Bedside Audit of Blood Administration (BABA) User Guide

Version 2: January 2024

ORBCoN

Ontario Regional Blood Coordinating Network

Inspiring and facilitating best transfusion practices in Ontario.

Table of Contents

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

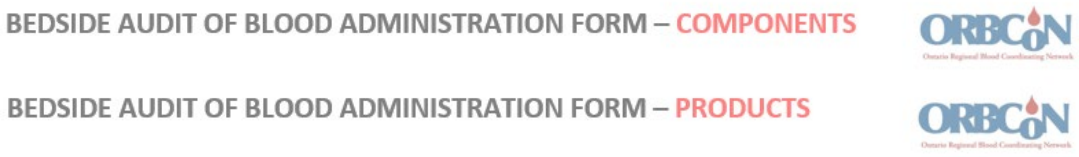
Record ID	Patient Code	Transfusion Date (dd/mm/yyyy)	Issue Time	Surname	First name	Hospital Identification Number	Data Entry Complete (√)	Data Entry by (initials)

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).



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: *(REDCap generates)*	**Patient Code:** *(Created by Auditor, as per tracking log)* *To avoid patient privacy breaches, do not use patient identifiers (i.e., initials, hospital number, accession number) or blood unit number.*	**Transfusion Date:**
Transfusion Priority: ☐ Routine ☐ Urgent ☐ Stat	**Transfusion Location:** *(Select location that best aligns to your site locations)* ☐ Chronic Care/Rehabilitation ☐ Emergency ☐ Intensive/Cardiac Care Unit ☐ Medical/Surgical Ward ☐ Neonatal/Pediatric	☐ Obstetrical Unit ☐ Operating Room ☐ Outpatient Clinic ☐ Post Anesthetic Care Unit ☐ Other *(specify)* _____
Blood Component: ☐ Red Blood Cells (RBC) ☐ Platelets ☐ Plasma ☐ 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?	☐ YES	☐ NO
Did the order include: • Component type • Volume/quantity/dose • Rate/duration of transfusion or stated in facility specific standard operating procedure	 ☐ YES ☐ YES ☐ YES	 ☐ NO ☐ NO ☐ NO
Was informed consent documented? *(Only select "Yes" if the transfusionist verified informed consent was documented)*	☐ YES	☐ NO
Was the IV established and * patent prior to the component arriving at the clinical area?	☐ YES	☐ 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?	☐ YES ☐ 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?	☐ YES ☐ NO
Were all the checks done in the presence of the patient, at the bedside?	☐ YES ☐ NO

