

Bedside Audit of Blood Administration (BABA) User Guide

Version 2: January 2024



Inspiring and facilitating best
transfusion practices in Ontario.



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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 Bedside Audit of Blood Administration project is a key activity of the provincial blood utilization strategy. In 2011 an online e-tool was built for Ontario hospitals to capture audit data and provide a report of the audit findings. In 2021 the bedside audit tool along with all other e-tools encountered a cyber breach and had to be rebuilt.

The new audit tool has been rebuilt using REDCap (Research Electronic Data Capture) a secure, web-based software platform designed for building and managing online databases and surveys. This REDCap tool has been customized for the Bedside Audit of Blood Administration Project.^{3,4} Historical data, from previous audits, has been uploaded to REDCap.

2. Purpose

This user guide will explain the questions on revised audit forms (component and product forms) as well as the functionality of the online tool in REDCap, including entry of audit results, exporting data and generation of reports using the ORBCoN template.

There are two user profiles in the REDCap Bedside Audit of Blood Administration tool – Location Manager and Data Entry.

Location Manager: This profile is assigned to users requiring report functionality, data exports and statistics. This profile can create a new record, view, and edit responses.

Data Entry: This profile is assigned to users to create a new record, view, and edit responses.


Data Access Group (DAG): Each hospital/corporation will have a DAG. Users within a given DAG can access records created by users within that group.

Users working in multiple hospital sites may have access to more than one DAG and will be required to use the DAG Switcher (which allows users to move themselves in and out of specific DAG to select the site of audit). Once assigned to a DAG, the user will be able to see ONLY the project records created by themselves and other users in that group. When assigned to multiple DAGs, the user will see a blue banner at the top of every project page, which will present the option to switch to another DAG.



3. Tracking Log

Bedside Audit of Blood Administration Tracking Log is found in Appendix A (page 43). This example Tracking Log may be modified to meet individual hospital needs. The log is a ***hospital document*** for internal tracking purposes which enables hospitals to link the REDCap generated record ID with a specific patient transfusion occurrence. This document ***is not*** to be shared outside of your organization.

 Bedside Audit of Blood Administration Tracking Log								
Record ID	Patient Code	Transfusion Date (dd/mm/yyyy)	Issue Time	Surname	First name	Hospital Identification Number	Data Entry Complete (v)	Data Entry by (initials)

Record ID is found on each REDCap record and is further defined in section 5.

Patient code is a mandatory REDCap field which hospitals must create/define and record on their tracking log for each audit data entry.

NOTE: *To avoid patient privacy breaches, do not use patient identifiers (i.e., initials, hospital number, accession number) or blood unit number.*

Suggested patient code creation: create a numbering system incorporating hospital name (acronym), audit year and sequential numbering.

i.e., Patient Code for first audit in 2022 Hospital A would be HospA-22-0001

 Patient Code for fifth audit in 2022 Hospital A would be HospA-22-0005

 New Audit year - Patient Code for first audit in 2023 Hospital A, HospA-23-0001

Issue Time: time unit left laboratory.

4. Bedside Audit of Blood Administration Forms (Manual)

There are two Bedside Audit of Blood Administration Forms; one for auditing administration of blood components, the other for auditing administration of blood products (refer to Appendix B, Bedside Audit of Blood Administration Forms, page 43).

BEDSIDE AUDIT OF BLOOD ADMINISTRATION FORM – COMPONENTS



BEDSIDE AUDIT OF BLOOD ADMINISTRATION FORM – PRODUCTS



Print the form specific to the audit you are conducting.

The ***section headings*** of both forms align. The sections are correlated with TM Standards and Best Practices (refer to Appendix C, Bedside Audit of Blood Administration References Transfusion Medicine Standards & Best Practice, page 43).

The ***fields*** within each section are particular to components and products, respectively.

The form is your working document to guide your audit and to record the findings.



Refer to 4.1 for the blood components form and 4.2 for the blood products form.

NOTE: Complete all fields in each section where feasible. If the auditor did not assess a parameter, leave that field blank. Added instruction for specific fields is provided. The terminology “for compliance” refers to the requirements necessary for fulfillment of TM Standards and Best Practice.

4.1. Components Form

4.1.1 Demographics

Demographics		Hospital Name:	
Record ID: <i>(REDCap generates)</i>	Patient Code: <i>(Created by Auditor, as per tracking log)</i>	Transfusion Date:	
		<i>To avoid patient privacy breaches, do not use patient identifiers (i.e., initials, hospital number, accession number) or blood unit number.</i>	
Transfusion Priority: <input type="checkbox"/> Routine <input type="checkbox"/> Urgent <input type="checkbox"/> Stat	Transfusion Location: <i>(Select location that best aligns to your site locations)</i> <input type="checkbox"/> Chronic Care/Rehabilitation <input type="checkbox"/> Obstetrical Unit <input type="checkbox"/> Emergency <input type="checkbox"/> Operating Room <input type="checkbox"/> Intensive/Cardiac Care Unit <input type="checkbox"/> Outpatient Clinic <input type="checkbox"/> Medical/Surgical Ward <input type="checkbox"/> Post Anesthetic Care Unit <input type="checkbox"/> Neonatal/Pediatric <input type="checkbox"/> Other <i>(specify)</i> _____		
Blood Component: <input type="checkbox"/> Red Blood Cells (RBC) <input type="checkbox"/> Platelets <input type="checkbox"/> Plasma <input type="checkbox"/> Cryoprecipitate (Cryo)			

- **Record ID:** This number will be auto generated in REDCap each time a record is added (i.e., an audit is documented). The first four digits reflect your DAG group ID followed by the record number. This Record ID number must be entered on the paper audit form and the Bedside Audit of Blood Administration Tracking Log (refer to Section 3).
- **Patient Code:** the auditor must create/define and then document the patient code on the paper audit form, the Bedside Audit of Blood Administration Tracking Log (refer to Section 3) and enter the patient code in REDCap.

NOTE: *To avoid patient privacy breaches, do not use patient identifiers (i.e., initials, hospital number, accession number) or blood unit number.*

4.1.2 Pre-Transfusion Checks-Transfusionist

Pre-Transfusion Checks - Transfusionist (References # 1)	
Was the authorized prescriber’s order documented?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Did the order include:	<input type="checkbox"/> YES <input type="checkbox"/> NO
• Component type	<input type="checkbox"/> YES <input type="checkbox"/> NO
• Volume/quantity/dose	<input type="checkbox"/> YES <input type="checkbox"/> NO
• Rate/duration of transfusion or stated in facility specific standard operating procedure	<input type="checkbox"/> YES <input type="checkbox"/> NO
Was informed consent documented? <i>(Only select “Yes” if the transfusionist verified informed consent was documented)</i>	<input type="checkbox"/> YES <input type="checkbox"/> NO
Was the IV established and * patent prior to the component arriving at the clinical area?	<input type="checkbox"/> YES <input type="checkbox"/> NO

- **Did the order include:**
For compliance, the order must include all 3 criteria as listed; opportunity to assess each criterion individually is provided.
- **Was informed consent documented?**
As per your hospital policy, informed consent is documented by the authorized



prescriber using a form or clinical notation. The transfusionist should verify informed consent was documented.

The transfusionist should not proceed with blood administration if informed consent is not documented unless the patient situation requires emergency transfusion.

- **Was the IV established and * patent prior to the product arriving at clinical area?**
Patent: correctly placed IV which permits IV solution to flow directly into the vein.

4.1.3 Pre-Transfusion Checks–Transfusion Service (TS)

Pre-Transfusion Checks – Transfusion Service (TS) (References # 2)	
Were the * Transfusion Medicine (TM) patient identifiers on the order/pick-up slip verified to match those on the TS label/tag on the component?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Time component issued from TS:	__:__ hrs.

- * **TM patient identifiers** include: 1. Patient surname & first name
2. Unique hospital identification number

4.1.4 Transfusion

Transfusion (References # 3)	
Was the component type received from TS verified to match the authorized prescriber's order?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Were all the checks done in the presence of the patient, at the bedside?	<input type="checkbox"/> YES <input type="checkbox"/> NO

4.1.5 Patient Identification Checks

Patient Identification Checks (References # 4)	
Were the * TM patient identifiers verified to be identical on the following: <ul style="list-style-type: none"> • Patient's arm band • Authorized prescriber's order • TS label/tag 	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO
Were the patient identification checks documented in the paper/electronic medical record (EMR)?	<input type="checkbox"/> YES <input type="checkbox"/> NO

- * **TM patient identifiers** include: 1. Patient surname & first name
2. Unique hospital identification number
- **Were the patient identification checks documented in the paper/electronic medical record (EMR)?**
"Documented" refers to the requirements as detailed in your hospital blood administration policy (e.g., transfusionist's signature on the transfusion record which verifies the procedures were followed; procedure list with check boxes selected; electronic documentation system).



4.1.6 Component Checks

Component Checks (References # 5a)	
<p>Were the ABO/Rh(D) blood groups (as applicable to the component being transfused) of the patient and the component verified to be identical or compatible: ←</p> <ul style="list-style-type: none"> • Patient ABO/Rh(D) test results (Group & Screen test) • Canadian Blood Services (CBS) label • TS label/tag 	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO
<p>If <i>not identical</i>, was compatibility validated (e.g., transfusionist's knowledge stated, compatibility chart consulted)? ←</p>	<input type="checkbox"/> N/A <input type="checkbox"/> YES <input type="checkbox"/> NO
<p>Was the unit number verified as identical on:</p> <ul style="list-style-type: none"> • CBS label • TS label/tag 	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO
<p>Was the expiry date on the blood component verified to be acceptable?</p>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<p>Were date and time of issue from TS checked to determine the maximum timeframe for completing the transfusion? ←</p>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<p>Were the component checks documented in the paper/electronic medical record (EMR)? ←</p>	<input type="checkbox"/> YES <input type="checkbox"/> NO

- **Were the ABO/Rh(D) blood groups (as applicable to the component being transfused) of the patient and the component verified to be identical or compatible:**
 - “As applicable to the component being transfused”, refers to e.g., for plasma Rh(D) is not relevant, e.g., for platelets depending on the supply on hand, least incompatible platelets may be transfused. In such clinical situations, select “YES”.
 - For compliance, all 3 criteria noted must be verified; opportunity to assess each criterion individually is provided.
- **If *not identical*, was compatibility validated?:**
 - Select “N/A” if the ABO/Rh(D) blood groups of the patient and the component were identical or if the above “as applicable to the component being transfused” information is pertinent.
 - Select “YES” if not identical and compatibility was validated by transfusionist verbally confirming their knowledge of compatibility or the hospital’s compatibility chart was consulted.
 - A question such as, “*tell me about how you would know the patient’s and component’s ABO/Rh(D) blood groups are compatible*” could be asked.
 - Select “NO” if not identical and the transfusionist does not indicate knowledge of compatibility or the hospital’s compatibility chart was not consulted.
 - A question such as, “*tell me about how you would know the patient’s and component’s ABO/Rh(D) blood groups are compatible*” could be asked.
- **Were date and time of issue from TS checked to determine the maximum timeframe for completing the transfusion?**
 - Select “YES” if the transfusionist indicates the component transfusion must be completed within 4 hours from the time of issue from TS (removal from temperature controlled environment).
 - A question such as, “*tell me the time the transfusion needs to be completed by*” could be asked.



- Select “NO” if the transfusionist was unaware of the need to check issue time (verses transfusion start time) to determine the maximum timeframe for completing the transfusion.
- **Were the component checks documented in the paper/electronic medical record (EMR)?:**
 “Documented” refers to the requirements as detailed in your hospital blood administration policy (e.g., transfusionist’s signature on the transfusion record which verifies the procedures were followed; procedure list with check boxes selected; electronic documentation system).

