Guideline 8

Administration of Blood and Blood Components

Purpose

8.0 To provide best practice guidelines for nurses that align with the standards set forth by the American Association of Blood Banks (AABB), Accreditation Canada (AC) Transfusion Services, Canadian Standards Association (CSA) and the Canadian Society of Transfusion Medicine (CSTM) for the administration of blood and blood components.

8.1 The standards state that a protocol/policy is required for the administration of blood and blood components. This includes:

- The use of infusion devices and ancillary equipment.
- Identification, evaluation, and reporting of adverse events related to transfusion

  Refer to Guideline 7

- Administration of blood and blood components will be under medical direction.

Blood refers to Whole Blood, Blood Components: Red Blood Cells, Platelets, Plasma (fresh or frozen) and Cryoprecipitate.

Policy for administration of blood and blood components

8.2 Health care facilities/Regional Health Authorities (RHA) in Manitoba must implement processes and procedures that include the following:

Pre-transfusion

8.3 Ensure documentation of patient Informed Consent

8.4 The Physicians Transfusion **ORDER** shall include the following:

- ✓ Product name and dosage/units required
- ✓ Date and time transfusion/infusion to take place
- ✓ Clinical indication for transfusion/infusion
- ✓ Modifications and special requirements if any to blood components
- ✓ If multiple products ordered, indicate the order of sequence

8.5 Ensure the intended blood recipient has direct venous access for administration.

All identification tags attached to the blood, blood component bag shall remain attached until the transfusion has been completed/ terminated. If any discrepancies are identified or the product fails inspection do not administer. Contact blood bank.

Infusion of one unit must not exceed 4 hours. if it is determined that this will not be possible, the blood must be returned to a monitored blood bank fridge be within 60 minutes of issue or it will be discarded.

The Blood Bag Verification Refer to Guideline 4

8.6 Inspect the product for any leakage, discoloration, or abnormalities such as evidence of clots or hemolysis. **Refer to Appendix 6** Visual Inspection. If the product fails visual inspection, contact the blood bank immediately.

8.7 The transfusionist and one other authorized personnel will verify the following:

- ✓ Recipient's unique identifier and first & last name
- ✓ Recipient's ABO group, Rh type and presence of antibodies
- ✓ Donation identification number, donor ABO group and if required, the Rh type

The Patient to Blood Bag Verification

Refer to Guideline 3

Patient Identification for the Administration of Blood, Blood Components,and/or Plasma Protein Products

8.8 Positive identification of the intended recipient

8.9 Explain the procedure to the patient and to report signs/symptoms of adverse reaction(s) immediately.

8.10 Assess the patient for symptoms prior to the transfusion/infusion that might be confused with a transfusion reaction and document same(i.e.fever or rash).

Complete required information on the product tag and/or Record of Transfusion (ROT) and return to blood bank. This ensures traceability of blood components and vein to vein process standards are met.
Refer to Appendix 8 Record of Transfusion Sample.

Documentation for Blood or Blood Product Administration

Refer to Guideline 5

8.11 The Cumulative Blood Product Record (CBPR)
See Appendix 7 Cumulative Blood Product Record Completion Guide

8.12 The following must be documented on the CBPR **before** administration of the blood or blood products.

- ✓ Pre-transfusion vital signs
- ✓ Names and designation of transfusionist and second identifier

8.13 The CBPR must also record the following:

- ✓ Intra-transfusion and post-transfusion vital signs
- ✓ Amount transfused (the volume)

In non-urgent, non-bleeding patients, blood, blood components and/or plasma protein products should be transfused/infused during daytime hours and given one at a time.

Administration of Blood or Blood Products

8.14 Blood Administration Set

Blood, blood components and/or plasma protein products must be administered through a standard sterile, pyrogen-free blood administration set that has a 170-260 microns filter designed to retain particles potentially harmful to the patient.

8.15 Red blood cell administration set should be changed after:

- ✓ Maximum of 4 hours

- ✓ Four consecutive units of red blood cells have been infused through the same set. If administering different products a separate set must be used for each
- ✓ More than 30 minutes have elapsed between units
- ✓ Set becomes occluded

8.16 Infusion of one unit of Red Blood Cells must not exceed 4 hours.

8.17 Medication must never be added to any transfusion of blood, blood components, and/or plasma protein products.

8.18 Transfusion of blood and/or blood components should be initiated at a slower rate and patient monitored for first 15 minutes for signs and symptoms of an adverse reaction (recommended initial rate of 50ml/hour). If no observed or reported reactions after 15 minutes proceed to ordered rate of transfusion.

8.19 Consider a slower rate for patients at risk of circulatory overload.

8.20 Patient must be monitored throughout the transfusion for adverse reactions. Post transfusion monitoring is at the discretion of the person administering the transfusion.

Quality Control

8.21 All Health care facilities/Regional Health Authorities (RHA) in Manitoba should implement a quality improvement system to monitor compliance with the policies for the administration of blood components and blood products.

8.22 A competency program shall be established for all personnel involved in the transfusion process.

Notes/Special Considerations

8.23 Only approved infusion devices and ancillary equipment that meet provincial safety standards and are approved by Health Canada are to be used for administration of blood, blood components, and/or plasma protein products.

8.24 Blood warming device must be validated and have a temperature sensor and an audible alarm system.

Refer to Appendix 12 Blood Warming Devices.

8.25 Pressure exerted by pressure pumps should not exceed 300mm Hg.

8.26 Rapid infusion devices shall be used only by appropriately trained staff.

EMERGENCY BLOOD ADMINISTRATION

For the administration of Emergency Blood, a pre-transfusion blood specimen must be drawn prior to the transfusion of unmatched Group O red cells.

Transfusion records shall include a signed declaration by the requesting physician/ authorized practitioner confirming that the clinical situation was sufficiently urgent to justify releasing blood products before completion of pre-transfusion testing.
Refer to Appendix 9 Record of Transfusion Emergency Blood Component.

When only Group O Rh positive units are available the Blood Transfusion Service will notify the Transfusion Medicine Physician on call within 24 hours if the recipient is determined to be Rh negative and is a female less than or equal to 45 years of age in order to determine need for administration of Rh Immune Globulin. This may include a consultation with the attending physician.

Outpatient Settings:

8.27 The patient should be monitored for adverse reactions until the transfusion has been completed. Post transfusion monitoring shall be at the discretion of the person administrating the transfusion.

8.28 Information of post transfusion adverse effects must be provided prior to outpatient being discharged from care.

Refer to Appendix 13 Patient resources, "A Blood Transfusion Reaction; what you should know patient information sheet