NURSING MANUAL
Policy and Procedure

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PURPOSE

This guideline document incorporates related blood transfusion standards and supports best practice for the administration of blood components and blood products.

POLICY

Professional Roles and Responsibilities

Primary Care Providers
1. Primary Care Providers (PCP), including PCPs with admitting privileges to SSH, nurse practitioners and midwives who are employees of SSH write orders and obtain written consents for blood components and blood products.

2. The PCP must order in writing:
   2.1. Type of blood component or blood product
   2.2. Specify product requirements (e.g. CMV negative, irradiated etc.)
       2.2.1. All blood available in Canada is now leukoreduced and therefore the risk of CMV transmission from blood transfusion is very low. Additional information is available in South Shore Health Blood Transfusion Services SOP S35.2.042 Cytomegalovirus (CMV) protocol.
       2.2.2. It is recommended that patients in specific risk groups, such as blood and marrow transplant patients, receive irradiated RBC, random donor and apheresed platelets. Note: Human Leukocyte Antigen (HLA) matched platelets are always irradiated. Additional information is available in South Shore Health Blood Transfusion Services SOP S35.2.044 Irradiated blood product transfusion policy.

2.3. Number of units and/or volume of product or apheresis procedure

2.4. If a blood warmer and/or pressure device is indicated for use. In the instance of a massive bleed it is recommended to warm all fluids and to infuse via a rapid infuser. Please note: Blood warmer temperature should not exceed 42°C and pressure devices should not exceed 300 mmHg. Refer to manufacturer’s instructions on blood warmers and rapid infusion devices.
3. Use of serologically incompatible blood, unmatched blood (in emergency or life-threatening situations) or expired blood components/blood products. **Note:** The PCP is required to sign the Emergency Release of Unmatched Blood (Lab form 410-117) within 24 hours. This form is an administrative record to be filed by Blood Transfusion Services (BTS).

4. Verbal/telephone orders can be accepted in an emergency if consent has been obtained. **The orders must be co-signed as per SSH documentation standards (Refer to Policy AD-110-1001 Documentation: Standards for Medical).**

5. Questions pertaining to pediatric transfusions should be referred to the hematologist/oncologist on call at IWK Health Centre. Refer to IWK Health Center policies, pre-printed orders or transfer orders for pediatric transfusions.

**Consent**

6. Written consent **must** be obtained by the PCP proposing the treatment unless emergency criteria exist. Consent is required for all blood components and blood products (refer to Appendix A: Consent to Transfusion).

   6.1. A single consent is sufficient to cover the ongoing blood transfusion requirements that relate to that treatment (refer to policy AD-110-206 Consent to Treatment).

   6.2. For patients refusing a blood transfusion, documentation/written refusal is required (refer to policy AD-110-206 Consent to Treatment).

   6.3. Where a patient is found by declaration of capacity to be incapable of consenting to treatment, a consent may be given or refused on behalf of the patient by a substitute decision-maker who has the capacity and is willing to make the decision to give or refuse the consent from the list in descending order as defined in “DEFINITIONS” section under “Substitute decision maker”.

   6.4. When it is not possible to obtain the consent of a patient or substitute decision maker and delay in transfusion would endanger the life of the patient or present a significant risk to their health, the PCP is to indicate this in the progress notes and may proceed with the treatment (refer to policy AD-110-206 Consent to Treatment) unless there is: An advance directive to refuse transfusion OR documented refusal (e.g. Jehovah’s Witness)

**Nursing Scopes of Practice**

7. Blood components and blood products administration is an entry level competency for Registered Nurses (RN), but experience in this procedure may or
may not have occurred during their clinical practicum.

7.1. RNs must successfully meet the knowledge and proficiency skill standards to perform this competency in the clinical setting as defined in the Blood Component and Blood Product Competency Guide.

7.2. RNs may administer blood components and blood products to patients of all age groups.

7.3. For products that are recommended to be administered IV direct as per the product monograph; RNs deemed competent in IV direct administration may administer these products (refer to policy NU-200-650 Medication-Direct IV).

8. Blood components and blood products administration is a non-mandatory entry level competency for Licensed Practical Nurses (LPN). For South Shore area, only clinical areas that provide sufficient opportunities to maintain proficiency will support the practice of LPNs to administer specific blood components and blood products to patients who have established plans of care with predictable outcomes (refer to Table 1). Both the patient outcomes and the outcomes of the component or product being transfused must be predictable.

9. LPNs must successfully meet the knowledge and proficiency skill standards to perform this competency by:

9.1. Achieving certification during student’s clinical placement.

9.2. Completing an accredited/approved post-graduate Blood Therapy program from the NSCC or other institution or the Nova Scotia Nursing Provincial Competencies Blood Transfusion eLearning modules.

9.3. Completing the competency requirements prior to performing this competency in the clinical setting. These requirements are defined in the Blood Component and Blood Product Competency Guide.

10. Each nurse is responsible and accountable for attaining and maintaining competence with blood transfusion therapy within her/his scope of practice. Competence will be initially validated at the time of employment and reviewed:

10.1. After orientation to the organization

10.2. On an ongoing periodic basis or following an extended leave of absence as determined by the manager.

10.3. When scope of practice changes

10.4. With the introduction of new equipment, technology, products or standards
11. Each nurse is accountable to discuss with their manager to determine whether sufficient opportunities to perform the skill have occurred in order to maintain clinical competency.

11.1. Further education and/or practice may be required to ensure that the nurse can perform the skill safely and competently if performed on a low frequency

Table 1. Practice areas supporting LPNs administering specific blood components and blood products

<table>
<thead>
<tr>
<th>Practice Setting</th>
<th>Blood components or blood products administered by LPNs for limited and specific patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambulatory Care</td>
<td>Albumin Packed red blood cells</td>
</tr>
<tr>
<td>Emergency*</td>
<td>Albumin Packed red blood cells WinRHo</td>
</tr>
<tr>
<td>ICU*</td>
<td>Albumin Packed red blood cells</td>
</tr>
<tr>
<td>Maternal Child</td>
<td>WinRho</td>
</tr>
<tr>
<td>Medical/Surgical</td>
<td>Albumin Packed red blood cells</td>
</tr>
<tr>
<td>Medical</td>
<td>Albumin Packed red blood cells</td>
</tr>
</tbody>
</table>

* Note: only if patient is hemodynamically stable with predictable outcomes

12. LPNs would not administer blood components or blood products independently to patients whose needs are complex, the plan of care is unknown/un-established, or whose conditions are frequently changing with complex or poorly understood outcomes. These may be limited contexts where LPNs would administer blood components under the direct guidance of a RN or PCP.