4.1.7. Procedure Checks

Procedure Checks (References # 6)	
Was the patient advised of signs & symptoms to watch for and report during or following the transfusion?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A FOR PATIENT
Was blood administration tubing with 170-260 micron filter used?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Was IV fluid 0.9% sodium chloride used?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Was the transfusion start time documented?	<input type="checkbox"/> YES, START TIME ____:____hrs <input type="checkbox"/> NO
Were vital signs checked within 30 minutes prior to transfusion?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Was the transfusion started at a slow rate (adults: 50 mL/hr; neonates/pediatrics: 1 mL/kg/hr, to maximum 50 mL/hr) for the first 15 minutes of transfusion?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A PATIENT SITUATION
Were vital signs checked 15 minutes after start of the transfusion?	<input type="checkbox"/> YES <input type="checkbox"/> NO
For vital signs checks, indicate if the vital sign parameter was assessed:	
• Temperature	<input type="checkbox"/> YES <input type="checkbox"/> NO
• Blood Pressure	<input type="checkbox"/> YES <input type="checkbox"/> NO
• Pulse	<input type="checkbox"/> YES <input type="checkbox"/> NO
• Respiration	<input type="checkbox"/> YES <input type="checkbox"/> NO
• Oxygen Saturation	<input type="checkbox"/> YES <input type="checkbox"/> NO
• Other (specify)	<input type="checkbox"/> YES <input type="checkbox"/> NO
Was the transfusionist aware of the steps to manage a transfusion reaction?	<input type="checkbox"/> YES <input type="checkbox"/> NO

- **Was the patient advised of signs & symptoms to watch for and report during or following the transfusion?:**
 Select “N/A FOR PATIENT” if the patient is unable to understand instructions e.g., comatose, or sedated patient.
- **Was the transfusion started at a slow rate (adults: 50 mL/hr; neonates /pediatrics: 1 mL/kg/hr, to maximum 50 mL/hr) for the first 15 minutes of transfusion?:**
 Select “N/A FOR PATIENT SITUATION” if the patient is bleeding/unstable, or the transfusion is ordered as “urgent or stat” and transfusionist deems the first 15-minute slow transfusion rate might impact the patient’s clinical situation.
- **Were vital signs checked 15 minutes after the start of the transfusion?:**
 Auditor time constraints may prevent returning to the transfusion location after the transfusion is completed to review paper documentation of vital signs.
 - A question such as “Tell me when you would check vital signs?” could be asked. If the transfusionist response includes “15 minutes after the transfusion was started”, then select “YES”.
- **For vital signs checks, indicate if the vital sign parameter was assessed:**
 For compliance, all parameters (excluding “Other”) must be verified; opportunity to assess each parameter individually is provided.



- **Was the transfusionist aware of the steps to manage a transfusion reaction?**
Select “Yes” if the transfusionist describes the steps to manage a transfusion reaction.
 - A question such as “*Tell me about what you would do if this patient had a fever or other symptom of a transfusion reaction?*” could be asked.

4.1.8. Post-Transfusion


Post-Transfusion (References # 7)	
Was the transfusion end time documented? ←	<input type="checkbox"/> YES, END TIME: __: __ hrs <input type="checkbox"/> NO <input type="checkbox"/> AUDITOR DID NOT ASSESS
Was the transfusion completed within 4 hours from time of issue from TS? ←	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN
Were vital signs checked on completion of the transfusion? ←	<input type="checkbox"/> YES <input type="checkbox"/> NO
Did the TS label/tag remain attached to the component until completion of transfusion? ←	<input type="checkbox"/> YES <input type="checkbox"/> NO
Does paper/electronic medical record (EMR) documentation provide the identity of the transfusionist?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Does the paper/electronic medical record (EMR) documentation include:	
• Volume transfused	<input type="checkbox"/> YES <input type="checkbox"/> NO
• Vital signs	<input type="checkbox"/> YES <input type="checkbox"/> NO
• Patient assessments (if applicable e.g., a transfusion reaction occurred) ←	<input type="checkbox"/> N/A <input type="checkbox"/> YES <input type="checkbox"/> NO
• None of the above documentation was assessed by the auditor ←	<input type="checkbox"/> AUDITOR DID NOT ASSESS

- **Was the transfusion end time documented?**
 - Select “NO” if the transfusion end time documentation was assessed by the auditor and no documentation was evident.
 - Select “AUDITOR DID NOT ASSESS” if the auditor was unable to assess end time documentation (e.g., auditor time constraints, unable to return to the transfusion location after the transfusion was completed).
- **Was the transfusion completed within 4 hours from time of issue from TS?:**
To determine, review issue time and transfusion end time to calculate transfusion time.
Select “UNKNOWN” if either issue time or transfusion end time was not documented.
- **Were vital signs checked on completion of transfusion?:**
Auditor time constraints may prevent returning to the transfusion location after the transfusion was completed to review paper documentation of vital signs.
 - A question such as “*Tell me when you would check vital signs?*” could be asked. If the transfusionist response includes “*When the transfusion is finished*”, then select “YES”.
- **Did the TS label/tag remain attached to the component until completion of the transfusion?**
This criterion is detailed explicitly in the TM standards (refer to Appendix C, page 12). It is not reasonable for the auditor to observe the entire transfusion to assess this. An alternative includes discussion with the transfusionist.



- A question such as “Tell me when you might remove the TS label/tag?” could be asked. If the transfusionist response includes “The TS label/tag has to stay on the blood bag, it is never removed”, then select “YES”.
- **Does the paper/electronic medical record (EMR) documentation include:**
 - **Patient assessments (if applicable e.g., a transfusion reaction occurred)**
 - Select “N/A” if there was no indication for additional patient assessment e.g., no signs or symptoms of transfusion reaction or patient concern.
 - Select “YES” if there was an indication for additional patient assessment and that assessment was documented (e.g., temperature 38.2 degrees Celsius was documented on the vital signs record and the patient care provided for temperature 38.2 degrees Celsius was documented).
 - Select “NO” if there was an indication for additional patient assessment but that assessment was not documented (e.g., temperature 38.2 degrees Celsius was documented on the vital signs record but no further documentation of patient care provided for temperature 38.2 degrees Celsius).
 - For compliance, volume transfused and vital signs must be documented [i.e., “YES” response] as well as patient assessment (if applicable a transfusion reaction occurred) [i.e., “N/A” or “YES” response]. Opportunity to assess each criterion individually is provided.
 - **None of the above documentation was assessed by the auditor**
Select “AUDITOR DID NOT ASSESS” only when documentation of Volume transfused AND Vital signs AND Patient assessments (if applicable e.g., a transfusion reaction occurred) were not assessed by the auditor (e.g., auditor time constraints, unable to return to the transfusion location after the transfusion was completed).

4.1.9. Summary

Summary	
Name of Auditor:	REDCap Entered By: 
Comments:	
* Patent: correctly placed IV which permits IV solution to flow directly into the vein	
* TM patient identifiers include: 1. Patient surname & first name 2. Unique hospital identification number	

- **REDCap Entered By:**
At the time of REDCap data entry, the first and last name of the individual entering the audit information may be noted on the paper audit form.



4.2. Products Form

4.2.1 Demographics

Demographics	Hospital Name:	
Record ID: <i>(REDCap generates)</i>	Patient Code: <i>(Created by auditor, as per tracking log)</i>	Transfusion Date:
<i>To avoid patient privacy breaches, do not use patient identifiers (i.e., initials, hospital number, accession number) or blood unit number.</i>		
Transfusion Priority: <input type="checkbox"/> Routine <input type="checkbox"/> Urgent <input type="checkbox"/> Stat	Transfusion Location: <i>(Select location that best aligns to your site locations)</i> <input type="checkbox"/> Chronic Care/Rehabilitation <input type="checkbox"/> Emergency <input type="checkbox"/> Intensive/Cardiac Care Unit <input type="checkbox"/> Medical/Surgical Ward <input type="checkbox"/> Neonatal/Pediatric <input type="checkbox"/> Obstetrical Unit <input type="checkbox"/> Operating Room <input type="checkbox"/> Outpatient Clinic <input type="checkbox"/> Post Anesthetic Care Unit <input type="checkbox"/> Other <i>(specify)</i> _____	
Blood Product: <input type="checkbox"/> Albumin <input type="checkbox"/> Fibrinogen Concentrate <input type="checkbox"/> Intravenous Immune Globulin <input type="checkbox"/> Prothrombin Complex Concentrate <input type="checkbox"/> Other <i>(specify)</i> _____		

- **Record ID:** this number will be auto generated in REDCap each time a record is added (i.e., an audit is documented). The first four digits reflect your DAG group ID followed by the record number. This Record ID number must be entered on the paper audit form and the Bedside Audit of Blood Administration Tracking Log (refer to Section 3).
- **Patient Code:** the auditor must create/define and then document the patient code on the paper audit form and the Bedside Audit of Blood Administration Tracking Log (refer to Section 3) and enter the patient code in REDCap.
NOTE: *To avoid patient privacy breaches, do not use patient identifiers (i.e. initials, hospital number, accession number) or blood unit number.*

4.2.2. Pre-Transfusion Checks-Transfusionist

Pre-Transfusion Checks – Transfusionist (References # 1)		
Was the authorized prescriber’s order documented?	←	<input type="checkbox"/> YES <input type="checkbox"/> NO
Did the order include:		
• Product type		<input type="checkbox"/> YES <input type="checkbox"/> NO
• Volume/quantity/dose		<input type="checkbox"/> YES <input type="checkbox"/> NO
• Rate/duration of infusion or stated in facility specific standard operating procedure (as per manufacturer’s recommendations)		<input type="checkbox"/> YES <input type="checkbox"/> NO
Was informed consent documented?	←	<input type="checkbox"/> YES <input type="checkbox"/> NO
<i>(Only select “Yes” if the transfusionist verified informed consent was documented).</i>		
Was the IV established and * patent prior to the product arriving at clinical area?	←	<input type="checkbox"/> YES <input type="checkbox"/> NO
		<input type="checkbox"/> N/A FOR PRODUCT

- **Did the order include:**
For compliance, the order must include all 3 criteria as listed; opportunity to assess each criterion individually is provided.
- **Was informed consent documented?:**
As per your *hospital policy*, informed consent is documented by the authorized prescriber using a form or clinical notation. The transfusionist should verify informed consent was documented. The transfusionist should not proceed with blood administration if informed consent is not documented unless the patient situation requires emergency transfusion.
- **Was the IV established and * patent prior to the product arriving at clinical area?:**
Patent: correctly placed IV which permits IV solution to flow directly into the vein. Select “N/A FOR PRODUCT” if the product’s route of administration is not IV.



4.2.3. Pre-Transfusion Checks–Transfusion Service (TS)

Pre-Transfusion Checks – Transfusion Service (TS) (References # 2)	
Were the * Transfusion Medicine (TM) patient identifiers on the order/pick-up slip verified to match those on the TS label/tag?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Time product issued from TS:	__ : __ hrs.

- * **TM patient identifiers** include: 1. Patient surname & first name
2. Unique hospital identification number

4.2.4. Transfusion

Transfusion (References # 3)	
Was the product type received from TS verified to match the authorized prescriber's order?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Were all the checks done in the presence of the patient, at the bedside?	<input type="checkbox"/> YES <input type="checkbox"/> NO

4.2.5. Patient Identification Checks

Patient Identification Checks (References # 4)	
Were the * TM patient identifiers verified to be identical on the following: <ul style="list-style-type: none"> • Patient's arm band • Authorized prescriber's order • TS label/tag 	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO
Were the patient identification checks documented in the paper/electronic medical record (EMR)?	<input type="checkbox"/> YES <input type="checkbox"/> NO

- * **TM patient identifiers** include: 1. Patient surname & first name
2. Unique hospital identification number

- **Were the patient identification checks documented in the paper/electronic medical record (EMR)?:**
“Documented” refers to the requirements as detailed in your hospital blood administration policy (e.g., transfusionist’s signature on the transfusion record which verifies the procedures were followed; procedure list with check boxes selected; electronic documentation system).