4.1.5 Patient Identification Checks

Patient Identification Checks (References # 4)	
Were the * **TM patient identifiers** verified to be identical on the following: • Patient's arm band • Authorized prescriber's order • TS label/tag	 ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO
Were the patient identification checks documented in the paper/electronic medical record (EMR)?	☐ YES ☐ 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)	
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: • Patient ABO/Rh(D) test results (Group & Screen test) • Canadian Blood Services (CBS) label • TS label/tag	☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO
If *not identical*, was compatibility validated (e.g., transfusionist's knowledge stated, compatibility chart consulted)?	☐ N/A ☐ YES ☐ NO
Was the **unit number** verified as identical on: • CBS label • TS label/tag	☐ YES ☐ NO ☐ YES ☐ NO
Was the **expiry** date on the blood component verified to be acceptable?	☐ YES ☐ NO
Were date and time of issue from TS checked to determine the **maximum timeframe** for completing the transfusion?	☐ YES ☐ NO
Were the component checks documented in the paper/electronic medical record (EMR)?	☐ YES ☐ 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?	☐ YES ☐ NO ☐ N/A FOR PATIENT
Was blood administration tubing with 170-260 micron filter used?	☐ YES ☐ NO
Was IV fluid 0.9% sodium chloride used?	☐ YES ☐ NO
Was the transfusion start time documented?	☐ YES, START TIME ___:___hrs ☐ NO
Were vital signs checked within 30 minutes prior to transfusion?	☐ YES ☐ 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?	☐ YES ☐ NO ☐ N/A PATIENT SITUATION
Were vital signs checked 15 minutes after start of the transfusion?	☐ YES ☐ NO
For vital signs checks, indicate if the vital sign parameter was assessed: • Temperature • Blood Pressure • Pulse • Respiration • Oxygen Saturation • Other *(specify)*	 ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO _____
Was the transfusionist aware of the steps to manage a transfusion reaction?	☐ YES ☐ 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?	☐ YES, END TIME: ___:___ hrs ☐ NO ☐ AUDITOR DID NOT ASSESS
Was the transfusion completed within 4 hours from time of issue from TS?	☐ YES ☐ NO ☐ UNKNOWN
Were vital signs checked on completion of the transfusion?	☐ YES ☐ NO
Did the TS label/tag remain attached to the component until completion of transfusion?	☐ YES ☐ NO
Does paper/electronic medical record (EMR) documentation provide the identity of the transfusionist?	☐ YES ☐ NO
Does the paper/electronic medical record (EMR) documentation include: • Volume transfused • Vital signs • Patient assessments (if applicable e.g., a transfusion reaction occurred) • None of the above documentation was assessed by the auditor	 ☐ YES ☐ NO ☐ YES ☐ NO ☐ N/A ☐ YES ☐ NO ☐ 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: *(REDCap generates)*	**Patient Code:** *(Created by auditor, as per tracking log)* *To avoid patient privacy breaches, do not use patient identifiers (i.e., initials, hospital number, accession number) or blood unit number.*	**Transfusion Date:**
Transfusion Priority: ☐ Routine ☐ Urgent ☐ Stat	**Transfusion Location:** *(Select location that best aligns to your site locations)* ☐ Chronic Care/Rehabilitation ☐ Emergency ☐ Intensive/Cardiac Care Unit ☐ Medical/Surgical Ward ☐ Neonatal/Pediatric	☐ Obstetrical Unit ☐ Operating Room ☐ Outpatient Clinic ☐ Post Anesthetic Care Unit ☐ Other *(specify)* _____
Blood Product: ☐ Albumin ☐ Fibrinogen Concentrate ☐ Intravenous Immune Globulin ☐ Prothrombin Complex Concentrate ☐ Other *(specify)* _____		

- **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?	☐ YES ☐ NO
Did the order include: • Product type • Volume/quantity/dose • Rate/duration of infusion or stated in facility specific standard operating procedure (as per manufacturer's recommendations)	☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO
Was informed consent documented? *(Only select "Yes" if the transfusionist verified informed consent was documented).*	☐ YES ☐ NO
Was the IV established and * patent prior to the product arriving at clinical area?	☐ YES ☐ NO ☐ 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?	☐ YES ☐ 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?	☐ YES ☐ NO
Were all the checks done in the presence of the patient, at the bedside?	☐ YES ☐ NO

4.2.5. Patient Identification Checks

Patient Identification Checks (References # 4)	
Were the * **TM patient identifiers** verified to be identical on the following: • Patient's arm band • Authorized prescriber's order • TS label/tag	 ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO
Were the patient identification checks documented in the paper/electronic medical record (EMR)?	☐ YES ☐ 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: • Manufacturer labelling • TS label/tag	 ☐ YES ☐ NO ☐ YES ☐ NO ☐ N/A FOR PRODUCT
Was the **expiry** date on the blood product verified to be acceptable?	☐ YES ☐ NO
Were date & time of entering/spiking product vial/bottle checked to determine **maximum timeframe** for completing the infusion?	☐ YES ☐ NO ☐ N/A FOR PRODUCT
Were the product checks documented in the paper/electronic medical record (EMR)?	☐ YES ☐ 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?	☐ YES ☐ NO ☐ N/A FOR PATIENT
Was appropriate IV tubing used (as per the manufacturer e.g., vented tubing, standard IV tubing)?	☐ YES ☐ NO ☐ N/A FOR PRODUCT
Was compatible IV fluid used (as per the manufacturer)?	☐ YES ☐ NO ☐ N/A FOR PRODUCT
Was the infusion start time documented?	☐ YES, START TIME ___:___hrs ☐ NO
Were vital signs checked within 30 minutes prior to infusion?	☐ YES ☐ NO
Was the infusion rate within manufacturer's recommendations?	☐ YES ☐ NO ☐ N/A FOR PRODUCT
Were vital signs checked 15 minutes after start of the infusion?	☐ YES ☐ NO ☐ N/A FOR PRODUCT
For vital signs checks, indicate if the vital sign parameter was assessed: • Temperature • Blood Pressure • Pulse • Respiration • Oxygen Saturation • Other *(specify)*	 ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO _____
Was the transfusionist aware of the steps to manage a transfusion reaction?	☐ YES ☐ 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?	☐ YES, END TIME ___:___ hrs ☐ NO ☐ AUDITOR DID NOT ASSESS ☐ 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?	☐ YES ☐ NO ☐ UNKNOWN ☐ N/A FOR PRODUCT
Were vital signs checked on completion of the infusion?	☐ YES ☐ NO ☐ N/A FOR PRODUCT
Did the TS label/tag remain attached to the product until completion of the infusion?	☐ YES ☐ NO
Does paper/electronic medical record (EMR) documentation provide the identity of the transfusionist?	☐ YES ☐ NO
Does the paper/electronic medical record (EMR) documentation include: • Volume transfused • Vital signs • Patient assessments (if applicable e.g., a transfusion reaction occurred) • None of the above documentation was assessed by the auditor	 ☐ YES ☐ NO ☐ YES ☐ NO ☐ N/A ☐ YES ☐ NO ☐ 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: <u>Specific to Rh(D) Immune Globulin (RhIG)</u>, 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".
  - <u>For a product where the route of administration is not IV</u>:
    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 <u>*was documented*</u> (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 <u>*was not documented*</u> (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	