Table 2. List of situations that patient care needs are beyond the scope of practice of a LPN.

<table>
<thead>
<tr>
<th>Patient situation</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crisis situations</td>
<td>Requires advanced priority decision making in a situation that is unpredictable.</td>
</tr>
<tr>
<td>Blood components or products that must be administered rapidly, or titrated (with</td>
<td>Requires advanced assessment and decision making.</td>
</tr>
</tbody>
</table>
### Patient situation | Rationale
--- | ---
or without a blood warmer or rapid infuser) | Active titration would indicate that the client’s needs are unanticipated.
Patient has had previous or suspected transfusion reaction. | Outcome/risk is unpredictable or not well established despite pre-medications.
A product that requires the interpretation of additional assessment parameters before, during or after administration (e.g. Octaplex or IVIG) | Interpretation of the data requires advanced decision making and assessment.

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**DEFINITIONS**

**Antibody Screen** - Testing the patient’s serum for allo- and/or auto-antibodies usually developed after exposure to foreign red cells.

**Blood** - Defined as whole blood made up of red cells, white cells, platelets and plasma.

**Blood Components** - A therapeutic component of blood intended for transfusion (e.g.: red cells, granulocytes, platelets, plasma) that can be prepared using the equipment and techniques available in a blood centre.

**Note:** Such equipment and techniques can include centrifugation, filtration, or freezing.

**Blood Products** - A therapeutic component derived from human blood or plasma, and produced by a manufacturing process that pools multiple units (usually more than 12) Note: Examples of blood products are human serum albumin, immunoglobulin preparations, and coagulation products such as factors VIII, and IX, fibrinogen, anti-thrombin III, etc.

**BTS** - Blood Transfusion Services

**Clerical Check** - A clerical check confirms that the identification checks are correct and there are no discrepancies. A clerical check is performed by the healthcare professional to verify that the armband and blood transfusion report or tag match with the patient’s full name, birth date, and another unique patient identifier such as health card or medical record number (refer to policy AD-110-223 Patient Identification). It also verifies that the patient’s ABO/Rh type is compatible/identical to the unit ABO/Rh type and that the unit is not expired.
Clerical Discrepancy - A clerical discrepancy exists when there is less than 100% consistency in the information on the blood, blood component or plasma derivative labels, Blood Transfusion Report or Tag or the patient’s identification band.

Crossmatch - Testing compatibility before transfusion between the Red Blood Cells (RBCs) of the donor and the recipient’s plasma/serum; determines if the recipient has any antibodies that would destroy the donors RBCs.

Predictable - the extent to which one can identify in advance a client's response on the basis of observation, experience or scientific reason.

Primary Care Provider (PCP) - includes PCPs, nurse practitioners and midwives providing primary health care to patients.

Serologically Incompatible Blood - Blood which is ABO/Rh compatible but due to the presence of auto-antibodies, high incidence allo-antibodies or multiple allo-antibodies may be serologically incompatible.

Unmatched Blood - Blood that has not undergone pre-transfusion testing.

Substitute Decision Maker - a person who has been authorized to give consent under the Personal Directives Act of April 1, 2010 or for someone without a personal directive and who lacks capacity to make healthcare decisions according to the following list in descending order:

a. guardian (e.g. Court appointed) with authority to make such decisions
b. nearest relative (who, except in the case of a minor spouse, is 19 years of age or older)
   - spouse
   - child
   - parent
   - person standing in loco parentis
   - sibling
   - grandparent
   - grandchild
   - aunt or uncle
   - niece or nephew
   - other relative
c. Public Trustee

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PROCEDURE

Refer to Blood Component Product Table (Appendix C), ABO/Rh compatibility Chart (Appendix D), and Transfusion Safety Checklist Tool (Appendix E) for further resources that can be utilized prior to transfusion.

PRE-ADMINISTRATION

1. Ensure a written consent has been obtained by the PCP.(refer to policy AD-110-206 Consent to Treatment).

   2.1. Contact BTS/PCP to provide education on blood products that contain no human plasma for patients with cultural or religious considerations (e.g. Jehovah’s Witness).

3. Review the order for transfusion and premedication.

4. Pre-medicate only if ordered, ensuring that product is available prior to administering pre-transfusion medications.

5. Ensure the patient’s intravenous site is patent and compatible solution for the product is infusing.
   5.1. Short peripheral catheters of 14 – 24 gauge for adults and 22 – 24 gauge for pediatric patients can be used for administration of blood components or products. (INS 2011)
   5.2. In the event of a massively bleeding patient, it is recommended two large bore IV lines be initiated.

6. Obtain clinical assessment and chart baseline vital signs (temperature, pulse, respiration, blood pressure) within one hour prior to transfusion.

7. Confirm product is ready from Blood Transfusion Services (BTS) and arrange for product pickup/delivery.

8. If a delay in transfusion greater than 30 minutes is expected upon receipt of blood component or blood product, return to BTS to allow the product to be stored until ready to transfuse. This 30 minute rule refers to the time that a blood component may be returned to the BTS inventory once the component has left the controlled environment, not the time in which the transfusion must be started. Blood components (RBC, FFP, PLTS) must be transfused within 4 hours of
leaving the controlled environment. Blood products (ie: IVIG, Albumin, etc.) must be transfused within 4 hours of the product seal being punctured.

9. Instruct the patient/substitute decision maker to notify the nurse if any of the following occur:
   - Chills/rigors
   - Urticaria/other skin rash
   - Respiratory distress (shortness of breath)
   - Nausea/Vomiting
   - Pain
   - Dizziness, weakness
   - Bleeding
   - Patient states feeling unwell/any change from pre-transfusion status

10. Verify the specific product requirements (e.g. CMV negative, irradiated).

11. Visually inspect product for clots, clumps, and discoloration. If present, notify BTS and return the product.

   11.1. Gently agitate blood components to mix thoroughly.

12. Prime the appropriate tubing with the blood component or a compatible solution (0.9% normal saline for blood components – for blood products follow manufacturer’s insert/product monograph).