4.2.6. Product Checks

Product Checks (References # 5b)	
Was the lot number verified as identical on: <ul style="list-style-type: none"> • Manufacturer labelling • TS label/tag 	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A FOR PRODUCT
Was the expiry date on the blood product verified to be acceptable?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Were date & time of entering/spiking product vial/bottle checked to determine maximum timeframe for completing the infusion?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A FOR PRODUCT
Were the product checks documented in the paper/electronic medical record (EMR)?	<input type="checkbox"/> YES <input type="checkbox"/> NO





- **Was the lot number verified as identical on: Manufacturer labelling, TS label/tag:**
Select “N/A FOR PRODUCT” if the product received was modified by TS staff and provided in an alternate container labeled with the TS label/tag only (i.e., the manufacturer’s labelling was not provided to the clinical location, a product that was reconstituted by TS staff).



- **Were date and time of entering/spiking product vial/bottle checked to determine the maximum timeframe for completing the infusion?**
 - Select “YES” if the transfusionist indicates the product infusion must be completed within 4 hours from the time of entering/spiking product vial/bottle.
 - A question such as, “tell me the time the infusion needs to be completed by” could be asked.
 - Select “NO” if the transfusionist was unaware of the need to check time of entering/spiking product vial/bottle to determine the maximum timeframe for completing the infusion.
- **Were the product checks documented in the paper/electronic medical record (EMR)?:**

“Documented” refers to the requirements as detailed in your hospital blood administration policy (e.g., transfusionist’s signature on the transfusion record which verifies the procedures were followed; procedure list with check boxes selected; electronic documentation system).

4.2.7. Procedure Checks

Procedure Checks (References # 6)	
Was the patient advised of signs & symptoms to watch for and report during or following the infusion? 	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A FOR PATIENT
Was appropriate IV tubing used (as per the manufacturer e.g., vented tubing, standard IV tubing)?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A FOR PRODUCT
Was compatible IV fluid used (as per the manufacturer)?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A FOR PRODUCT
Was the infusion start time documented? 	<input type="checkbox"/> YES, START TIME ____:____hrs <input type="checkbox"/> NO
Were vital signs checked within 30 minutes prior to infusion?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Was the infusion rate within manufacturer’s recommendations?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A FOR PRODUCT
Were vital signs checked 15 minutes after start of the infusion? 	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A FOR PRODUCT
For vital signs checks, indicate if the vital sign parameter was assessed:  <ul style="list-style-type: none"> • Temperature • Blood Pressure • Pulse • Respiration • Oxygen Saturation • Other (specify) 	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO
Was the transfusionist aware of the steps to manage a transfusion reaction?	<input type="checkbox"/> YES <input type="checkbox"/> NO

- **Was the patient advised of signs & symptoms to watch for and report during or following the infusion?:**
Select “N/A FOR PATIENT” if the patient is unable to understand instructions e.g., comatose, or sedated patient.

NOTE: If the product’s route of administration is not IV,
then select “N/A FOR PRODUCT” for the following questions:

- Was appropriate IV tubing used?**
- Was compatible IV fluid used?**



Was the infusion rate within manufacturer’s recommendations?

Were vital signs checked 15 minutes after start of the infusion?

• **Was the infusion start time documented?:**

For a product where the route of administration is not IV:

Select “YES, START TIME ___:___ hrs” and enter the time of administration (i.e., the injection time) if this information is documented.

Select “NO” if the time of administration (i.e., the injection time) is not documented.

• **Were vital signs checked 15 minutes after the start of the infusion?**

Auditor time constraints may prevent returning to the infusion location after the infusion was completed to review paper documentation of vital signs.

- A question such as “Tell me when you would check vital signs?” could be asked. If the transfusionist response includes “15 minutes after the infusion started”, then select “YES”.

• **For vital signs checks, indicate if the vital sign parameter was assessed:**

For compliance, all parameters (excluding “Other”) must be verified; opportunity to assess each parameter individually is provided.

• **Was the transfusionist aware of the steps to manage a transfusion reaction?**

Select “Yes” if the transfusionist describes the steps to manage a transfusion reaction.

- A question such as “Tell me about what you would do if this patient had a fever or other symptom of a transfusion reaction?” could be asked.

4.2.8. Post-Transfusion

Post-Transfusion (References # 7)	
Was the infusion end time documented? ←	<input type="checkbox"/> YES, END TIME ___:___ hrs <input type="checkbox"/> NO <input type="checkbox"/> AUDITOR DID NOT ASSESS <input type="checkbox"/> N/A FOR PRODUCT
Was the infusion completed within 4 hours from time of entering/spiking the product vial/bottle or as per the manufacturer’s recommendations? ←	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN <input type="checkbox"/> N/A FOR PRODUCT
Were vital signs checked on completion of the infusion? ←	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A FOR PRODUCT
Did the TS label/tag remain attached to the product until completion of the infusion? ←	<input type="checkbox"/> YES <input type="checkbox"/> NO
Does paper/electronic medical record (EMR) documentation provide the identity of the transfusionist?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Does the paper/electronic medical record (EMR) documentation include:	
• Volume transfused	<input type="checkbox"/> YES <input type="checkbox"/> NO
• Vital signs	<input type="checkbox"/> YES <input type="checkbox"/> NO
• Patient assessments (if applicable e.g., a transfusion reaction occurred) ←	<input type="checkbox"/> N/A <input type="checkbox"/> YES <input type="checkbox"/> NO
• None of the above documentation was assessed by the auditor ←	<input type="checkbox"/> AUDITOR DID NOT ASSESS

• **Was the infusion end time documented?**

- Select “NO” if the infusion end time documentation was assessed by the auditor and no documentation was evident.
- Select “AUDITOR DID NOT ASSESS” if the auditor was unable to assess documentation (e.g., auditor time constraints, unable to return to the infusion location after the infusion was completed).



- Select “N/A FOR PRODUCT” if the product’s route of administration is not IV.
- **Was the infusion completed within 4 hours from time of entering/spiking the product vial/bottle or as per the manufacturer’s recommendations?**
- To determine, review infusion start and end times to calculate transfusion time.
- Select “UNKNOWN” if either infusion start or end time was not documented.
- Select “N/A FOR PRODUCT” if the product’s route of administration is not IV.
- **Were vital signs checked on completion of the infusion?:**
Select “N/A FOR PRODUCT” if the product’s route of administration is not IV and the manufacturer’s recommendations do not specify post-administration assessment.

NOTE: Specific to Rh(D) Immune Globulin (RhIG), post injection the manufacturer recommends monitoring patients for at least 20 minutes for potential adverse effects (though rare, tachycardia and hypotension have been reported).⁵


- **Did the TS label/tag remain attached to the product until completion of the infusion?**
- This criterion is detailed explicitly in the TM standards (refer to Appendix C, p. 12). It is not reasonable for the auditor to observe the entire infusion to assess this. An alternative includes discussion with the transfusionist.
 - A question such as “*Tell me when you might remove the TS label/tag?*” could be asked. If the transfusionist response includes “*The TS label/tag has to stay on the blood product, it is never removed*”, then select “YES”.
- For a product where the route of administration is not IV:
Select “YES” if the T/S label/tag remained attached to the product as feasible for the administration procedure (i.e., for intramuscular or subcutaneous injection, until the injection was being given; if the transfusionist withdrew the product from the vial and did not immediately perform the injection, the TS label/tag should remain attached).
- **Does the paper/electronic medical record (EMR) documentation include:**
- **Patient assessments (if applicable e.g., a transfusion reaction occurred):**
 - Select “N/A” if there was no indication for additional patient assessment e.g., no signs or symptoms of transfusion reaction or patient concern.
 - Select “YES” if there was an indication for additional patient assessment and that assessment was documented (e.g., temperature 38.2 degrees Celsius was documented on the vital signs record and the patient care provided for temperature 38.2 degrees Celsius was documented).
 - Select “NO” if there was an indication for additional patient assessment but that assessment was not documented (e.g., temperature 38.2 degrees Celsius was documented on the vital signs record but no further documentation of patient care provided for temperature of 38.2 degrees Celsius).
- For compliance, volume transfused and vital signs must be documented [i.e., “YES” response] as well as patient assessment (if applicable a transfusion reaction



occurred) [i.e., “N/A” or “YES” response]. Opportunity to assess each criterion individually is provided.

- **None of the above documentation was assessed by the auditor**
Select “AUDITOR DID NOT ASSESS” only when documentation of Volume transfused AND Vital signs AND Patient assessments (if applicable e.g., a transfusion reaction occurred) were not assessed by the auditor (e.g., auditor time constraints, unable to return to the transfusion location after the transfusion was completed).

4.2.9. Summary

Summary	
Name of Auditor:	REDCap Entered By: 
Comments:	
* Patent: correctly placed IV which permits IV solution to flow directly into the vein	
* TM patient identifiers include: 1.Patient surname and first name 2.Unique hospital identification number	

- **REDCap Entered By:**
At the time of REDCap data entry, the first and last name of the individual entering the audit information may be noted on the paper audit form.

5. How to Access REDCap

5.1. This is the URL for the REDCap database: <https://mctr.mcmaster.ca/>

5.2. Click and enter Username and Password.

If you currently have an active account in REDCap for another project (i.e., TTISS), login using your existing credentials.

If you are a new REDCap user, your login credentials will be provided via email.



Log In

Please log in with your user name and password. If you are having trouble logging in, please contact [Joanne Duncan](#).

Username:	<input type="text"/>
Password:	<input type="password"/>
<input type="button" value="Log In"/>	Forgot your password?

Welcome to REDCap!

REDCap is a secure web platform for building and managing online databases and surveys. REDCap's streamlined process for rapidly creating and designing projects offers a vast array of tools that can be tailored to virtually any data collection strategy.

REDCap provides automated export procedures for seamless data downloads to Excel and common statistical packages (SPSS, SAS, Stata, R), as well as a built-in project calendar, a scheduling module, ad hoc reporting tools, and advanced features, such as branching logic, file uploading, and calculated fields.

REDCap Features

Build online surveys and databases quickly and securely in your browser

- Create and design your project using a secure login from any device. No extra software required. Access from anywhere, at any time.

Fast and flexible - Go from project creation to starting data collection in less than one day. Customizations and changes are possible any time, even after data collection has begun.



Once logged in you will see the home page

Welcome to REDCap!

REDCap is a secure web platform for building and managing online databases and surveys. REDCap's streamlined process for rapidly creating and designing projects offers a vast array of tools that can be tailored to virtually any data collection strategy.

REDCap provides automated export procedures for seamless data downloads to Excel and common statistical packages (SPSS, SAS, Stata, R), as well as a built-in project calendar, a scheduling module, ad hoc reporting tools, and advanced features, such as branching logic, file uploading, and calculated fields.

Learn more about REDCap by watching a [brief summary video \(4 min\)](#). If you would like to view other quick video tutorials of REDCap in action and an overview of its features, please see the [Training Resources](#) page.

NOTICE: If you are collecting data for the purposes of human subjects research, review and approval of the project is required by your Institutional Review Board. If you require assistance or have any questions about REDCap, please contact [JoAnne Duchsap](#).