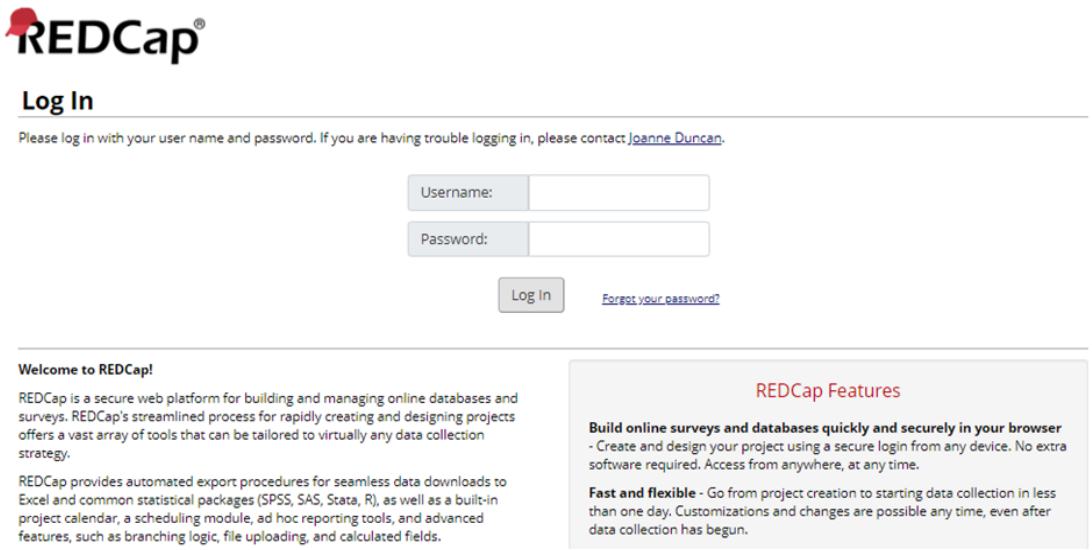
- **REDCap Entered By:**
  At the time of REDCap data entry, the first and last name of the individual entering the audit information may be noted on the paper audit form.

