Protocol for Bedside Audit of Blood Administration 2018

ORBCoN
Ontario Regional Blood Coordinating Network

Inspiring and facilitating best transfusion practices in Ontario.

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You will find all the information needed to conduct your audit within this package.

If you require additional information or have any questions, please contact:

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On behalf of, Ontario Regional Blood Coordinating Network

Provincial Bedside Audit Protocol

Background

The Provincial Agencies Trillium Gift of Life Network/Blood and Specialized Program (PATB, formerly the Blood Programs Coordinating Office) of the Ministry of Health and Long-Term Care was established in 2005. One of the PATB mandates is to lead the implementation of a provincial blood utilization strategy and monitor and make recommendations for initiatives related to blood and blood components. The Ontario Regional Blood Coordinating Network (ORBCoN) was established by the PATB in 2006 to provide an organized and integrated approach to blood management.

One of the highest risks of transfusion is the risk of receiving a blood component intended for another recipient. Estimates of the frequency of transfusion of blood of the wrong (incompatible) ABO blood group is approximately 1 in 40,000.[1,2] The primary cause of these incidents is failure to follow clerical or technical procedures. Through audit, the root cause of these types of errors can be identified and corrective actions be put into place.[3]

The Provincial Bedside Audit of Blood Administration project is a key activity of the provincial blood utilization strategy. This is the second time a province wide bedside audit of blood administration has been done.

Purpose and Rationale

The goal of this audit is to collect data and compare results from the 2010 Bedside audit to see if there have been improvements made in ensuring compliance with current Standards [4,5] and critical steps in the process, specifically identification of the recipient, identification of the blood components given and monitoring the patient before, during and after the transfusion.

Population to be studied

This data collection project will focus on all orders of blood components at the participating sites over a 3 month period (or maximum number of orders-see Sample size section). There will be no interaction with patients to collect these data. The data elements required are as listed below:

- Hospital site
- Date of transfusion
- Priority of transfusion
- Patient care area
- Component type
- Blood Component unit #
- Time unit left laboratory

This data collection project will focus on 4 areas of blood administration at the bedside, which included:

- Confirmation of physician's orders

- Check of patient's identification at the time of transfusion (at the bedside)
- Verification of the blood component (at the bedside)
- Procedure check of vital signs

General questions will also be asked about the participating facility:

- Is there a facility policy specific to blood component administration?
- Does the facility provide transfusion information to patients that are or may receive a blood transfusion?
- Does the facility have a training program for individuals that transport blood components to clinical areas?

Please note: Ethics approval may be required depending on each facilities protocol for this type of activity however most REB would consider this a quality improvement initiative.

Sample Size

The data collection period will occur for a maximum of 3 months (or maximum number of orders-see table below) from Sept 4th to Nov 30th, 2018. All Ontario hospitals will be invited to participate in the provincial audit.

Hospital Classification	# of transfusion procedures/duration
Small Community	2 transfusion procedures or 3 months
Medium to Large Community	5 transfusion procedures or 3 months
Teaching	10 transfusion procedures or 3 months

Method

Participating hospitals will be asked to perform the audits using the standard audit form developed by the provincial working group.

Participating hospitals will enter all data points from the audits sheet into the online bedside audit tool. Reports have been created to allow hospital participants to retrieve their results. Each hospital is only able to view audit results from their own facility.

The audit form and cover sheet are included in the Appendices along with the relevant references used in the development of the standard audit form.

Definition of end-point

Successful data collection and web-based entry for a 3 month period (or maximum number of transfusion procedures) at all participating sites signals the end-point of the data collection period.

Data analysis:

Following audit completion, all data will be validated and an analysis of the data will be conducted to determine if each of the transfusion procedures have complied with standards. A provincial audit report will be created using aggregate data that is anonymized. The final provincial audit report will be provided to all Ontario hospitals.

