

2023 Provincial Bedside Audit of Blood Administration



Inspiring and facilitating best
transfusion practices in Ontario.



Table of Contents

| | |
|---------------------------------|---|
| | 1 |
| 1. Background | 3 |
| 2. Purpose | 3 |
| 3. Protocol | 3 |
| 4. Sample Size | 4 |
| 5. Method | 5 |
| 6. Definition of Endpoint | 5 |
| 7. Data analysis: | 5 |
| 8. Audit limitations: | 5 |
| 9. Audit Documentation | 5 |

1. Background

Transfusion of blood is a frequently ordered treatment; across Ontario hospitals, every day in FY 2021/22, approximately 950 red blood cell units were transfused.¹ To deliver safe transfusion patient care, evidence-based, best practice hospital policies and procedures are developed. Audit, assessment of practice, is a valuable patient safety indicator and provides opportunity for ongoing learning to enhance transfusion safety.² This audit tool is based on Health Canada and Transfusion Medicine TM Standards which provide the rationale for policies and procedures.

The Provincial Bedside Audit of Blood Administration project is a key activity of the provincial blood utilization strategy. Data from this audit may be compared with previous audits held in 2011 and 2018.

The audit form has been updated as per current TM standards and online tool has been rebuilt using REDCap (Research Electronic Data Capture) a secure, web-based software platform designed for building and managing online databases and surveys³. This REDCap tool has been customized for the Bedside Audit of Blood Administration Project.

2. Purpose

The goal of this audit is to collect data and compare results from the previous Bedside audits to see if there have been improvements made in ensuring compliance with current Standards² 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.

3. Protocol

Population to be studied

This data collection project will focus on all orders of **blood components only** 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 audit will be categorized into 7 subsections of data collection. The data elements required are as listed below:

Bedside Audit Demographic

- Hospital site
- Date of transfusion
- Priority of transfusion
- Patient care area
- Component type

Pre-Transfusion Checks for Transfusionist

- Confirmation of physician orders
- Informed Consent obtained
- Established IV prior to component arriving at clinical area

Pre-Transfusion Checks – Transfusion Medicine

Patient Identification Checks

- Verify the patient’s and unit identification prior to issuing to clinical area
- Verify the time component was issued is documented

Component Checks

- Verify the ABO/Rh of component and patient are identical or compatible against test results, component label and Transfusion Medicine label/tag
- Verify the unit number is identical on the component supplier label and the Transfusion Medicine label/tag
- Verify the expiry date is acceptable
- Verify the component checks were documented

- Verify TM patient identifiers identical
- Verify the identification checks were documented in patient’s chart

Procedure Checks

- Verify Was the patient advised of signs and symptoms to watch out for and when to report
- Verify that the correct supplies and equipment were used
- Verify that the start of the infusion was documented
- Verify that the vital signs were checked at the required intervals

Post Transfusion Checks

- Verify that the transfusion end time was documented
- Verify that the transfusion was completed within the 4 hours from time of issue
- Verify the identity of the transfusionist, volume transfused, vital signs and any patient assessments are documented

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.

4. Sample Size

The data collection period will occur for a maximum of 3 months (or maximum number of orders-see table below) from Jan 30th to Mar 30th, 2023. All Ontario hospitals will be invited to participate in the provincial audit.

| Hospital Classification | # of transfusion procedures/duration |
|--|---|
| Small Community (<100 beds) | 2 transfusion procedures or 3 months |
| Medium to Large Community (>100 beds) | 5 transfusion procedures or 3 months |
| Large/Teaching (university affiliated) | 10 transfusion procedures or 3 months |

5. Method

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

Participating hospitals will enter all data points from the audit form into the online REDCap audit tool. The link to this audit tool will be provided by ORBCoN by email.

A report template has been created to allow hospital participants to retrieve and analyze their results. Each hospital is only able to view audit results from their own facility.

Participants are required to follow the user guide for data entering and generating reports.

The audit form, user guide and reference document used in the development of the standard audit form is included.

6. Definition of Endpoint

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

7. 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.

8. Audit limitations:

REDCap user profile and link to project is needed to perform audits to enter data electronically

9. Audit Documentation

- [Bedside Audit of Blood Administration User Guide](#)
- [Bedside Audit of Blood Administration Forms](#)
- Bedside Audit of Blood Administration Data Report Template
- [Bedside Audit of Blood Administration References Transfusion Medicine Standards and Best Practices](#)

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- ¹ Ontario Regional Blood Coordinating Network (ORBCoN). Blood Utilization Graphs [Internet]. Toronto (CA); ORBCoN: 2022 Aug [cited 2022 Aug 16]. Available from: <https://transfusionontario.org/en/category/blood-utilization-audits/blood-utilization-graphs/>
- ² Irina Maramica, Ira A. Shulman. Approaches to Blood Utilization Auditing in Technical Manual 19th edition, AABB Press, Bethesda MD; 2017:557-566
- ³ PA Harris, R Taylor, R Thielke, J Payne, N Gonzalez, JG. Conde, Research electronic data capture (REDCap) – A metadata-driven methodology and workflow process for providing translational research informatics support, J Biomed Inform. 2009 Apr;42(2):377-81.