5. How to Access REDCap

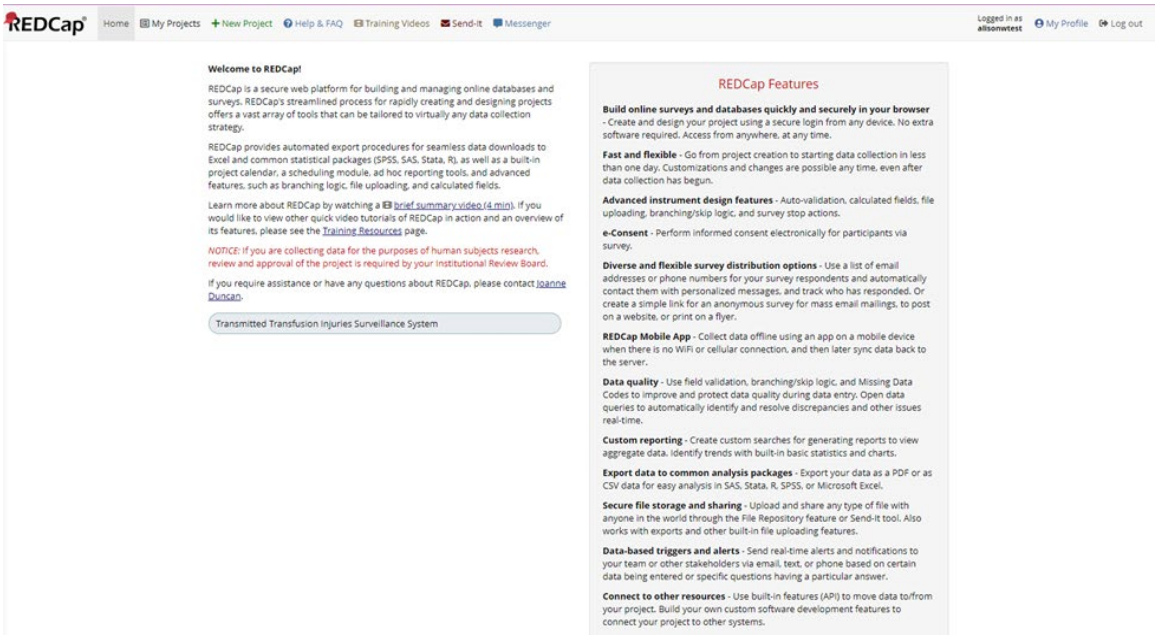
5.1. This is the URL for the REDCap database: **https://mctr.mcmaster.ca/**

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.

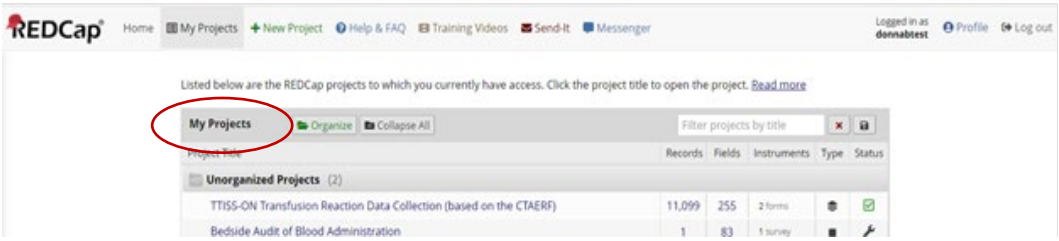
If you are a new REDCap user, your login credentials will be provided via email.



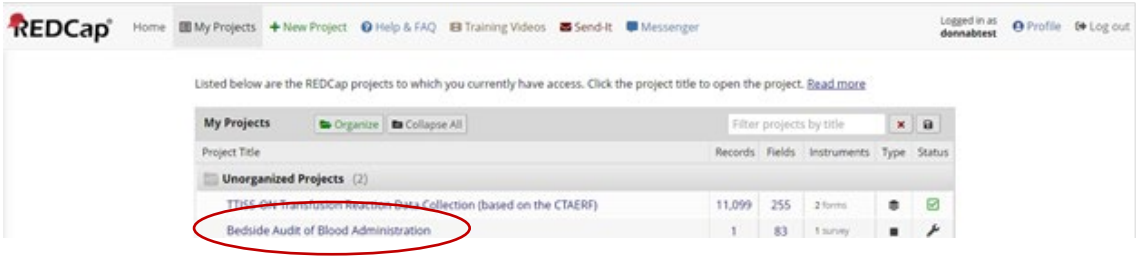
Once logged in you will see the home page