   12.1. Normal Saline or compatible solution can be used to improve flow rate or clear lines after the infusion of blood components.

   12.2. Blood administration tubing piggybacked into a mainline is to be attached at the lowest port closest to the patient.

13. Medication must NOT be added to or piggy-backed with any blood component or blood product. (Exception: iron chelating medication).

14. Ensure the patient has the correct patient identification armband. The following must be verified in the presence of the patient by two healthcare professionals, with one of the verifiers being the transfusionist (may be verified by LPN, RN, PCP, NP, Midwife):

   14.1. Verify that the patient’s full name and another unique patient identifier number such as health card or medical record number, on the “Blood Transfusion Report or Tag” AND the patient's identification arm band match.

   14.2. Verify the ABO group, Rh type and Blood Serial number on the “Blood Transfusion Report or Tag” matches or are compatible with the ABO
group, Rh type and blood serial number on the product label.

15. Verify the product has not/will not expire during transfusion. **Note: If any of the above criteria are not met, do not start the transfusion, notify the BTS and return the product.**

**ADMINISTRATION**

1. Sign the Transfusion Tag using the transfusionist’s Meditech user ID, that is attached to the component or product and fill in the start time. Keep the Transfusion Tag attached until the transfusion is complete.

2. Monitor the patient throughout the transfusion for signs of an adverse reaction. Refer to the “Algorithm for Transfusion Reactions” *(Appendix A)*, for identifying adverse reactions.

   2.1. Remain with the patient for the first 5 minutes of the transfusion
   
   2.2. Assess the patient every 5 minutes times two and
   
   2.3. Every 1 hour thereafter to ensure the blood is infusing appropriately and to assess the patient for signs/symptoms of adverse reactions.

   2.4. It is recommended the patient remain on the nursing unit or be observed by a healthcare professional during the transfusion.

3. Monitor infusion rates. Slower infusion rates may be necessary in infants, the elderly or patients that are cardiovascular compromised or at risk for fluid overload. See “Blood Component and Blood Product Table” *(Appendix C)* for recommended infusion rates.

4. Patient vital signs must be checked and documented.

   4.1. Within the hour prior to starting the transfusion
   
   4.2. After the first 15 minutes of the transfusion
   
   4.3. Every hour during the transfusion
   
   4.4. One hour following completion of the transfusion. Refer to exceptions*
   
   4.5. When administering IVIG products, it is recommended that vital signs be monitored when increasing infusion rates and if lot number changes with product infused. It is not necessary to slow down the infusion rate when changing lot numbers *(Refer to manufacturer’s instructions)*.

*EXCEPTIONS:* In ambulatory care settings, the patient should be kept for a minimum of 15 to 30 minutes, to a maximum of one hour post-transfusion.
Assessment may vary depending on product administered (e.g. due to the very low risk of immediate reaction, vital signs may be omitted pre and post administration of routine maternal [up to 300 micrograms] doses of WinRho-SDF. If this is done, a mandatory 15 minute observation period is required following the administration).

5. Immediately document on the Blood Component or Product Transfusion Record at the time of transfusion:
   5.1. The unit number (DO NOT affix sticker/label)
   5.2. Type of blood component or blood product transfused
   5.3. Date and time of start and finish
   5.4. Identity of individual who administered the transfusion and initials of verifier
   5.5. If the patient experienced an adverse transfusion reaction

6. When more than one unit of RBC or multiple bags of plasma are to be given, with each unit/bag administered, the patient should be monitored as in the initial transfusion.

7. Change the blood administration set to prevent potential bacterial contamination:
   7.1. at least every 4 hours
   7.2. or if more than 60 minutes has elapsed before another unit is initiated.

8. Avoid simultaneous administration of blood components/blood products. In emergency situations it may be necessary to administer blood components and blood products concurrently using separate IV access.

9. If a product is still hanging at the end of four hours after being dispensed from the monitored blood refrigerator, discontinue and discard the remaining product, document the amount transfused and notify attending PCP.

**POST ADMINISTRATION**

**ABSENCE of transfusion reaction:**

1. Flush IV line with normal saline or compatible solution following transfusion.
2. Remove the Blood Transfusion Tag and complete the required information.
3. Disconnect the blood administration set and store for 4 hours following transfusion. If a transfusion reaction has not occurred, discard the container and administration set in a stiff-sided Biohazard Container.
4. Return the completed Transfusion Tag to BTS within 24 hours of the transfusion.

5. File the patient’s health record documents in the appropriate location of the patient’s chart.

6. Obtain post transfusion bloodwork as ordered and review results to determine response to transfusion.

7. Continue to assess patient periodically for signs/symptoms of a reaction that may occur several hours after a transfusion.

**TRANSFUSION REACTION SUSPECTED:**

**Note: Refer to the Algorithm for Transfusion Reactions (Appendix A)**

1. **Immediately** stop the transfusion.

2. If patient is experiencing **serious signs and symptoms**, disconnect the transfusion.

3. Maintain IV patency with appropriate IV solution (0.9% Normal Saline or if blood products - refer to manufacturers insert/product monograph)

4. Notify the attending physician or PCP. LPNs are to collaborate with a RN for further nursing actions as per the Algorithm for Transfusion Reactions (Appendix A).

5. Check vital signs every 15 minutes until patient is stable.

6. Perform clerical check to ensure there is no clerical discrepancy by verifying that the armband and blood report or tag match with the patient’s name, birth date and health card number. Verify the patient’s ABO/Rh type is compatible/identical to the unit ABO/Rh type and the unit is not expired.

7. Notify BTS.

8. If mild allergic reaction or mild fever, with the onset of symptoms being greater than 15 minutes from the start of the transfusion, transfusion may resume cautiously **ONLY** as directed by PCP.

8.1. After resuming the transfusion, remain with the patient for the first 5 minutes of resuming the transfusion, then assess the patient every 5 minutes times two and every hour thereafter to observe for signs and
symptoms of adverse reactions. Reassess vital signs after 15 minutes.