Transmitted Transfusion Injuries Surveillance System

REDCap Features

- Build online surveys and databases quickly and securely in your browser** - Create and design your project using a secure login from any device. No extra software required. Access from anywhere, at any time.
- Fast and flexible** - Go from project creation to starting data collection in less than one day. Customizations and changes are possible any time, even after data collection has begun.
- Advanced instrument design features** - Auto-validation, calculated fields, file uploading, branching/skip logic, and survey stop actions.
- e-Consent** - Perform informed consent electronically for participants via survey.
- Diverse and flexible survey distribution options** - Use a list of email addresses or phone numbers for your survey respondents and automatically contact them with personalized messages, and track who has responded. Or create a simple link for an anonymous survey for mass email mailings, to post on a website, or print on a flyer.
- REDCap Mobile App** - Collect data offline using an app on a mobile device when there is no WiFi or cellular connection, and then later sync data back to the server.
- Data quality** - Use field validation, branching/skip logic, and Missing Data Codes to improve and protect data quality during data entry. Open data queries to automatically identify and resolve discrepancies and other issues real-time.
- Custom reporting** - Create custom searches for generating reports to view aggregate data. Identify trends with built-in basic statistics and charts.
- Export data to common analysis packages** - Export your data as a PDF or as CSV data for easy analysis in SAS, Stata, R, SPSS, or Microsoft Excel.
- Secure file storage and sharing** - Upload and share any type of file with anyone in the world through the File Repository feature or Send-It tool. Also works with exports and other built-in file uploading features.
- Data-based triggers and alerts** - Send real-time alerts and notifications to your team or other stakeholders via email, text, or phone based on certain data being entered or specific questions having a particular answer.
- Connect to other resources** - Use built-in features (API) to move data to/from your project. Build your own custom software development features to connect your project to other systems.

5.3. From the home page select “My Projects”

Listed below are the REDCap projects to which you currently have access. Click the project title to open the project. [Read more](#)

My Projects [Organize](#) [Collapse All](#)

Project Title	Records	Fields	Instruments	Type	Status
Unorganized Projects (2)					
TTISS-ON Transfusion Reaction Data Collection (based on the CTAERF)	11,099	255	2 forms		
Bedside Audit of Blood Administration	1	83	1 survey		

5.4. Select Bedside Audit of Blood Administration and the audit project home will display.

Listed below are the REDCap projects to which you currently have access. Click the project title to open the project. [Read more](#)

My Projects [Organize](#) [Collapse All](#)

Project Title	Records	Fields	Instruments	Type	Status
Unorganized Projects (2)					
TTISS-ON Transfusion Reaction Data Collection (based on the CTAERF)	11,099	255	2 forms		
Bedside Audit of Blood Administration	1	83	1 survey		



Location Manager Profile - Homepage

REDCap®

Logged in as allisonwtest | Log out

My Projects

REDCap Messenger

Contact REDCap administrator

Project Home and Design

Project Home · Codebook

Project status: Development

Data Collection — Hospital Group

Record Status Dashboard
- View data collection status of all records

Add / Edit Records
- Create new records or edit/view existing ones

Show data collection instruments

Applications

Data Exports, Reports, and Stats

Help & Information

Help & FAQ

Video Tutorials

Suggest a New Feature

Contact REDCap administrator

Current Data Access Group: Hospital Group Switch

Bedside Audit of Blood Administration ID 521

Project Home

The tables below provide general dashboard information, such as a list of all users with access to this project, general project statistics, and upcoming calendar events (if any).

Project Statistics

Records in project	Total: 512 / In group: 35
Most recent activity	01/17/2024 2:06pm
Space usage for docs	1.85 MB

Home page features:

Many of the functionality features are found in the menu on the left side of the homepage.

Logged in as (your username)

My Projects

Project Home

Data Collection - DAG (noted in green font)

- Record Status Dashboard

- Add/Edit Records

Applications - Data Exports, Reports and Stats

Help and Information

Project Statistics: displays the number of records both in “Total” and “In group”.

“In group” indicates the number of records entered in your specific DAG.



Data Entry Profile - Homepage

The screenshot shows the REDCap homepage for the project "Bedside Audit of Blood Administration" (ID 521). The current Data Access Group (DAG) is "Hospital Group". The left-hand navigation menu includes sections for "Project Home and Design", "Data Collection" (highlighted in green), "Applications", and "Help & Information". The "Data Collection" section contains "Record Status Dashboard" and "Add / Edit Records". The main content area displays "Project Statistics" with the following data:

Project Statistics	
Records in project	Total: 512 / In group: 35
Most recent activity	01/17/2024 2:11pm
Space usage for docs	1.85 MB

Many of the functionality features are found in the menu on the left side of the homepage.

Logged in as (your Username)

My Projects

Project Home

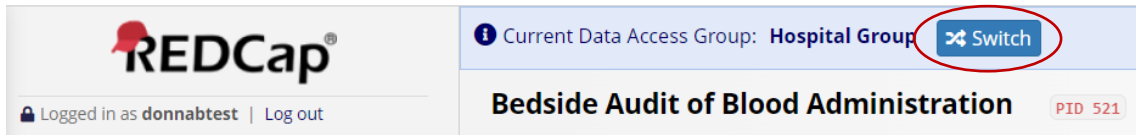
Data Collection - DAG (noted in green font)

- Record Status Dashboard
- Add/Edit Records

Project Statistics: displays the number of records both "Total" and "In group". "In group" indicates the number of records entered in your specific DAG.



5.5. Switch

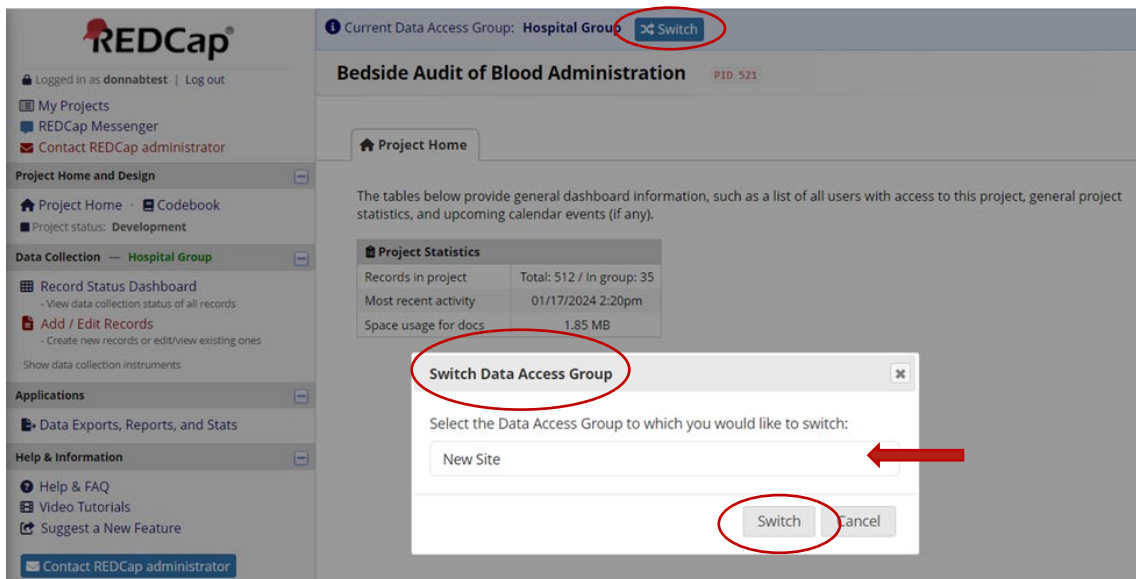


If you work at multiple hospitals within multiple DAGs, you will be assigned to the DAGs specific to your working locations.

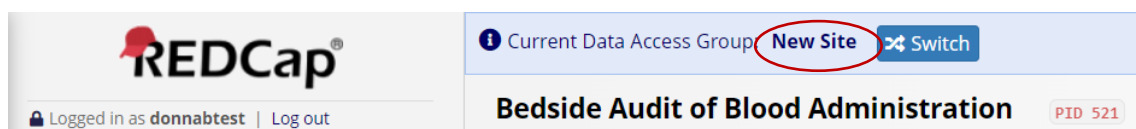
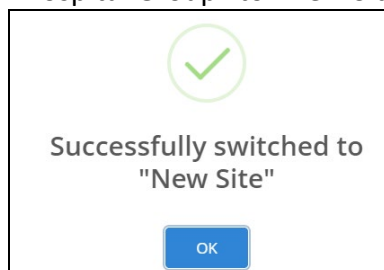
If assigned to multiple DAGs, the user will see a blue banner at the top of every project page, which will present them with the option to switch to another DAG.

To change DAGs

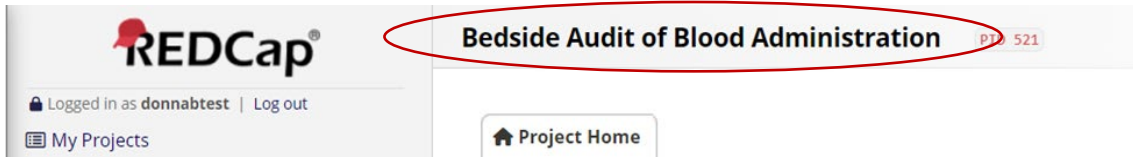
- Click on "Switch". The "Switch Data Access Group" pop up will display.
- Select the DAG you wish to report in by clicking on the box populated with sites to which you have been given access.
- Click Switch.



The following popup will display; this confirms the DAG has switched from "Hospital Group" to "New Site".



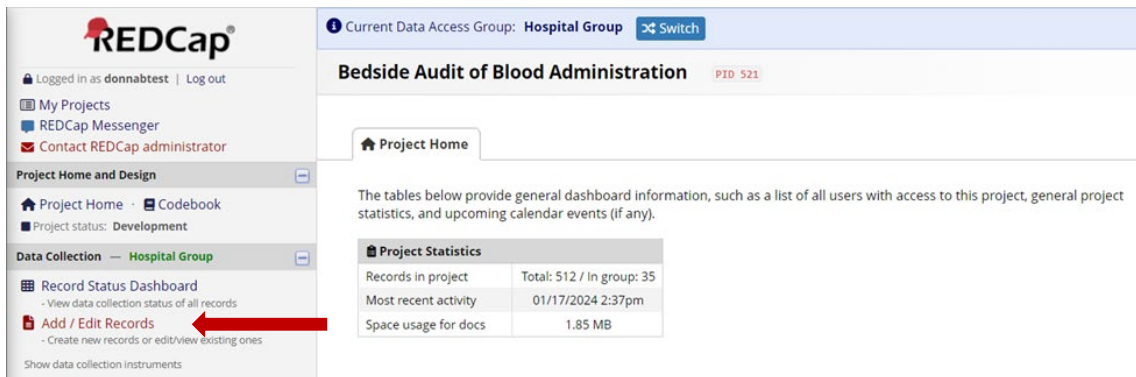
If you work in a single hospital / DAG you will not have the blue banner and Switch function as it is not required.