References:

1. Callum JL, Pinkerton P Bloody Easy 4 Blood Transfusions, Blood Alternatives and Transfusion Reactions – A Guide to Transfusion Medicine. 4nd ed, Sunnybrook Health Sciences Centre, Toronto ON; 2017:43
2. Dzik WH, Corwin H, Goodnough LT et al. Patient Safety and Blood Transfusion: New Solutions. Transfusion Medicine Reviews Vol 17, No 3; 2003:169-180.
3. Irina Maramica, Ira A. Shulman. Approaches to Blood Utilization Auditing in Technical Manual 19th edition, AABB Press, Bethesda MD; 2017:557-566
4. Standards for Hospital Transfusion Services ver 4 CSTM, Ottawa ON; 2017:13
5. Blood and Blood Components CAN / CSA-Z902-15. A National Standard of Canada, Standards Council of Canada, Mississauga ON; 2015:33

Bedside Audit Cover Page – Initial Order Entry

Introduction:

Hospital policies and procedures relating to transfusion of blood components and products are created to help ensure patients receive the correct blood component as prescribed by their physician in the safest manner possible. Performing regular audits of the transfusion process can provide a useful indicator for patient safety by monitoring if policies and procedures are being followed consistently.

Blood components are an important part of patient care but are not without risk. The highest risk of severe adverse reaction relating to blood transfusion (including death) is the transfusion of an incorrect unit to the wrong patient. The patient bedside is the last point at which such an error can be prevented. Therefore, the verification checks performed on the patient's identification and the blood component labels just prior to transfusion are critical steps in the transfusion process.

5 checks of safe blood verification are:

1. Confirm the correct identity of the recipient at the bedside
2. Confirm the correct blood component / product type
3. Confirm the correct blood component / product identification number
4. Check the compatibility of the ABO/Rh group of the blood component and the recipient
5. Check the expiry date on the blood component / product to ensure it is in date

Glossary of Terms *(to be considered on a separate tab accessible throughout all audit tools)*

Word/Phrase	Explanation
CBS Label	Label applied to the blood component by the blood supplier
TS Label/Tag	Label applied / attached to the blood component by the Transfusion Services (TS)
Laboratory request form/electronic request	Form or LIS request sent by the clinical area to document the component requested for a particular patient
Patent	Indicates that fluid can flow through IV tubing into patient's blood vessel
Acceptable Expiry Date	Product will not be transfused after date listed on TS label/Tag or CBS label

General Questions: *(Please complete and submit)*

1. Does your facility have a policy specific for blood component administration? ❍ Yes ❍ No
2. Does your facility have transfusion information to be provided to patients? ❍ Verbal ❍ Written ❍ Electronic ❍ Not Provided
3. Are staff who administer blood products trained and certified with competency assessment? ❍ Yes ❍ No
4. If Yes: How often is the competency assessed? ❍ 1 yr ❍ 2 yrs ❍ Other OTHER

Bedside Audit Form

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Bedside Audit Order

Order number:

* Transfusion date:

* Priority: ❍ Routine ❍ Urgent ❍ Stat

* Ward/Area: ❍ ER ❍ ICU/CCU ❍ OR/RR ❍ Outpatient Clinic
❍ Medical/Surgery Ward ❍ Obstetrical Unit
❍ Chronic Care/Rehab ❍ Neonatal/Pediatric

*Site Name
(multi centers)

* Blood Component: ❍ RBC
❍ Platelets
❍ Plasma
❍ Cryoprecipitate

* Patient Code

*Time unit left laboratory:

Order Confirmation Check: [See References 1-2]

* Is the physician's order documented? ❍ Yes ❍ No

If yes, * Is component type specified? ❍ Yes ❍ No

* Is the infusion rate specified? ❍ Yes ❍ No

* Is there evidence that Informed Consent was obtained? ❍ Yes ❍ No

* Was the component verified against the physician order upon receipt on the clinical area? ❍ Yes ❍ No

Identification of Patient Check: [See Reference 3]

* Was the recipient information on the TS label/tag compared to the recipient information on the Laboratory Request form? ❍ Yes ❍ No