8.2. **IMMEDIATELY** stop the transfusion if the patient develops any serious signs and symptoms. See Algorithm for Transfusion Reactions *(Appendix A).*

9. If transfusion reactions suspected, testing is completed as advised by BTS, based on recommendations in the Laboratory Investigation of Adverse Reactions document from the NS Provincial Blood Coordinating Program. Draw samples for laboratory investigation where indicated (enter TRX in Meditech Blood Bank module). Further testing/samples may be requested from BTS to complete adverse investigation.

10. Complete the information requested on the back of the Transfusion Tag specific for suspected transfusion reaction. Document the most clinically significant information on the Transfusion Tag.
   10.1. Remove the Transfusion Tag from the product
   10.2. Return the Transfusion Tag to BTS

11. Document the reaction, treatment and response on the Blood Transfusion Reaction flow sheet and in the Interdisciplinary Notes, as applicable.

12. Place the container and administration set with the suspected blood component, blood product bag/bottles and tubing in a Biohazard Ziploc bag to return to BTS.

13. If a reaction is suspected after blood component or product bags/vials have been discarded and the Transfusion Tag sent, notify BTS of possible reaction.

14. Send all appropriate documents to BTS:
   14.1. Blood Component or Product Transfusion Record
   14.2. Blood Transfusion Reactions Flowsheet

15. Submit an incident/occurrence report for suspected transfusion reactions. Serious incidents must be reported as soon as possible to the manager and/or shift supervisor.

**NOTIFICATION OF TRANSFUSION**

*This is a CONTROLLED document for internal use only. Any documents appearing in paper form are not controlled and should be checked against the electronic version prior to use.*
1. The Notification of Transfusion letter (Appendix E) must be given to patient/substitute decision maker following administration of blood/blood products.

2. The Notification of Transfusion need only be given once during a length of stay or course of treatment.

3. The nurse is to explain to the patient/substitute decision maker that they have received a blood component/product and to contact their PCP with any questions or concerns.

4. The nurse is to document that the notification has been given.

5. A copy is to be placed on the patient’s chart and the original is to be given to the patient/substitute decision maker.

DOCUMENTATION

1. Documentation on all transfusions must include the following information:
   1.1. Teaching performed to the patient/substitute decision maker
   1.2. Monitoring of the patient throughout the transfusion
   1.3. How patient tolerated the transfusion
   1.4. Presence or absence of a transfusion reaction
   1.5. Date and time (start and finish) of transfusion

2. The following data must be documented in the patient’s health record:
   2.1. Blood component or blood product transfused
   2.2. The product unit number
   2.3. Blood type
   2.4. The identity of the transfusionist and verifier

3. In the event of a transfusion reaction, document these additional items:
   3.1. Any clinically significant information
   3.2. Signs and symptoms and time of reaction
   3.3. Volume infused
   3.4. Time/name of PCP notified
   3.5. Notification of Blood Transfusion Services
3.6. Specimens sent (as applicable)

3.7. Treatment administered and response

4. BTS must be notified of all reactions. Each adverse event is investigated and further products are not issued to a patient until the reaction is investigated. Concurrently all companion products are held in blood banks across the country if a serious adverse event is suspected (this prevents the administration of potentially contaminated products to other patients). The information provided on the Blood Transfusion Reactions Flowsheet and the Transfusion Tag and the progress note in the patient’s chart provides a basis for decision-making in the investigation of adverse reactions and is vital in this process.

REFERENCES


Historical dates:
Oct. 2011 – NU-100-150 Blood Components and Blood Products Administration
Nov. 2015– NU-100-150 Blood Components and Blood Products Administration – minor revision
APPENDIX A – Consent to Transfusion

South Shore Health

☐ FMH    ☐ QGH    ☐ SSRH

CONSENT to TRANSFUSION of BLOOD or BLOOD PRODUCTS

I _______________________ hereby consent to the transfusion of Blood Components or Blood products to be performed on ______________________ (relationship) if it becomes necessary during the course of my/their treatment. The nature and anticipated effect of receiving blood or blood products, including the material and special risks and alternatives available have been explained to me by ________________________________.

(Name of Attending PCP)

I understand that reasonable efforts will be made to keep me informed when blood or blood products are transfused.

I agree that the PCP named above may make use of the assistance of other hospital staff in this process.

This consent is valid as long as the doctor believes such treatment to be essential to my care for this period of hospitalization or the series of treatment related to my current health problem, unless revoked sooner by me.

The following restrictions apply: ________________________________

I understand the meaning of my decision and I agree that the risks, available alternatives and benefits have been explained to my satisfaction.

Dated this ____________________ day of ________________________, 20__

_________________________________    ___________________________    __________________________
Patient/Parent/Guardian                  Relationship                    Signature of attending PCP

_________________________________    ___________________________
Signature of Witness                    Name of Witness (Print)

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APPENDIX B - Algorithm for Transfusion Reactions
Refer to next page
### APPENDIX B - Algorithm for Transfusion Reactions

**PATIENT EXHIBITS SIGNS AND SYMPTOMS OF A TRANSFUSION REACTION**

**STOP THE TRANSFUSION!!!**

1. If patient is experiencing serious signs and symptoms, disconnect the transfusion
2. Maintain IV patency with appropriate IV fluid
3. Contact the PCP for medical assessment
4. Check vital signs every 15 minutes until stable
5. Perform Clerical check to ensure there is no clerical discrepancy by verifying that the arm band and blood tag match with the patient’s name and medical record number. Verify the patient’s ABO/Rh type is compatible/identical to the unit ABO/Rh type and the unit is not expired.