6. Adding and Editing Record (Audit Data)

6.1. Add a Record

- Click on “Add / Edit Records” on the left menu

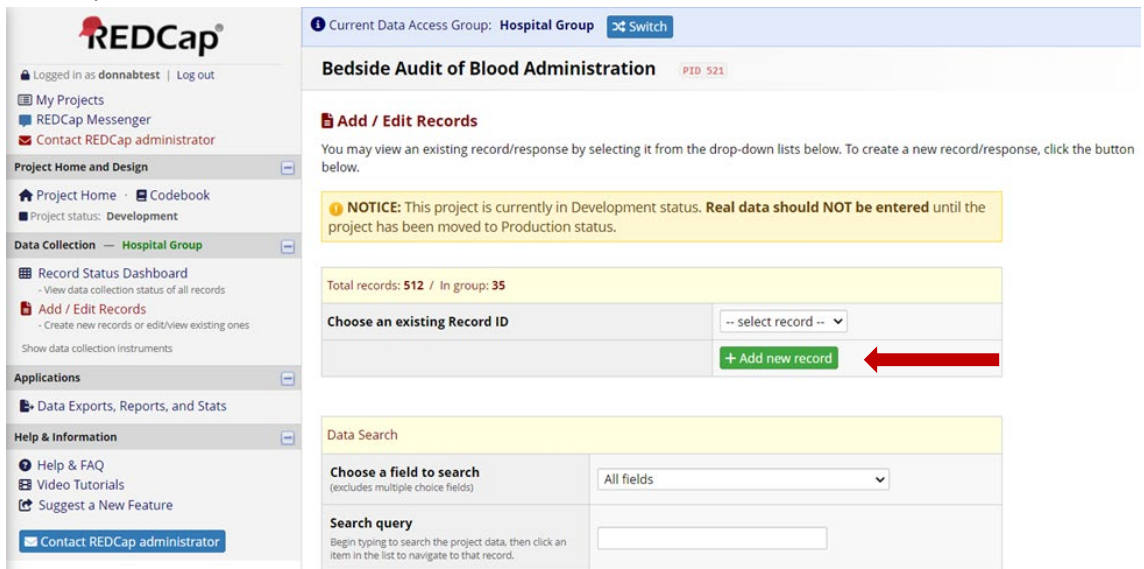


- Click on “+ Add new record”

NOTE:

NOTICE: This project is currently in Development status. **Real data should NOT be entered** until the project has been moved to Production status.

Disregard this notice, enter real data (the database is fully functional in development status).



- The Bedside Audit of Blood Administration form will open.

Current Data Access Group: Hospital Group [Switch](#)

Bedside Audit of Blood Administration PID 521

Actions: [Download PDF of Instrument\(s\)](#) [Video: Basic data entry](#)

Bedside Audit of Blood Administration

Editing existing Record ID 4232-19.

Record ID 4232-19

Demographics

Select the hospital site * must provide value

Patient Code

Created by auditor, as per tracking log * must provide value

Transfusion Date

Today M-D-Y * must provide value

Transfusion Priority

Routine Urgent STAT * must provide value

Transfusion Location

Select location that best aligns to your site locations * must provide value

What is being transfused/infused?

Blood Component Blood Product * must provide value

- REDCap auto generates the Record ID. Add the Record ID to your Bedside Audit of Blood Administration Tracking Log (refer to Section 3) and to the paper audit form.

Demographics	Hospital Name:	
Record ID: (REDCap generates)	Patient Code: (Created by Auditor, as per tracking log)	Transfusion Date:
	<i>To avoid patient privacy breaches, do not use patient identifiers (i.e., initials, hospital number, accession number) or blood unit number.</i>	

6.2. Edit a Record

- Click on “Add / Edit Records” on the left menu.

Current Data Access Group: Hospital Group [Switch](#)

Bedside Audit of Blood Administration PID 521

Add / Edit Records

You may view an existing record/response by selecting it from the drop-down lists below. To create a new record/response, click the button below.

NOTICE: This project is currently in Development status. **Real data should NOT be entered** until the project has been moved to Production status.

Total records: 48 / In group: 18

Choose an existing Record ID -- select record --



- Option 1: Click on dropdown carrot “select record”

The screenshot shows the REDCap interface for the 'Bedside Audit of Blood Administration' project. The left sidebar contains navigation options like 'My Projects', 'Project Home and Design', 'Data Collection', 'Applications', and 'Help & Information'. The main content area shows the 'Add / Edit Records' section with a 'NOTICE' box stating the project is in Development status. Below the notice, it displays 'Total records: 48 / In group: 18'. A dropdown menu for 'Choose an existing Record ID' is open, showing a list of record IDs. A red arrow points to the dropdown arrow, indicating the action to click.

- A list of all the records within your DAG will display.
- Click on the Record ID number of the record you wish to edit.

This screenshot is similar to the previous one, but the dropdown menu for 'Choose an existing Record ID' is fully open, displaying a list of record IDs from '4232-1' to '4232-10'. A red arrow points to the selected record ID '4232-1' in the dropdown list.

- The Bedside Audit of Blood Administration form will open. Make appropriate edits / changes to data previously entered or complete the form.

The screenshot shows the 'Bedside Audit of Blood Administration' form for editing an existing record. The form is titled 'Editing existing Record ID "4232-1"'. It includes fields for 'Record ID' (4232-1), 'Demographics', 'Select the hospital site' (Hospital A), and 'Patient Code' (HospA-2022-0001). There are also buttons for 'Save & Exit Form', 'Save & ...', and 'Cancel'. A note at the bottom states: 'To avoid patient privacy breaches, do not use patient identifiers (i.e., initials, hospital number, accession number) or blood unit number.'



- **Option 2:** Enter the Record ID number into the “Search query” field

The screenshot shows the REDCap interface for the 'Bedside Audit of Blood Administration' project. The 'Add / Edit Records' section is active. A yellow notice states: 'NOTICE: This project is currently in Development status. Real data should NOT be entered until the project has been moved to Production status.' Below this, it shows 'Total records: 48 / In group: 18'. There is a dropdown menu for 'Choose an existing Record ID' and a green '+ Add new record' button. The 'Data Search' section has a dropdown for 'Choose a field to search' set to 'All fields'. The 'Search query' field contains '4232-1', with a red arrow pointing to the text.

- A list of all the records beginning with that Record ID number will display.
- Click on the Record ID number of the record you wish to edit.

This screenshot shows the 'Data Search' section of the REDCap interface. The 'Search query' field contains '42', and a dropdown menu is open, displaying a list of records: '4232-1', '4232-10', '4232-11', and '4232-12'. A red arrow points to the first item, '4232-1'.

- The Bedside Audit of Blood Administration form will open. Make appropriate edits / changes to data previously entered or complete the form.

The screenshot shows the 'Bedside Audit of Blood Administration' form in REDCap. The 'Record ID' field is populated with '4232-1'. The 'Demographics' section includes a dropdown for 'Select the hospital site' set to 'Hospital A' and a text field for 'Patient Code' containing 'HospA-2022-0001'. A note below the patient code field reads: 'To avoid patient privacy breaches, do not use patient identifiers (i.e., initials, hospital number, accession number) or blood unit number.' The form also has 'Save & Exit Form', 'Save & ...', and 'Cancel' buttons.



NOTE:

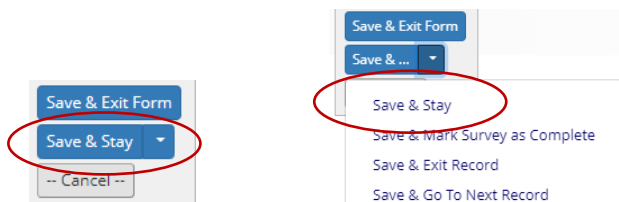
There are multiple options to access records to edit / view (i.e., Left menu: Record Status Dashboard; Add / Edit Records).

7. Bedside Audit of Blood Administration REDCap Form

NOTE: DO NOT ENTER ANY PATIENT IDENTIFIERS IN REDCap!

To avoid patient privacy breaches, do not use patient identifiers (i.e., initials, hospital number, accession number) or blood unit number.

- The bedside audit form is the same for Location Manager and Data Entry profiles. The menu on the left remains the same regardless of the screen you have open.
- **Record ID** is found on each REDCap record. Each time a record is added the Record ID is auto generated in REDCap. The first four digits reflect your DAG group ID followed by the record number.
Add the Record ID to your Bedside Audit of Blood Administration Tracking Log (refer to Section 3) and to the paper audit form.
- In the top right corner of form: Select **“Save & Stay”** (either view may appear)



- If you need to pause/leave data entry and have not completed the record, you may select **“Save & Exit Form”**.



8. How to Enter Data by Section

Complete all fields in each section. Most fields are straightforward and self-explanatory. Additional instructions for specific fields (indicated by a red arrow symbol) are provided.

8.1 Demographics

The screenshot shows the REDCap interface for a 'Bedside Audit of Blood Administration' form. The form is for Record ID 4232-19. The 'Demographics' section includes a dropdown menu for 'Select the hospital site', a text field for 'Patient Code', and a date field for 'Transfusion Date'. The 'Transfusion Priority' section has radio buttons for 'Routine', 'Urgent', and 'STAT'. The 'Transfusion Location' section has a dropdown menu. The 'What is being transfused/infused?' section has radio buttons for 'Blood Component' and 'Blood Product'. Red arrows point to the dropdown menus for 'Select the hospital site', 'Transfusion Location', and 'Blood Component'.

- **Hospital Site:** Click dropdown carrot to select. Hospital names are listed alphabetically.

NOTE: Confirm the correct hospital site is selected, this impacts the validity of data records.

- **Patient code:** Mandatory REDCap field. Hospitals must create/define and record on their tracking log (refer to Section 3). Enter the Patient code from the tracking log.

NOTE: *To avoid patient privacy breaches, do not use patient identifiers (i.e., initials, hospital number, accession number) or blood unit number.*

- **Transfusion Location:** Click the dropdown carrot to select from predefined the list. Select the location that best aligns to your hospital site.

Chronic Care/Rehabilitation
Emergency
Intensive/Cardiac Care Unit
Medical/Surgical Ward
Neonatal/Pediatric
Obstetrical Unit
Operating Room
Outpatient Clinic
Post Anesthetic Care Unit
Other

- **What is being transfused / infused?**

What is being transfused / infused?
* must provide value
 Blood Component
 Blood Product
reset


Select blood component or blood product which will auto direct to the appropriate form for data entry.



Each of the following sections will address both blood component and blood product data entry with field specific instructions. For guidance related to the questions' subject matter, refer to Section 4, 4.1 blood component form and 4.2 blood product form.


8.2. Pre-Transfusion Checks Transfusionist

Blood Components

Pre-Transfusion Checks - Transfusionist	
<p>Was the authorized prescriber's order documented? * must provide value</p>	<p><input type="radio"/> Yes <input type="radio"/> No</p> <p>reset</p>
<p>Did the order include: * must provide value</p>	<p><input type="checkbox"/> Component type <input type="checkbox"/> Volume/quantity/dose <input type="checkbox"/> Rate/duration of transfusion or stated in facility specific standard operating procedure</p> <p>Select all that were included </p>
<p>Was informed consent documented? * must provide value</p>	<p><input type="radio"/> Yes <input type="radio"/> No</p> <p>reset</p> <p>Only select "Yes" if the transfusionist verified informed consent was documented</p>
<p>Was the IV established and * patent prior to the component arriving at the clinical area? * must provide value</p>	<p><input type="radio"/> Yes <input type="radio"/> No</p> <p>reset</p> <p>* Patent: correctly placed IV which permits IV solution to flow directly into the vein</p>

- **Did the order include:**
 - "Select all that were included": click the REDCap checkboxes corresponding to the "YES" responses on the paper audit form.

Blood Products

Pre-Transfusion Checks - Transfusionist	
<p>Was the authorized prescriber's order documented? * must provide value</p>	<p><input type="radio"/> Yes <input type="radio"/> No</p> <p>reset</p>
<p>Did the order include: * must provide value</p>	<p><input type="checkbox"/> Product type <input type="checkbox"/> Volume/quantity/dose <input type="checkbox"/> Rate/duration of infusion or stated in facility specific standard operating procedure (as per manufacturer's recommendations)</p> <p>Select all that were included </p>
<p>Was informed consent documented? * must provide value</p>	<p><input type="radio"/> Yes <input type="radio"/> No</p> <p>reset</p> <p>Only select "Yes" if the transfusionist verified informed consent was documented</p>
<p>Was IV established and * patent prior to the product arriving at the clinical area? * must provide value</p>	<p><input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Not applicable for this product</p> <p>reset</p> <p>* Patent: correctly placed IV which permits IV solution to flow directly into the vein</p>

- **Did the order include:**
 - "Select all that were included": click the REDCap checkboxes corresponding to the "YES" responses on the paper audit form.