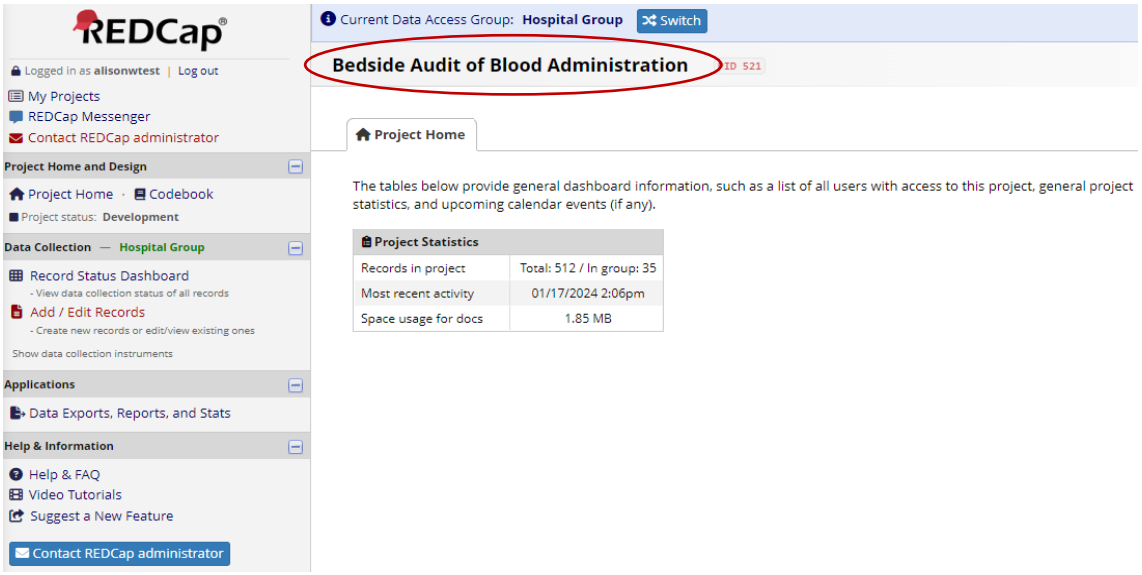
5.3. From the home page select “My Projects”



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



Location Manager Profile - Homepage



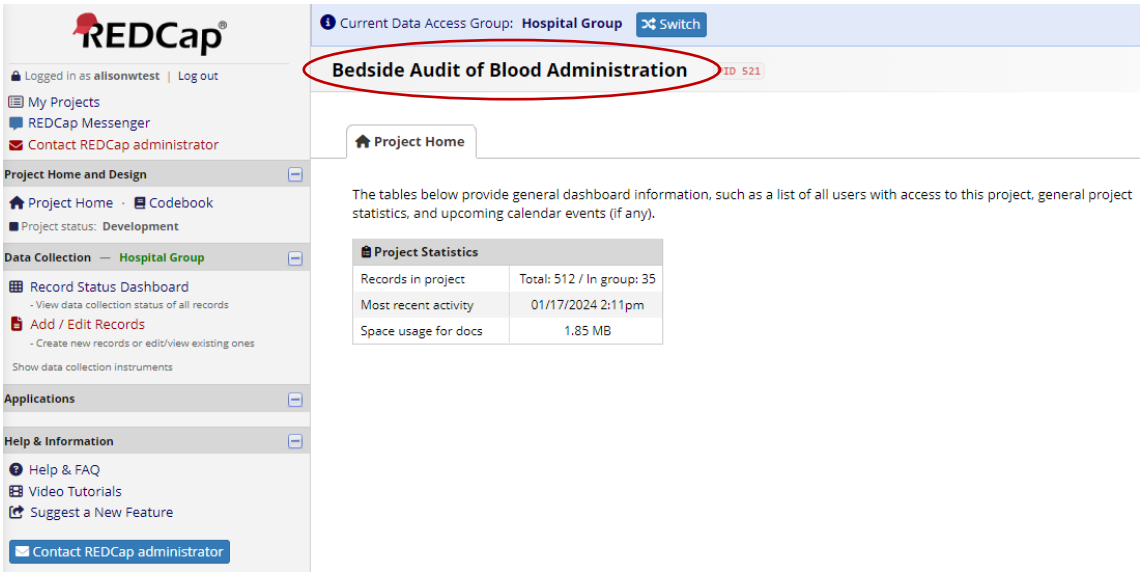
Home page features:

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

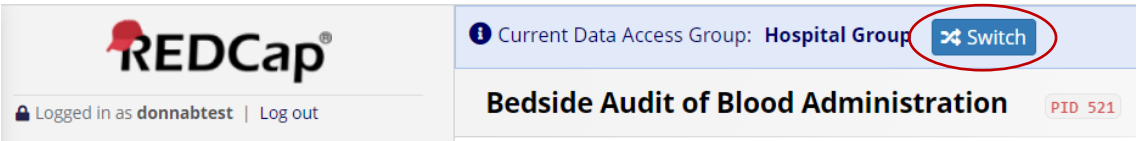


Many of the functionality features are found in the menu on the left side of the homepage.