**IF PATIENT HAS ANY ONE OF THE FOLLOWING:**
- Onset of symptoms within first 15 minutes of transfusion
- Fever
- Chills/rigors
- Hypotension/shock
- Hypertension
- Unexplained anxiety
- Any pain
- Headache
- Dyspnea/respiratory distress
- Tea colored urine
- Bleding from IV site
- Nausea/vomiting
- Tachycardia/arrhythmias
- Generalized flushing
- Hives/rash covering body greater than 1/4 body
- Patient states s/he feels unwell

\*Note: Consider bacterial contamination if the patient exhibits any of following during or within 4 hours post transfusion:

1. Temperature rise >1°C and ≥38°C with no other signs or symptoms
2. Institute patient management
3. Notify the patient’s PCP immediately
4. Notify Blood Transfusion Services (BTS) immediately
5. The following should be sent to BTS:
   a. Tubes of blood as per BTS reaction investigation policy
   b. Completed Blood Transfusion Tag
   c. Blood product & administration set/fluid
   d. Additional samples as requested by BTS
6. Include:
   a. Blood and product cultures if bacterial contamination is suspected as indicated by BTS
   b. Chest x-ray for dyspnea/respiratory distress

**CONSIDER:** Acute hemolytic, Severe allergic, Anaphylactic/anaphalactoid, Transfusion associated circulatory overload (TACO), Transfusion related acute lung injury (TRALI) or bacterial contamination

**ΒTS MUST BE NOTIFIED OF ALL SUSPECTED TRANSFUSION REACTIONS**

- Consider medicating with antipyretics or analgesics \*Note: Requires a PCP order
- Document assessment and intervention on patient’s chart and transfusion tag
- Resume transfusion cautiously ONLY as directed by PCP
- Patient should be directly observed for the first 5 minutes after resuming transfusion then every 5 minutes for the next 10 minutes

**IMMEDIATELY stop transfusion if the patient develops any SERIOUS signs and symptoms**

**TEMPERATURE RISE ≥1°C AND ≥38°C**

1. DO NOT RESTART THE TRANSFUSION
2. Institute patient management
3. Notify the patient’s PCP immediately
4. Notify Blood Transfusion Services (BTS) immediately
5. The following should be sent to BTS:
   a. Tubes of blood as per BTS reaction investigation policy
   b. Completed Blood Transfusion Tag
   c. Blood product & administration set/fluid
   d. Additional samples as requested by BTS
6. Include:
   a. Blood and product cultures if bacterial contamination is suspected as indicated by BTS
   b. Chest x-ray for dyspnea/respiratory distress

**ΒTS MUST BE NOTIFIED OF ALL SUSPECTED TRANSFUSION REACTIONS**

- Consider medicating with antihistamines or antipyretics \*Note: Requires a PCP order
- Document assessment and intervention on patients chart and on transfusion tag
- Resume transfusion cautiously ONLY as directed by PCP
- Patient should be directly observed for the first 5 minutes after resuming transfusion then every 5 minutes for the next 10 minutes

**If remainder of transfusion is uneventful, upon completion documentation of Blood Transfusion Report/Tag should be completed and returned to BTS once transfusion is complete**

**ENSURE MOST CLINICALLY SIGNIFICANT INFORMATION IS DOCUMENTED ON TRANSFUSION TAG AND PATIENT’S CHART**

**CONSIDER:** FEBRILE NON-HEMOLYTIC or MINOR ALLERGIC

**IF PATIENT IS EXPERIENCING MINOR SYMPTOMS:**
- Temperature rise > 1°C and <38°C
- No other symptoms AND
- Onset greater than 15 minutes into transfusion

**SECONDARY SYMPTOMS**
- Hives/Rash over <1/4 of body with no other symptoms

**ΒTS MUST BE NOTIFIED OF ALL SUSPECTED TRANSFUSION REACTIONS**

- Consider medicating with antihistamines or antipyretics \*Note: Requires a PCP order
- Document assessment and intervention on patients chart and on transfusion tag
- Resume transfusion cautiously ONLY as directed by PCP
- Patient should be directly observed for the first 5 minutes after resuming transfusion then every 5 minutes for the next 10 minutes

**IMMEDIATELY stop the transfusion if the patient develops any SERIOUS signs and symptoms**

**IF REMAINDER OF TRANSFUSION IS UNEVENTFUL:**

1. If patient is experiencing serious signs and symptoms, disconnect the transfusion
2. Maintain IV patency with appropriate IV fluid
3. Contact the PCP for medical assessment
4. Check vital signs every 15 minutes until stable
5. Perform Clerical check to ensure there is no clerical discrepancy by verifying that the arm band and blood tag match with the patient’s name and medical record number. Verify the patient’s ABO/Rh type is compatible/identical to the unit ABO/Rh type and the unit is not expired.

**IF PATIENT DEVELOPS ANY SERIOUS SIGNS AND SYMPTOMS**

1. DO NOT RESTART THE TRANSFUSION
2. Institute patient management
3. Notify the patient’s PCP immediately
4. Notify Blood Transfusion Services (BTS) immediately
5. The following should be sent to BTS:
   a. Tubes of blood as per BTS reaction investigation policy
   b. Completed Blood Transfusion Tag
   c. Blood product & administration set/fluid
   d. Additional samples as requested by BTS
6. Include:
   a. Blood and product cultures if bacterial contamination is suspected as indicated by BTS
   b. Chest x-ray for dyspnea/respiratory distress

**CONSIDER:** Acute hemolytic, Severe allergic, Anaphylactic/anaphalactoid, Transfusion associated circulatory overload (TACO), Transfusion related acute lung injury (TRALI) or bacterial contamination

\*Note: Possible exception for pediatric patients: lab testing will be performed at discretion of PCP
## APPENDIX C – Blood component product table