8.3. Pre-Transfusion Checks –Transfusion Service (TS)

Blood Components

Pre-Transfusion Checks - Transfusion Service (TS)

Were the * Transfusion Medicine (TM) patient identifiers on the order / pick-up slip verified to match those on the TS label / tag on the component? Yes No reset

* must provide value * TM patient identifiers : patient surname & first name and unique hospital identification number

Time component issued from TS H:M 

* must provide value


- **Time component issued from TS**


Note: Entering Time in REDCap

- Option 1: Enter the time in the free text box. The format “hours: minutes” (e.g., 08:45; 14:03) is mandatory.
- Option 2: Click on the clock icon. The following pop up will display.


Choose Time

Time 13:48

Hour 

Minute 

Click and adjust the “Hour” toggle to reflect the hour you want to enter on the “Time” display. Then click and adjust the “Minute” toggle to reflect the minutes you want to enter on the “Time” display. Click “Done”. The time will appear in the free text box.

Time component issued from TS H:M 

* must provide value

- Option 3: If the time to be entered is the actual current time, click the “Now” button and the actual current time will appear in the free text box.

Blood Products

Pre-Transfusion Checks - Transfusion Service (TS)

Were the * Transfusion Medicine (TM) patient identifiers on the order / pick-up slip verified to match those on the TS label / tag? Yes No reset

* must provide value * TM patient identifiers : patient surname & first name and unique hospital identification number

Time product issued from TS H:M

* must provide value

- **Time component issued from TS**

Above information “*Entering Time in REDCap*” is applicable.



8.4. Transfusion

Blood Components

Transfusion	
Was the component type received from TS verified to match the authorized prescriber's order? <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No <small>reset</small>
Were all the checks done in the presence of the patient, at the bedside? <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No <small>reset</small>

Blood Products

Transfusion	
Was the product type received from TS verified to match the authorized prescriber's order? <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No <small>reset</small>
Were all the checks done in the presence of the patient, at the bedside? <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No <small>reset</small>

8.5. Patient Identification Checks

Blood Components

Patient Identification Checks	
Were the * TM patient identifiers verified to be identical on the following: <small>* must provide value</small>	<input type="checkbox"/> Patient's arm band <input type="checkbox"/> Authorized prescriber's order <input type="checkbox"/> TS label/tag <small>Select all that were verified. * TM patient identifiers: patient surname & first name and unique hospital identification number</small>
Were the patient identification checks documented in the paper/electronic medical record (EMR)? <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No <small>reset</small>

- **Were the * TM patient identifiers verified to be identical on the following:**
 - “Select all that were verified”: click the REDCap checkboxes corresponding to the “YES” responses on the paper audit form.

Blood Products



Patient Identification Checks	
Were the * TM patient identifiers verified to be identical on the following: <small>* must provide value</small>	<input type="checkbox"/> Patient's arm band <input type="checkbox"/> Authorized prescriber's order <input type="checkbox"/> TS label/tag <small>Select all that were verified. * TM patient identifiers: patient surname & first name and unique hospital identification number</small>
Were the patient identification checks documented in the paper/electronic medical record (EMR)? <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No <small>reset</small>

- **Were the * TM patient identifiers verified to be identical on the following:**
 - “Select all that were verified”: click the REDCap checkboxes corresponding to the “YES” responses on the paper audit form.




8.6. Component Checks /Products Checks

Blood Components

Component Checks / Product Checks	
Were the ABO/Rh(D) blood groups (as applicable to the component being transfused) of the patient and the component verified to be identical or compatible? <i>* must provide value</i>	<input type="checkbox"/> Patient ABO/Rh(D) test results (Group & Screen test) <input type="checkbox"/> Canadian Blood Services (CBS) label <input type="checkbox"/> TS label/tag Select all that were verified 
If the ABO / Rh(D) blood groups (as applicable to the component being transfused) of the patient and the component <u>were not identical</u>, was compatibility * validated? <i>* must provide value</i>	<input type="radio"/> Not applicable <input type="radio"/> Yes <input type="radio"/> No reset <small>* Transfusionist knowledge stated; compatibility chart consulted</small>
Was the unit number verified as identical on: <i>* must provide value</i>	<input type="checkbox"/> CBS label <input type="checkbox"/> TS label/tag Select all that were verified 
Was the expiry date on the blood component verified to be acceptable? <i>* must provide value</i>	<input type="radio"/> Yes <input type="radio"/> No reset
Were date and time of issue from TS checked to determine the maximum timeframe for completing the transfusion? <i>* must provide value</i>	<input type="radio"/> Yes <input type="radio"/> No reset
Were the component checks documented in the paper/electronic medical record (EMR)? <i>* must provide value</i>	<input type="radio"/> Yes <input type="radio"/> No reset

- **Were the ABO/Rh(D) blood groups (as applicable to the component being transfused) of the patient and the component verified to be identical or compatible?**
- **Was the unit number verified as identical on:**
 - “Select all that were verified”: click the REDCap checkboxes corresponding to the “YES” responses on the paper audit form.

Blood Products

Component Checks / Product Checks	
Was the lot number verified as identical on: <i>* must provide value</i>	<input type="checkbox"/> Manufacturer labelling <input type="checkbox"/> TS label/tag <input type="checkbox"/> Not applicable for this product Select all that were verified 
Was the expiry date on the blood product verified to be acceptable? <i>* must provide value</i>	<input type="radio"/> Yes <input type="radio"/> No reset
Were date and time of entering/spiking product vial/bottle checked to determine maximum timeframe for completing the infusion? <i>* must provide value</i>	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Not applicable for this product reset
Were the product checks documented in the paper/electronic medical record (EMR)? <i>* must provide value</i>	<input type="radio"/> Yes <input type="radio"/> No reset

- **Was the lot number verified as identical on:**
 - “Select all that were verified”: click the REDCap checkboxes corresponding to the “YES” responses on the paper audit form.



8.7. Procedure Checks

Blood Components

Procedure Checks	
Was patient advised of signs & symptoms to watch for and report during or following transfusion? <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Not applicable for this patient reset
Was blood administration tubing with 170-260 micron filter used? <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No reset
Was IV fluid 0.9% sodium chloride used? <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No reset
Was transfusion start time documented? <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No reset
Were vital signs checked within 30 minutes prior to transfusion? <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No reset
Was the transfusion started at a slow rate (adults: 50 mL/hr; neonates/pediatrics: 1 mL/kg/hr, to maximum 50 mL/hr) for the first 15 minutes of transfusion? <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Not applicable for this patient situation reset
Were vital signs checked 15 minutes after start of the transfusion? <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No reset
For vital signs checks, select the vital sign parameters assessed: <small>* must provide value</small>	<input type="checkbox"/> Temperature <input type="checkbox"/> Blood Pressure <input type="checkbox"/> Pulse <input type="checkbox"/> Respiration <input type="checkbox"/> Oxygen saturation <input type="checkbox"/> Other <small>Multiple parameters may be selected</small>
Was the transfusionist aware of the steps to manage a transfusion reaction? <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No reset

- **Was transfusion start time documented?**
 - If “YES” is selected, the following displays:

Was transfusion start time documented? <small>* must provide value</small>	<input checked="" type="radio"/> Yes <input type="radio"/> No reset
Time transfusion started <small>* must provide value</small>	<input type="text"/> <input type="button" value="Now"/> H:M


Refer to information about “*Entering Time in REDCap*” on page 28.



Blood Products

Procedure Checks	
Was patient advised of signs & symptoms to watch for and report during or following transfusion? <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Not applicable for this patient reset
Was appropriate IV tubing used (as per the manufacturer e.g., vented tubing, standard IV tubing)? <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Not applicable for this product reset
Was compatible IV fluid used (as per the manufacturer)? <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Not applicable for this product reset
Was the infusion start time documented? <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No reset
Were vital signs checked within 30 minutes prior to infusion? <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No reset
Was the infusion rate within the manufacturer's recommendations? <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Not applicable for this product reset
Were vital signs checked 15 minutes after start of the infusion? <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Not applicable for this product reset
For vital signs checks, select the vital sign parameters assessed: <small>* must provide value</small>	<input type="checkbox"/> Temperature <input type="checkbox"/> Blood Pressure <input type="checkbox"/> Pulse <input type="checkbox"/> Respiration <input type="checkbox"/> Oxygen saturation <input type="checkbox"/> Other <small>Multiple parameters may be selected</small>
Was the transfusionist aware of the steps to manage a transfusion reaction? <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No reset

- **Was infusion start time documented?**
 - If “YES” is selected, the following displays:

Was the infusion start time documented? <small>* must provide value</small>	<input checked="" type="radio"/> Yes <input type="radio"/> No reset
Time infusion started <small>* must provide value</small>	<input type="text"/>  <input type="button" value="Now"/> H:M

Refer to information about “**Entering Time in REDCap**” on page 28.



8.8. Post-Transfusion

Blood Components

Post-Transfusion	
Was the transfusion end time documented? <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Auditor did not assess <small>reset</small>
Was the transfusion completed within 4 hours from time of issue from TS? <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown <small>reset</small>
Were vital signs checked on completion of the transfusion? <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No <small>reset</small>
Did the TS label/tag remain attached to the component until completion of the transfusion? <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No <small>reset</small>
Does the paper/electronic medical record (EMR) documentation provide the identity of the transfusionist? <small>* must provide value</small>	<input type="radio"/> Yes <input type="radio"/> No <small>reset</small>
Does the paper/electronic medical record (EMR) documentation include: <small>* must provide value</small>	<input type="checkbox"/> Volume transfused <input type="checkbox"/> Vital signs <input type="checkbox"/> Patient assessments (if applicable e.g., a transfusion reaction occurred) <input type="checkbox"/> Auditor did not assess <small>NOTE: Select "Auditor did not assess" when documentation of Volume transfused AND Vital signs AND Patient assessments (if applicable) were not assessed by the auditor.</small>

- **Was transfusion end time documented?**
 - If "YES" is selected, the following displays:

Was the transfusion end time documented? <small>* must provide value</small>	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Not Assessed <small>reset</small>
Time transfusion ended <small>* must provide value</small>	<input type="text"/> <input type="button" value="Now"/> H:M

Refer to information about "**Entering Time in REDCap**" on page 28.

- **Does the paper/electronic medical record (EMR) documentation include:**
 - "**Volume transfused**": If "Yes" was checked on the audit form, then in REDCap, click to select.
 - "**Vital signs**": If "Yes" was checked on the audit form, then in REDCap, click to select.
 - "**Patient assessments (if applicable e.g., a transfusion reaction occurred)**":
 - If "N/A" or "YES" were checked on the audit form, then in REDCap **click to select** "Patient assessments (if applicable e.g., a transfusion reaction occurred)".
 - If "NO" was checked on the audit form then in REDCap **do not select** "Patient assessments (if applicable e.g., a transfusion reaction occurred)".
 - "**Auditor did not assess**": if checked on the paper audit form, then in REDCap, click to select.