* Were the recipient's name and one additional unique identifier on the TS label/tag compared with the identification attached to the patient? ❍ Yes ❍ No

* Did the confirmation of the patient's identification and the TS label/tag take place in the presence of the patient? (at the bedside) ❍ Yes ❍ No

Verification of Component: [See Reference 4-5]

* Was the donor unit ABO/Rh on the CBS label verified to match that on the TS label/tag? ❍ Yes ❍ No

* Was the donor unit number on the CBS label verified as identical to that on the TS label/tag? ❍ Yes ❍ No

* Was the recipient's ABO/Rh on the TS label/tag confirmed to be compatible with the donor unit? ❍ Yes ❍ No

If no indicate reason:

* Was the expiry date on the blood component verified to be acceptable? ❍ Yes ❍ No

Procedure Check: [See References 6-10]

* Time infusion started:

Time infusion finished:

* Was the IV established and patent when the blood component arrived at the bedside? ❍ Yes ❍ No

* Was patient advised of symptoms to watch for and report during or following transfusion? ❍ Yes ❍ No ❍ N/A

* Were pre-transfusion vital signs checked within 30 minutes prior to transfusion? ❍ Yes ❍ No

If not within 30 minutes, specify: ❍ 30 min – 1 hour ❍ 1 – 2 hours ❍ > 2 hours

* Were vital signs checked 15 min after start of transfusion? ❍ Yes ❍ No

* What vital signs were documented during transfusion?

❑ Temperature ❑ Blood Pressure
❑ Pulse ❑ Respiration
❑ Other (please specify):

* Were post-transfusion vital signs checked at the end of transfusion? ❍ Yes ❍ No

Name of Auditor:

Initials:

Bedside Audit Order Form References

SECTION: Transfusion Order Confirmation:

1. Physician's orders written:

CSA Z902-15 (11.4.3) CSTM v4 2017 (5.9.1.4)

Transfusions shall be prescribed by a physician and administered according to operating procedures.

CSA Z902-15 (11.4.4)

The rate of infusion should be specified by a physician.

CSTM v4 2017 (5.9.1.4)

Transfusion of blood components and blood products shall be prescribed by a physician or other authorized health care professional. The transfusion order shall specify the rate of infusion, if not in the standard operating procedure for transfusion.

2. Evidence of Informed Consent:

CSA Z902-15 (11.2.1) CSTM v4 2017 (5.8.6.2)

There shall be an operating procedure for obtaining informed consent of the recipient prior to the transfusion of whole blood and blood components. Information given to the recipient shall include
(a) A description of the whole blood or blood component;
(b) The associated risks and benefits, including life-threatening risks; and
(c) Alternatives, if appropriate to clinical circumstances, including benefits and risks.

Note: *Policies and procedures for informed consent are usually developed and maintained by the health care facility as a whole. This Clause is intended to ensure that essential information about transfusion is included when whole blood and blood components are involved.*

SECTION: Identification of Patient Check:

Identification of Recipient:

1. **CSTM v4 2017 (5.9.3.1)**

Policies, processes and procedures shall be established to ensure continuous and unequivocal identification of the recipient from the sample collection through to transfusion.

CSA Z902-15 (11.3.1)

Before any transfusion of blood components, there shall be unequivocal identification of the recipient and of the component to be transfused to ensure they match the information in the written request for blood components, as detailed in Items a) to f) in Clause 10.2.1. The person performing the transfusion shall confirm and document that all information associating the blood component with the proposed recipient has been matched and verified in the physical presence of the recipient, as defined in the operating procedures.