<table>
<thead>
<tr>
<th>Blood component/ Blood product</th>
<th>Indication</th>
<th>Compatibility</th>
<th>Administration</th>
</tr>
</thead>
</table>
| **Red blood cells (RBCs)**    | • Promote oxygenation  
• Restore Blood Volume | Must be A, B, O, Rh identical or compatible  
(See Compatibility chart: Appendix E ) | • Standard blood tubing with 170-260 um filter  
• May use infusion device  
• If transfusion is cancelled, unused RBC’s can be returned to inventory in the Lab if less than 30 minutes from time of issue has passed. Start infusion at rate of 2mL/minute (120mL/hr) for first 15 minutes. May be increased if reaction not suspected. One unit usually takes 1.5-2 hr to infuse, but may be slower for elderly or cardiovascularly compromised patients.  
• Must be infused within 4 hours from time dispensed from BTS (time stamped on blood bag) or removed from monitored blood refrigerator or transport crate.  
• Change administration set at least every 4 hours and/or if there is greater than 1 hour between units. |
| **Platelets**       | • Treatment of bleeding  
• Prevention of bleeding (Platelet count less than 10,000/ul)  
• Not given for ITP,HIT, TTP consumptive disorders unless bleeding/check with Hematologist | • Preferred ABO and Rh compatible  
• Must have type and screen, group not specific. Rh must match for women of childbearing potential, regardless of number of units to be administered. If PCP orders Rh mismatched platelets to be given then anti-D Immunoglobulin should | • Standard blood tubing with 170-260 um filter or platelet tubing  
• Administer by gravity flow as rapidly as patient can tolerate (1 adult dose/20 min average).  
• Must be infused within 4 hours  
• Change tubing after 4 consecutive adult doses and at least every 4 hours and/or if there is greater than 1 hour between units  
• INFUSION DEVICE NOT RECOMMENDED |
<table>
<thead>
<tr>
<th>Blood component/Blood product</th>
<th>Indication</th>
<th>Compatibility</th>
<th>Administration</th>
</tr>
</thead>
</table>
| Fresh Frozen Plasma Apheresed (FFPA) | ▪ FFPA contains both labile clotting factors V and VIII, plus all non-labile coagulation factors.  
▪ FP contains all the coagulation factors at levels similar to the levels in FFPA with the exception of the labile factors, V and VIII, which may be slightly reduced in FP.  
▪ Therefore FFPA may be preferred in the treatment of TTP and HUS in situations when | ▪ Must be A, B, O compatible  
▪ Rh compatibility not required  
▪ Although Factor V and VIII levels are slightly lower than in Fresh Frozen plasma, in most clinical situations where these products are indicated, FP and FFP may be used interchangeably. | ▪ Standard blood tubing with 170-260 um filter  
▪ Use immediately as factors breakdown.  
▪ Transfuse as rapidly as can be clinically tolerated  
▪ Continuous infusions can be infused using an infusion device and tubing to be changed at least every 4 hours |

<p>| CPD Frozen Plasma (FP) | | | |</p>
<table>
<thead>
<tr>
<th>Blood component/Blood product</th>
<th>Indication</th>
<th>Compatibility</th>
<th>Administration</th>
</tr>
</thead>
</table>
| **Cryosupernatant Plasma (CSP)** | - Used for treatment in TTP patients  
- Hemolytic uremic syndrome (HUS) | - Must be A, B O compatible  
- Rh compatibility not required | - Standard blood tubing with 170-260 um filter  
- Use immediately as factors breakdown  
- Transfuse as rapidly as can be clinically tolerated  
- Continuous infusions can be infused using an infusion device and tubing to be changed at least every 4 hours |
| **Cryoprecipitate** | - Highest concentration of factor VIII.  
- Fibrinogen, Willebrands Factor, and Factor XIII | - A, B, O compatible (not required for adult transfusion)  
- Rh compatibility not required | - Standard blood tubing with 170-260 um filter  
- Use immediately as factors breakdown.  
- Transfuse as rapidly as can be clinically tolerated.  
- Continuous infusions can be infused using an infusion device and tubing to be changed at least every 4 hours. |
| **Albumin** | - Increases oncotic pressure, leads to fluid shift to intravascular space  
- Available in 5% and 25% concentrations | Group and screen not required | - Requires vented tubing without filter.  
- 25% - infuse slowly because risk of overload  
- Must be infused within 4 hr  
- Dose and rate determined and ordered by PCP  
- See manufacturer’s recommendations for compatible fluids and rate of infusion  
- May use infusion device |
<p>| <strong>Immunoglobulins</strong> | Group and screen not required | - Anaphylactoid reactions are rare but may occur, PCP should be readily available. Epinephrine at bedside. |</p>
<table>
<thead>
<tr>
<th>Blood component/ Blood product (this is not a comprehensive list):</th>
<th>Indication</th>
<th>Compatibility</th>
<th>Administration</th>
</tr>
</thead>
<tbody>
<tr>
<td>IGIVnex®, Gamunex®, Gammagard SD®, Gammagard Liquid®, Privigen®</td>
<td>IMMUNOLOGY: ▪ Primary and secondary immune deficiency conditions</td>
<td>required</td>
<td>• Visually inspect for discoloration • Requires vented tubing • Follow manufacturer’s recommendations for IV fluid compatibility, rate of infusion and use of filters. • Refer to Provincial IVIG Nursing Administration documents for initial rates and rate increases, available on <a href="http://www.gov.ns.ca/health/nspbcp/professionals.asp">http://www.gov.ns.ca/health/nspbcp/professionals.asp</a> Link also avail on Clinical Resource intranet Blood/Blood Products • Quick reference guidelines for vital sign monitoring: ▪ Pretransfusion within one hour of beginning transfusion ▪ Prior to each rate increase ▪ Q1 hour at maximum ▪ If patient develops a reaction, stop infusion, call PCP and notify BTS. Patient should be pre-medicated prior to subsequent doses (requires PCP order). ▪ If patient to receive multiple days of therapy follow same infusion procedure.</td>
</tr>
<tr>
<td>Vivaglobin*: (subcutaneous immune globulin)</td>
<td>HEMATOLOGY ▪ ITP, Fetal Alloimmune Thrombocytopenia, Hematological Malignancy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other hyperimmune globulins :</td>
<td>NEUROLOGY ▪ Guillain Barre Syndrome, Acute Disseminated Encephalo-myelitis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cytogam* (anti-CMV Ig)</td>
<td>RHEUMATOLOGY ▪ Juvenile Idiopathic Arthritis, Kawasaki Disease</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blood component/Blood product</td>
<td>Indication</td>
<td>Compatibility</td>
<td>Administration</td>
</tr>
<tr>
<td>------------------------------</td>
<td>------------</td>
<td>---------------</td>
<td>----------------</td>
</tr>
<tr>
<td><strong>Rh Immunoglobulin</strong>&lt;br&gt;(Anti D, D Immune Globulin, WinRho®SDF, Rhogam®)</td>
<td>• Prevent Allo-immunization in Rh-neg patients transfused with Rh+ platelets.&lt;br&gt;• Prevent Rh disease in Rh-neg women during pregnancy or other obstetrical conditions&lt;sup&gt;16&lt;/sup&gt;.&lt;br&gt;• Increase platelet count in Rh+, non-splenectomized patients with ITP.</td>
<td>Rh and ABS required</td>
<td>• Anaphylactoid reactions are rare but may occur, PCP should be readily available. Epinephrine at bedside.&lt;br&gt;• Reconstitute and administer according to manufacturer’s insert.&lt;br&gt;<strong>IV Direct</strong>&lt;br&gt;Use lowest port on normal saline mainline (clamped) or via injection cap/adaptor. Flush pre and post (at rate of factor) as per manufacturers instructions. Refer to RCP Rh Program instructions for IV direct administration&lt;br&gt;<strong>Nursing Care:</strong>&lt;br&gt;Remain with patient during administration, assess patient and obtain vital signs. For routine maternal [up to 300 micrograms] doses of WinRho-SDF vital signs may be omitted pre and post administration, due to the very low risk of immediate reaction. Observe the patient for 15 minutes following administration.&lt;br&gt;<strong>If WinRho® SDF is being administered for ITP patients, close monitoring in a healthcare setting is recommended for at least eight hours after administration. Urine dipstick testing for blood should be conducted before dosing and at 2, 4 and 8 hours after receiving the dose.</strong></td>
</tr>
<tr>
<td><strong>Clotting factor</strong></td>
<td>• To replace specific clotting factors&lt;br&gt;• Increases factor VIII</td>
<td>Type and screen not required</td>
<td>• Reconstitute and administer according to manufacturer’s insert.&lt;br&gt;• Anaphylactoid reactions are rare but may occur, PCP</td>
</tr>
<tr>
<td>Blood component/ Blood product</td>
<td>Indication</td>
<td>Compatibility</td>
<td>Administration</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------------</td>
<td>---------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Humate-P^®</td>
<td>and von Willebrand factor for people with von Willebrand’s disease.</td>
<td>Note: Some recombinant products contain human proteins to stabilize product, therefore risk of disease transmission is not totally eliminated. Some manufactured products contain no human protein.</td>
<td>should be readily available. <strong>Epinephrine at bedside.</strong></td>
</tr>
<tr>
<td>Advate^®</td>
<td>Increases factor VIII for people with Hemophilia Type A. Recombinant products but human proteins are used to stabilize product so risk of disease transmission is not totally eliminated.</td>
<td>- Phlebitis at the IV site, tingling to mouth or light headedness may be rate related. Slow infusion/bolus and symptoms should resolve immediately.</td>
<td></td>
</tr>
<tr>
<td>Helixate^®FS, Kogenate^®FS</td>
<td>Increases factor IX for people with Hemophilia Type B or Christmas Disease.</td>
<td>- Patients may self-administer at home as arranged by a PCP and with the PCPs order.</td>
<td></td>
</tr>
<tr>
<td>Benefix^®</td>
<td>Used to replace factors X or II (thrombin) caused by heredity or acquired deficiency.</td>
<td>- <strong>Brands are not interchangeable.</strong></td>
<td></td>
</tr>
<tr>
<td>Niastase^®</td>
<td>Factor VII</td>
<td>- Administer <strong>Niastase® IV Direct only over 5 minutes.</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Nursing Care:**