Blood Products

Post-Transfusion	
<p>Was the infusion end time documented? * must provide value</p>	<p> <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Auditor did not assess <input type="radio"/> Not applicable for this product </p> <p style="text-align: right;">reset</p>
<p>Was the infusion completed within 4 hours from time of entering/spiking the product vial/bottle or as per the manufacturer's recommendations? * must provide value</p>	<p> <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> Not applicable for this product </p> <p style="text-align: right;">reset</p>
<p>Were vital signs checked on completion of the infusion?</p>	<p> <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Not applicable for this product </p> <p style="text-align: right;">reset</p>
<p>Did the TS label/tag remain attached to the product until completion of the infusion? * must provide value</p>	<p> <input type="radio"/> Yes <input type="radio"/> No </p> <p style="text-align: right;">reset</p>
<p>Does the paper/electronic medical record (EMR) documentation provide the identity of the transfusionist? * must provide value</p>	<p> <input type="radio"/> Yes <input type="radio"/> No </p> <p style="text-align: right;">reset</p>
<p>Does the paper/electronic medical record (EMR) documentation include: * must provide value</p>	<p> <input type="checkbox"/> Volume transfused <input type="checkbox"/> Vital signs <input type="checkbox"/> Patient assessments (if applicable e.g., a transfusion reaction occurred) <input type="checkbox"/> Auditor did not assess </p> <p>NOTE: Select "Auditor did not assess" when documentation of Volume transfused AND Vital signs AND Patient assessments (if applicable) were not assessed by the auditor.</p>

- **Was infusion end time documented?**
 - If "YES" is selected, the following displays:

<p>Was the infusion end time documented? * must provide value</p>	<p> <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Not assessed <input type="radio"/> Not applicable for this product </p> <p style="text-align: right;">reset</p>
<p>Time infusion ended * must provide value</p>	<p> <input type="text"/> <input type="button" value="Now"/> H:M </p>

Refer to information about "**Entering Time in REDCap**" on page 28.

- **Does the paper/electronic medical record (EMR) documentation include:**
 - "**Volume transfused**": If "Yes" was checked on the audit form, then in REDCap, click to select.
 - "**Vital signs**": If "Yes" was checked on the audit form, then in REDCap, click to select.
 - "**Patient assessments (if applicable e.g., a transfusion reaction occurred)**":
 - If YES or N/A were checked on the audit form then in REDCap **click to select** "Patient assessments (if applicable e.g., a transfusion reaction occurred)".
 - If NO was checked on the audit form then in REDCap **do not select** "Patient assessments (if applicable e.g., a transfusion reaction occurred)".
 - "**Auditor did not assess**": if checked on the paper audit form, then in REDCap, click to select.



8.9. Summary

Summary
Name of Auditor
* must provide value

Please provide first and last name
Entered by:
* must provide value

Please provide first and last name
Comments

Expand

8.10. Form Status

Form Status
Complete? Incomplete
Save & Exit Form Save & Stay
-- Cancel --

Once a record has been added, the Form Status is “Incomplete”.

It is recommended:

- A) If you have completed all data entry, click on the dropdown carrot and select “Complete”

Complete? Complete
Incomplete
Unverified
Complete
Save & Stay

- B) If you have remaining data to collect/enter, click the dropdown carrot and select “Unverified” as a reminder (record status dashboard will be a yellow radio button).

Complete? Unverified
Incomplete
Unverified
Complete
Save & Stay

Data Collection Instrument	Status
Bedside Audit of Blood Administration (survey)	Unverified



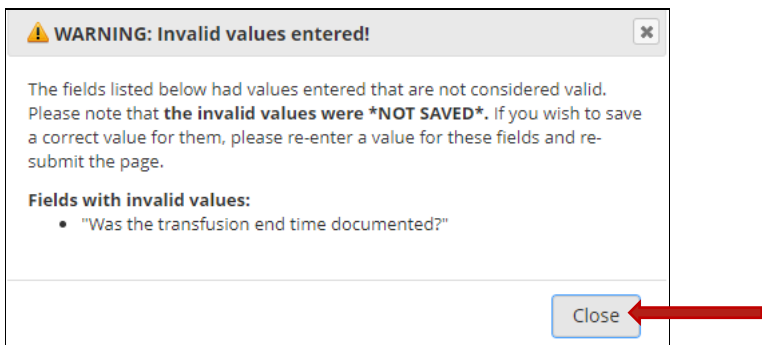
Always save your data entry by clicking “Save and Exit Form” or “Save & Stay”

These “save” options are available at the bottom of form as well as top right corner of form (refer to Section 7 Bedside Audit of Blood Administration REDCap Form, page 25).

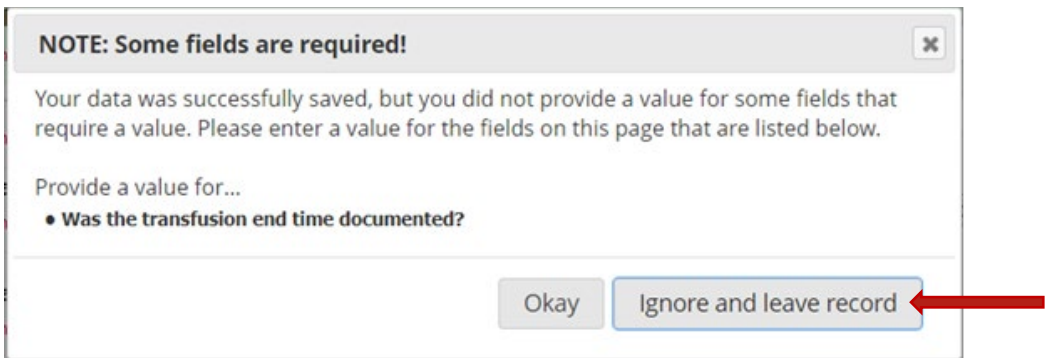
NOTE:

If some audit information is not available i.e., Time Infusion Finished is not documented, enter the available data and leave missing fields blank. Continue to save the form.

The following pop up will appear. Select “Close”



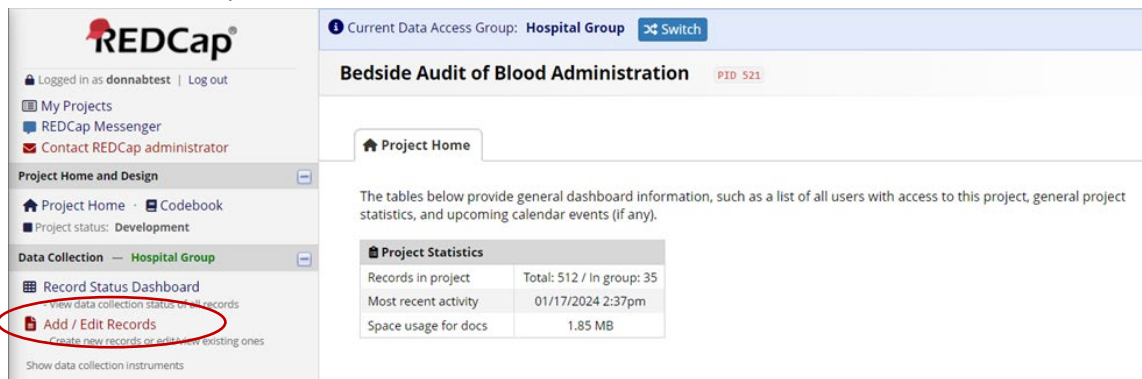
Next, the following pop up will appear. Select “Ignore and leave record”.



9. Download and Print a Record PDF

This functionality is available only to Location Manager Profile.

9.1 Select “Add / Edit Records”.



9.2 Select the record you wish to download and print.

The screenshot shows the REDCap interface for the 'Bedside Audit of Blood Administration' project (PID 521). The current data access group is 'Hospital Group'. The 'Add / Edit Records' section is active, displaying a notice that the project is in 'Development' status and that real data should not be entered until it is moved to 'Production' status. Below the notice, it shows 'Total records: 12 / In group: 11'. A table allows users to 'Choose an existing Record ID'. A dropdown menu is open, showing options: '-- select record --', '4232-1', and '4232-2'. A red arrow points to the '4232-2' option.

9.3 The following screen will open:

The screenshot shows the 'Record Home Page' for Record ID 4232-2. It displays the 'Data Collection Instrument' as 'Bedside Audit of Blood Administration (survey)' and its 'Status' as 'Complete', indicated by a green circle icon. A red arrow points to this icon. A legend for status icons is provided: Incomplete (red circle), Incomplete (no data saved) (grey circle), Unverified (yellow circle), Partial Survey Response (orange circle), Complete (green circle), and Completed Survey Response (green circle with checkmark).

Click on the radio button below “Status” to open the record.

9.4 The record will open. Click on the drop-down carrot “Download PDF of Instrument(s)”

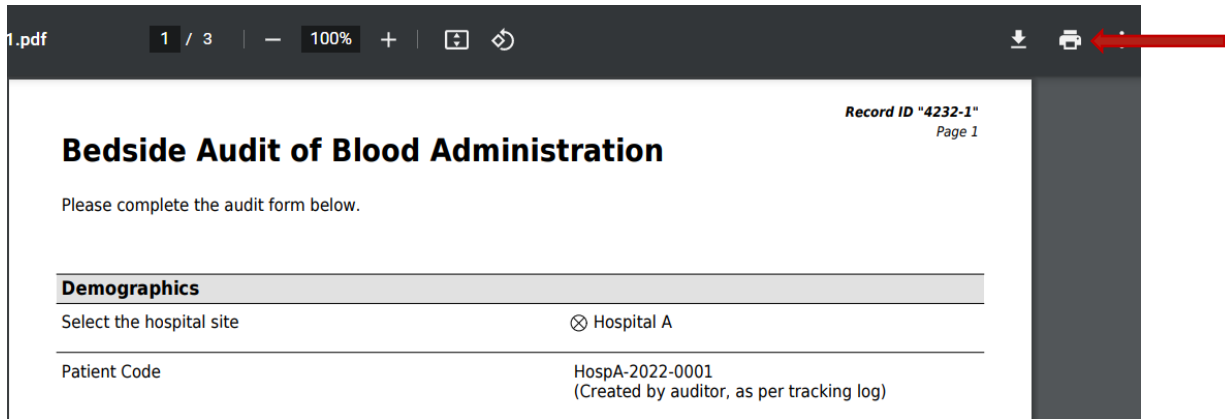
The screenshot shows the record details for Record ID 4232-2. The 'Actions' section includes a dropdown menu for 'Download PDF of instrument(s)'. A red arrow points to this dropdown menu. Below the actions, the record is shown as 'Editing existing Record ID 4232-2' with the Record ID '4232-2'.

9.5 Select “This survey with saved data (compact)” to download the record.

The screenshot shows the dropdown menu for 'Download PDF of instrument(s)'. The options are: 'This survey (blank)', 'This survey with saved data', 'This survey with saved data (via browser's Save as PDF)', and 'This survey with saved data (compact)'. A red arrow points to the 'This survey with saved data (compact)' option.



9.6 Click on the downloaded record to open it. Then select the “Print” icon.



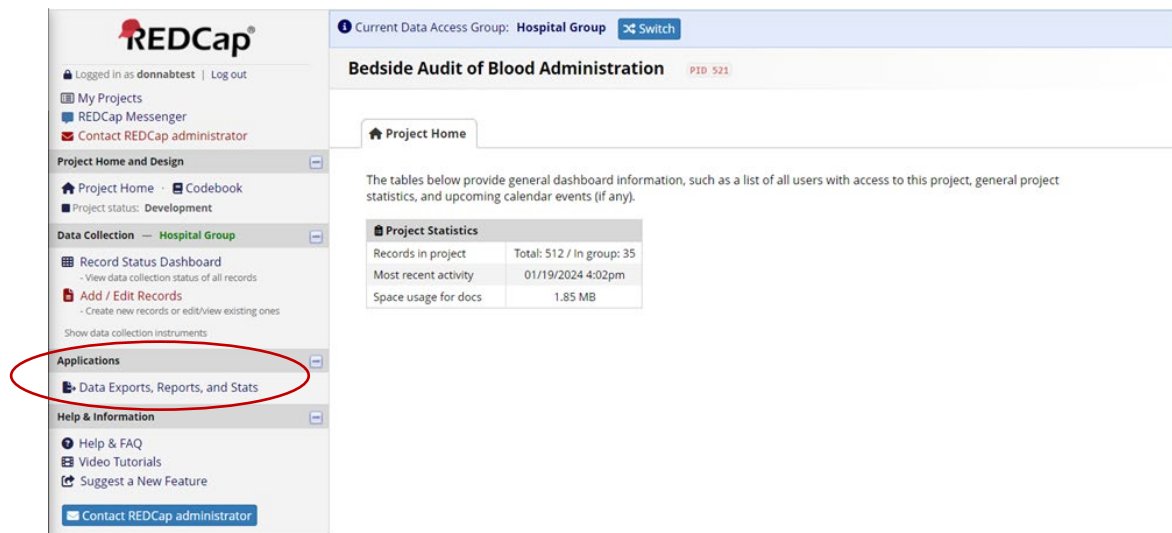
10. Viewing and Exporting Data from REDCap

This functionality is available only to Location Manager Profile.