Note*: Information matching and verification take place in the physical presence of the recipient so that a direct comparison can be made between the blood component request (see Clause 10.2.1) and the available visual information (e.g., on the recipient's identification band) or verbal information (from a conscious recipient).*

SECTION: Verification of Component:

Identification of Blood Component:

2. **CSA Z902-15 (11.3.2)**

There shall be unequivocal identification of the blood component before any transfusion of blood components

3. Transfusion label/tag remained attached to the component for the entire transfusion?

CSA Z902-15 (11.3.3)

All identifying information attached to the blood bag shall remain attached at least until the completion of the transfusion

SECTION: Procedure Check:

4. Was the IV established and patent prior to receiving the blood?

CSTM v4 2017 (5.9.5.2)

Venous access shall be established as per established hospital policy and procedures. Needle gauge shall be a diameter large enough to allow appropriate flow rates and avoid cell damage.

CSA Z902-15 (11.4.9)

Before the infusion of blood components, the administration line and filter shall be primed with blood component or a compatible solution.

Bloody Easy Blood Administration v2 (page 17)

Ensure that the IV access is dedicated to the transfusion.

5. Was patient advised of symptoms to watch for and report during or following transfusion?

CSA Z902-15 (11.4.16)

The recipient shall be observed during the transfusion and for an appropriate time thereafter for suspected adverse events. Instructions concerning possible adverse events shall be provided to the recipient, or to a responsible caregiver, when direct medical observation or monitoring of the recipient will not be available after transfusion.

CSTM v4 2017 (5.9.4.10)

Before, during, and after transfusion, recipient vital signs shall be monitored and documented. The recipient shall be monitored by qualified personnel for suspected adverse reactions during and after the transfusion. If direct medical monitoring is not possible after transfusion, the recipient or a responsible caregiver shall be given instructions concerning possible adverse reactions.

6. Pre-transfusion vital signs checked within 30 min prior to transfusion?

CSA Z902-15 (11.4.15)

Recipient vital signs shall be recorded before, during, and after transfusion.

CSTM v4 2017 (5.9.4.10)

Before, during, and after transfusion, recipient vital signs shall be monitored and documented. The recipient shall be monitored by qualified personnel for suspected adverse reactions during and after the transfusion. If direct medical monitoring is not possible after transfusion, the recipient or a responsible caregiver shall be given instructions concerning possible adverse reactions.

Bloody Easy Blood Administration v2 (page25)

Monitor the patient closely and document vital signs: prior to the transfusion – within previous 30 minutes.

7. Were vital signs checked 15 minutes after the start of the transfusion?

CSA Z902-15 (11.4.15)

Recipient vital signs shall be recorded before, during, and after transfusion.

Bloody Easy Blood Administration v2 (page25)

Monitor the patient closely and document vital signs: Prior to the transfusion – within previous 30 minute, After the first 15 minutes of the blood unit, At prescribed intervals, according to your hospital policy, At the end of the unit, If there is a suspected reaction

Bloody Easy V4 (page 21,30,35)

Monitor patient. Check patient's vital signs: prior to starting each unit, 15 minutes after starting, at end of transfusion, during any transfusion reactions.
Transfuse slowly (50 mL/hr) for the first 15 minutes, where appropriate.

Monitor the patient closely for the first 15 minutes.

8. Post transfusion vital signs checked after transfusion is complete?

CSA Z902-15 (11.4.15)

Recipient vital signs shall be recorded before, during, and after transfusion.

Bloody Easy Blood Administration v2 (page25)

Monitor the patient closely and document vital signs: Prior to the transfusion – within previous 30 minute, After the first 15 minutes of the blood unit, At prescribed intervals, according to your hospital policy, At the end of the unit, If there is a suspected reaction

Bloody Easy 4 (page 21,30,35)

Monitor patient. Check patient's vital signs: prior to starting each unit, 15 minutes after starting, at end of transfusion, during any transfusion reactions.
Transfuse slowly (50 mL/hr) for the first 15 minutes, where appropriate.
Monitor the patient closely for the first 15 minutes.