Remain with patient during administration, assess patient and obtain vital signs.

**IV Direct**

Use lowest port on normal saline mainline (clamped) or via injection cap/adaptor. Flush pre and post (at rate of factor) as per manufacturers instructions.

If **unable to administer IV direct** the product may be reconstituted according to manufacturer’s insert using filter needles as instructed. Remove filter needle, replace with a blunt fill needle to inject slowly into an emptied normal saline mini-bag. Prime tubing with factor and infuse at correct rate. Flush with normal saline.

**Continuous Intravenous Infusions (CIVI)**

CIVI of factor VIII or IX may be ordered to maintain steady state factor levels perioperatively or to manage a bleeding episode not controlled by boluses. It is critical that the
<table>
<thead>
<tr>
<th>Blood component/Blood product</th>
<th>Indication</th>
<th>Compatibility</th>
<th>Administration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticoagulant Factor</td>
<td></td>
<td></td>
<td>infusion is not interrupted.</td>
</tr>
</tbody>
</table>
| **ANTITHROMBIN III IMMUNO**   | - Increases antithrombin III levels to prevent thrombotic complications.  
- Acts as a physiological inhibitor of blood coagulation. | Type and screen not required | Follow manufacturer’s recommendations for IV fluid compatibility, rate of infusion and use of filters.  
**IV Direct**  
Use lowest port on normal saline mainline (clamped) or via injection cap/adaptor.  
Flush pre and post (at rate of factor) infusion as per manufacturers instructions.  
**If unable to administer IV direct** the product may be reconstituted according to manufacturer’s insert using filter needles as instructed.  
This can be injected slowly, using a blunt fill needle into an emptied normal saline mini bag.  
Prime tubing with factor and infuse at correct rate.  
Flush with normal saline.  
**Nursing Care:**  
Remain with patient during administration, assess patient and obtain vital signs. |
| Prothrombin Complex:          |            |               |                |
| **Octaplex®**                 | - Indicated for the reversal of oral vitamin K antagonists (i.e. Coumadin/Warfarin) or vitamin K deficiency in patients who are | Type and screen not required | - Concurrent vitamin K supplementation is indicated for sustained reversal of vitamin K antagonist effect.  
It is recommended that *Vitamin K 10mg IV infusion over 30 mins be administered with the initial dose of octaplex®*.  
- Octaplex® should only be administered to patients with an INR (International Normalized Ratio) greater than 1.5.  
It is recommended that the INR be available prior to |
<table>
<thead>
<tr>
<th>Blood component/ Blood product</th>
<th>Indication</th>
<th>Compatibility</th>
<th>Administration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>exhibiting major bleeding manifestations and/or requiring urgent (less than 6 hours) invasive/surgical procedures.</td>
<td></td>
<td>administering octaplex®, however in emergent situations where the INR is delayed or not available, administration of octaplex® is acceptable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• <strong>Anaphylactoid reactions</strong> are rare but may occur, PCP should be readily available. <strong>Epinephrine at bedside.</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Use Octaplex Pre-Printed Orders</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Administration:</strong> Initial dose: 40 mL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reconstitute as per manufacturers directions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Administer via IV pump or IV push – initial rate 1 mL/min. up to 3 mL/min. Max dose / episode is 120 mL (3000 IU Factor IX)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Nursing Care:</strong> vital signs immediately prior to infusion, at 5 mins and upon completion. Observe for increased pulse, headache and thromboembolic episodes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Check INR 10-15 minutes after each infusion and 24 hrs post</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Refer to NSPBCP guideline for specific information</strong></td>
</tr>
</tbody>
</table>
### APPENDIX D – Compatibility charts

#### ABO Compatibility of Red Cells

<table>
<thead>
<tr>
<th>Recipient</th>
<th>Donor</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>A</td>
<td>O</td>
</tr>
<tr>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>B</td>
<td>O</td>
</tr>
<tr>
<td>AB</td>
<td>AB</td>
</tr>
<tr>
<td>AB</td>
<td>A,B,O</td>
</tr>
<tr>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

#### Rh Compatibility of Red cells

<table>
<thead>
<tr>
<th>Rh of Recipient</th>
<th>Rh of Donor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rh positive</td>
<td>Rh positive or negative</td>
</tr>
<tr>
<td>Rh negative</td>
<td>Rh negative</td>
</tr>
</tbody>
</table>

Platelet compatibility chart on next page
If platelets are administered to an Rh negative woman with child bearing potential she should receive Rh Immune Globulin (Anti D) to avoid difficulties in future pregnancies.