NOTE:

When adding records in REDCap was initiated, if your DAG had 12 or fewer historical records, then you must contact ORBCoN to validate these Record ID numbers prior to exporting your data.

10.1. Select “Data Exports, Reports and Stats”



10.2. View Report

Click on “View report”.

	Report name	View/Export Options	Management Options	Report ID (auto-generated)
A	All data (all records and fields)	View Report Export Data Stats & Charts		
B	Selected instruments (all records)	Make custom selections		
1	Audit Data	View Report Export Data Stats & Charts	Edit Copy Delete	2112

[+ Create New Report](#)

The following report appears and provides an opportunity to review data entered for accuracy and completeness.

Current Data Access Group: **Hospital Group** [Switch](#)

Bedside Audit of Blood Administration

VIDE: [How to use Data Exports, Reports, and Stats](#)

[+ Create New Report](#) [My Reports & Exports](#) [Other Export Options](#)

Number of results returned: **22** [Export Data](#) [Print Page](#)
Total number of records queried: 52
Report execution time: 0 seconds
Live filters: [\[Record ID \]](#)

All data (all records and fields)

Record ID	Survey Identifier	Survey Timestamp	Select the hospital site	Patient Code	Order Number	Transfusion Date	Transfusion Priority	Transfusion Location	If other, please specify	What is being transfused/infused?	Blood Comp
"4232-1"			Hospital A (999999)	HospA-2022-0001		11-14-2022	Urgent (2)	Other (10)	Delivery Room	Blood Component (1)	Red B Cells (1)
"4232-2"			Hospital A (999999)	HospA_2022-0002		11-15-2022	Routine (1)	Medical/Surgical Ward (4)		Blood Component (1)	Red B Cells (1)

10.3. Export Data

Select “Data Exports, Reports and Stats” as in 10.1.

Export Data is used to generate the file to be added to the “Bedside Audit Data Report Template” (Appendix C).



Click on “Export Data”


My Reports & Exports				
	Report name	View/Export Options	Management Options	Report ID (auto-generated)
A	All data (all records and fields)	View Report Export Data Stats & Charts		
B	Selected instruments (all records)	Make custom selections		
1	Audit Data	View Report Export Data Stats & Charts	Edit Copy Delete	2112
+ Create New Report				


Choose export format by selecting radio button “CSV / Microsoft Excel (raw data)”
Click “Export Data”


Exporting "All data (all records and fields)"


Select your export settings, which includes the export format (Excel/CSV, SAS, SPSS, R, Stata) and if you wish to perform de-identification on the data set.


Choose export format


 CSV / Microsoft Excel (raw data)


 CSV / Microsoft Excel (labels)

 SPSS Statistical Software

 SAS Statistical Software

 R Statistical Software

 Stata Statistical Software

 CDISC ODM (XML)

De-identification options (optional)

The options below allow you to limit the amount of sensitive information that you are exporting out of the project. Check all that apply.

Known Identifiers:

Remove all tagged Identifier fields (tagged in Data Dictionary)

Hash the Record ID field (converts record name to an unrecognizable value)

Free-form text:

Remove unvalidated Text fields (i.e. Text fields other than dates, numbers, etc.)

Remove Notes/Essay box fields

Date and datetime fields:

Remove all date and datetime fields

— OR —

Shift all dates by value between 0 and 364 days (shifted amount determined by algorithm for each record) [What is date shifting?](#)

Also shift all survey completion timestamps by value between 0 and 364 days (shifted amount determined by algorithm for each record)

[Deselect all options](#)

Additional export options

Export survey identifier field and survey timestamp field(s)?

Advanced data formatting options

Set CSV delimiter character
Set the delimiter used to separate values in the CSV data file (only valid for CSV Raw Data and CSV Labels export formats):
., (comma) - default

Force all numbers into a specified decimal format?
You may choose to force all data values containing a decimal to have a specified decimal character (comma or period/full stop). This will be applied to all calculations and number-validated text values in the export file.
Use fields' native decimal format (default)

NOTE: Your data formatting selections above will be remembered in the future and will be pre-selected upon your next export.

[Export Data](#) [Cancel](#)




Click icon “EXCEL CSV Raw” to download file.

✔ **Data export was successful!** ✕

The data export was successful, and your data is now ready to be downloaded. Click the download icon(s) below on the right to download your data file. If exporting to a specific statistical analysis package, you will additionally need to download the syntax file that is provided for that stats package. For more details, follow the instructions in the box below.


Citation Notice
Please cite the REDCap project when publishing manuscripts (citation information and template methods language are [available here](#)).

 **CSV / Microsoft Excel (raw data)**

You may download the survey results in CSV (comma-separated) format, which can be opened in Excel. You have the choice of downloading the data either with the full headers and answer labels or just with the answer codes (i.e. raw data).

NOTE: If you are using a version of Microsoft Excel prior to Excel 2007, due to limitations the data will only be read to 255 columns when opened.

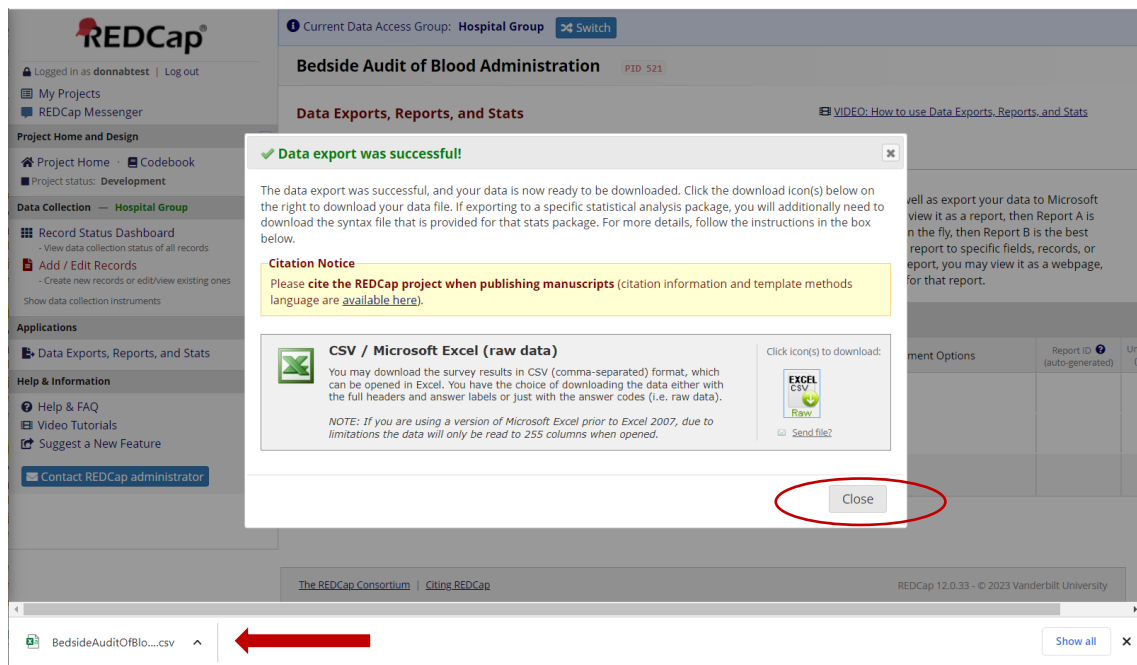
Click icon(s) to download:

 ←

[Send file?](#)


Close

File will download. Click “Close”.



The screenshot shows the REDCap interface for the 'Beside Audit of Blood Administration' project. A modal window titled 'Data export was successful!' is open, displaying the same success message and download options as the previous image. A red circle highlights the 'Close' button at the bottom of the modal. Below the modal, the browser's download bar shows a file named 'BesideAuditOfBlo...csv' with a red arrow pointing to it.

Click on the downloaded file to open it.

BesideAuditOfBlo...csv^



10.4. This is an example of the downloaded “EXCEL CSV Raw” file.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	record_id	redcap_su	bedside_ai	multi	patient	ordnum	txndate	prior	ward	ward_oth	com_prod	comp	prod	prod_oth
2	4232-19			777777	HospC-23-RBC		2023-01-12	1	4		1	1		
3	4232-20			777777	HospC-23-PLTS		2023-01-12	2	3		1	2		
4	4232-21			777777	HospC-23-IVIG		2023-01-12	1	8		2		3	
5	4232-22			777777	HospC-23-RhIG		2023-01-12	1	10	Delivery R	2		5	RhIG

If required, filter the data e.g., by time period (column G, “txndate”).

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	record_id	redcap_su	bedside_ai	multi	patient	ordnum	txndate	prior	ward	ward_oth	com_pr	comp	prod	prod_oth
2	4232-19			777777	HospC-23-RBC		2023-01-12	1	4		1	1		
3	4232-20			777777	HospC-23-PLTS		2023-01-12	2	3		1	2		
4	4232-21			777777	HospC-23-IVIG		2023-01-12	1	8		2		3	
5	4232-22			777777	HospC-23-RhIG		2023-01-12	1	10	Delivery R	2		5	RhIG

11. Using the Data Report Template

11.1. Save the “Bedside Audit of Blood Administration Data Report Template “(Appendix D, page 43) to your desktop.

11.2. Select the “Raw Data” tab on the Data Report Template



The Data Report Template includes multiple tabs containing several report options. These reports will be auto populated when information is added to the “Raw Data” tab.

11.3. Copy and paste the rows of data from the “EXCEL CSV Raw” file (see example above, Section 10.4) into the blank rows on the “Raw Data” worksheet (example below) of the Data Report Template.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
	record_id	redcap_su	bedside_audit_of_	multi	patient	ordnum	txndate	prior	ward	ward_o	com_pr	comp	prod	prod_o
1			rvey_ident	blood_administrati						ther	od			ther
2			ifier	on_timestamp										
3														
4														
5														

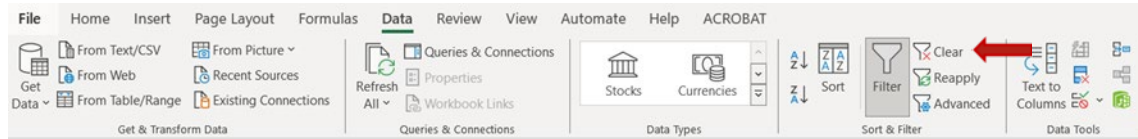
From the Data Report Template, select “Save as” a new excel file. Name this new file as per the audit time period (e.g., BABA Data Report Jan 1 to Mar 31 2023).

As appropriate for your hospital, the Data Report Template charts/graphs can be reviewed with staff and committees. To create hospital specific documents, use “Screenshot” to insert charts/graphs from the Data Report Template (the charts/graphs cannot be copied and pasted as the worksheets are locked to maintain the integrity of the calculations/formulas).



11.4. Return to the Data Report Template, “Raw Data” tab.

If “Filter” was used, ensure all filters are cleared.



Highlight only the rows containing the pasted data and delete.

This prepares the template for generation of future data reports.

12. Appendices

Appendix A	Bedside Audit of Blood Administration Tracking Log
Appendix B	Bedside Audit of Blood Administration Forms
Appendix C	Bedside Audit of Blood Administration References Transfusion Medicine Standards & Best Practice
Appendix D	Bedside Audit of Blood Administration Data Report Template

13. References

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