1. CSTM Standards for Hospital Transfusion Services. Ver 4, CSTM, Ottawa, Canada; 2017.
2. CAN/CSA-Z902-15 A National Standard of Canada Blood and Blood Components. Standards Council of Canada, CSA Mississauga, Canada; 2015.
3. Callum JL, Pinkerton PH, Bloody Easy 4 Blood Transfusions, Blood Alternatives and Transfusion Reactions – A Guide to Transfusion Medicine, Sunnybrook Health Sciences Centre, Toronto, Canada; ver 4: 2016.
4. Lima A, Bloody Easy Blood Administration Ver2– A Handbook for Health Professionals, Ontario Regional Blood Coordinating Network; 2015.

Tips on the Bedside Audit Form…

Bedside Audit Form

ORBCoN
Ontario Regional Blood Coordinating Network

Order Number
Assigned by the online tool, record assigned number when entering data into the tool

Bedside Audit C

Order number:

* Priority: ❍ Routine ❍ Urgent ❍ Stat

* Ward/Area: ❍ ER ❍ ICU/CCU ❍ OR/RR
❍ Medical/Surgery Ward
❍ Chronic Care/Reh

Patient Code: Record patient code from separate audit tracking log form here to keep track of paper form. When entering in tool, code will only be linked to Order number generated by system and can not be traced to specific patient

❍ RBC
❍ Platelets
❍ Plasma
❍ Cryoprecipitate

* Patient Code

*Time unit left laboratory:

Order Confirmation Check
You will need to go to the patient chart to check this

Order Confirmation Check: [See References 1-2]

*Is the physician's order documented? ❍ Yes ❍ No

If yes, * Is component type specified? ❍ Yes ❍ No

* Is the infusion rate specified? ❍ Yes ❍ No

* Is there evidence that Informed Consent was obtained? ❍ Yes ❍ No

* Was the component verified against the physician order upon receipt on the clinical area? ❍ Yes ❍ No

Was the component verified against the physician order?
You may need to ask the transfusionist if this was done

Identification of Patient Check: [See Reference 3]

* Was the recipient information on the TS label/tag compared to the recipient information on the Laboratory Request form? ❍ Yes ❍ No

* Were the recipient's name and one additional unique identifier on the TS label/tag compared with the identification attached to the patient? ❍ Yes ❍ No

* Did the confirmation of the patient's identification and the TS label/tag take place in the presence of the patient? (at the bedside) ❍ Yes ❍ No

Verification of Component: [See Reference 4-5]

* Was the donor unit ABO/Rh on the CBS label verified to match that on the TS label/tag? ❍ Yes ❍ No

* Was the donor unit number on the CBS label verified as identical to that on the TS label/tag? ❍ Yes ❍ No

* Was the recipient's ABO/Rh on the TS label/tag confirmed to be compatible with the donor unit? ❍ Yes ❍ No

If no indicate reason:

* Was the expiry date on the blood component verified to be acceptable? N

Was the recipient's ABO/RH on the TS label/tag confirmed to be compatible?
If this step is not part of your facility's procedure, answer no and then make a comment in the box.
You may need to ask the transfusionist if this was done.

Procedure Check: [See References 6-10]

* Time infusion started:

Time infusion Finished:

* Was the IV established and patent when the blood component arrived at the bedside

* Was patient advised of symptoms to watch for and report during or following transfusion? ❍ Yes ❍ No ❍ N/A

* Were pre-transfusion vital signs checked within 30 minutes prior to transfusion? ❍ Yes ❍ No

If not within 30 minutes, specify: ❍ 30 min – 1 hour ❍ 1 – 2 hours ❍ > 2 hours

* Were vital signs checked 15 min after start of transfusion? ❍ Yes ❍ No

* What vital signs were documented during transfusion?

❑ Temperature ❑ Blood Pressure
❑ Pulse ❑ Respiration
❑ Other (please specify):

* Were post-transfusion vital signs checked at the end of transfusion? ❍ Yes ❍ No

Name of Auditor:

Initials:

Version September 2017

Bedside Audit Tracking Log Form

Patient Code Number	Transfusion Date (dd/mm/yyyy)	Last Name	First Name	Hospital Identification Number	Data entry complete (√)	Initials