<table>
<thead>
<tr>
<th>ABO Compatibility of Plasma</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recipient</strong></td>
</tr>
<tr>
<td>A</td>
</tr>
<tr>
<td>B</td>
</tr>
<tr>
<td>AB</td>
</tr>
<tr>
<td>O</td>
</tr>
</tbody>
</table>
## APPENDIX E – Transfusion safety checklist

### Pre-transfusion – before administration of a blood component or blood product

- Review the indication for the transfusion and consider appropriateness
- Verify consent is signed by the PCP and the patient or substitute decision maker and is relevant to the reason for the transfusion
- Provide patient/substitute decision maker with education pamphlet prior to transfusion and document teaching
- Check PCP’s orders for product to be administered, specific product requirements and orders for pre-transfusion medications. Check EMR for blood tests; patient’s blood group type and Rh, availability of blood component
- Pre-medicate only if ordered by PCP when product available
- Confirm IV site is patent / sufficient gauge or start IV
- Prime blood administration set with 0.9% normal saline for blood components or refer to manufacturer’s insert for blood products
- Ensure patient has ID armband on
- Obtain clinical assessment and record baseline vital signs (TPR and BP) within one hour prior to transfusion
- Review the transfusion with the patient and educate on signs and symptoms of adverse reactions and to advise the nurse if these occur
- Check EMR for product availability and arrange pick up of blood component/blood product from Blood Transfusion Services (BTS)
- If the transfusion is going to be delayed, return blood component/blood product to BTS within 30 minutes to ensure product can be returned to inventory
- Verify the specific product requirements (e.g. CMV neg, irradiated)
- Visually inspect product for any clots, clumps, discoloration. If present, notify BTS and return product

### Transfusion – administration of blood component or blood product

- Check the following in front of the patient with a verifier:
  - The patient’s full name and additional unique identifier (date of birth, medical unit number or health card number) on the transfusion tag AND the patient’s ID armband match
  - ABO/Rh of blood component is compatible with patient’s blood type. Refer to Table 1 – ABO Compatibility Chart
- Blood serial number on the transfusion tag matches the product label
- The product will not expire during transfusion
- Document start time and sign the transfusion tag. Keep tag attached to the blood component/blood product until transfusion is complete
- Slow infusion rates for infants, elderly or patients at risk for fluid overload
- Monitor the patient throughout the transfusion for any signs or symptoms of adverse reactions.
- Stay with patient for first 5 minutes and reassesses patient every 5 mins x2
- Obtain and document vital signs after the first 15 minutes and every hour during the transfusion
- Monitor infusion rates, volume infused and IV site during transfusion.
- Document on the Blood Transfusion Record.
- Ensure blood component/blood product is transfused within 4 hours from the time it was removed from the blood fridge or discard remainder

### Post-transfusion – upon completion or discontinuing a transfusion

#### Transfusion reaction:
- Once the transfusion has been stopped or discontinued, initiate the Transfusion Reaction Flowsheet
- Refer to the “Algorithm for Transfusion Reactions” for further nursing actions
  - Notify PCP and BTS
  - Check vital signs every 15 minutes until stable
  - Perform clerical check
- Enter blood work in Order Entry using ‘TRX' and notify Lab for blood testing. Get specific instructions on sample collection if tests are being collected by nurse.
- Document on transfusion tag and return to BTS separate from but with the blood container and administration set.
- Place blood container and administration set in appropriate container to transport to Lab.
- Send copies of Blood Transfusion Record and Transfusion Reaction Flowsheet to BTS
- Complete an Incident / Occurrence Report if reaction due to an error

#### No transfusion reaction
- Discard blood component or product still hanging after 4 hours from dispensing from blood fridge.
- Flush line with normal saline or compatible solution following transfusion
- Remove the transfusion tag, complete and return to BTS.
- Obtain and document vital signs and BP within the recommended time period
- Document and/or place Blood Transfusion Records in the appropriate location in the chart
- Ensure Notification of Transfusion Letter is initiated or given to patient and document
Table 1 – ABO Compatibility Chart

<table>
<thead>
<tr>
<th>Recipient ABO group</th>
<th>Donor ABO Group</th>
<th>RBC’s</th>
<th>Plasma</th>
<th>Platelets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unknown</td>
<td></td>
<td>O</td>
<td>AB</td>
<td>AB</td>
</tr>
<tr>
<td>O</td>
<td></td>
<td>O</td>
<td>O, A, B, AB</td>
<td>O, A, B, AB</td>
</tr>
<tr>
<td>A</td>
<td></td>
<td>A, O</td>
<td>A, AB</td>
<td>A, AB</td>
</tr>
<tr>
<td>B</td>
<td></td>
<td>B, O</td>
<td>B, AB</td>
<td>B, AB</td>
</tr>
<tr>
<td>AB</td>
<td></td>
<td>AB, A, B, O</td>
<td>AB</td>
<td>AB</td>
</tr>
</tbody>
</table>
APPENDIX F – Notification of transfusion (sample)

Notification of Transfusion

Dear Madam/Sir or Substitute Decision Maker,

Hospitals in the province of Nova Scotia routinely tell all patients about blood, blood products, or protein based clotting factors that were given.

This letter is to inform you that you have received blood, a blood product, or a protein based clotting factor.

Please call your doctor if you have any questions.

________________________________________
Day    Month    Year    Signature of transfusionist

________________________________________
Print Name