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.

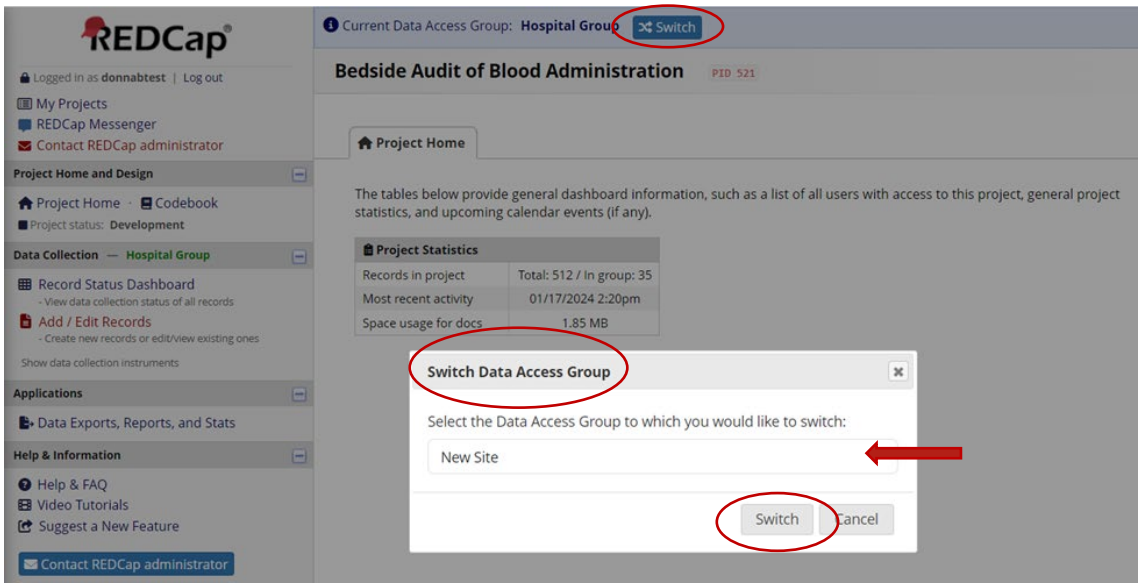
5.5. **Switch**



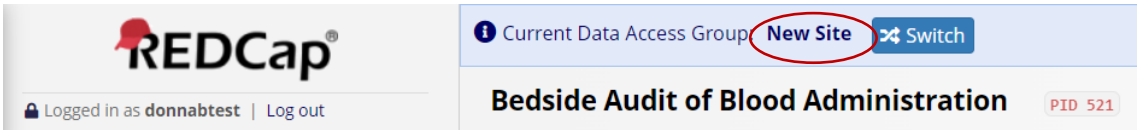
If you work at multiple hospitals within multiple DAGs, you will be assigned to the DAGs specific to your working locations.
If assigned to multiple DAGs, the user will see a blue banner at the top of every project page, which will present them with the option to switch to another DAG.

To change DAGs

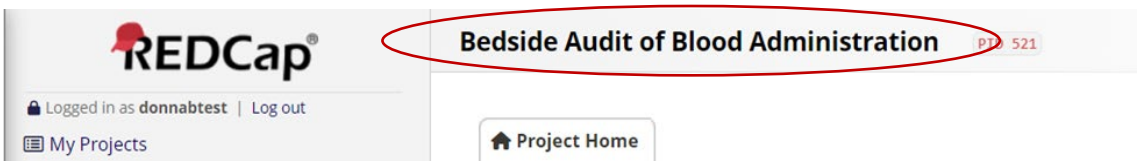
- Click on “Switch”. The “Switch Data Access Group” pop up will display.
- Select the DAG you wish to report in by clicking on the box populated with sites to which you have been given access.
- Click Switch.



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



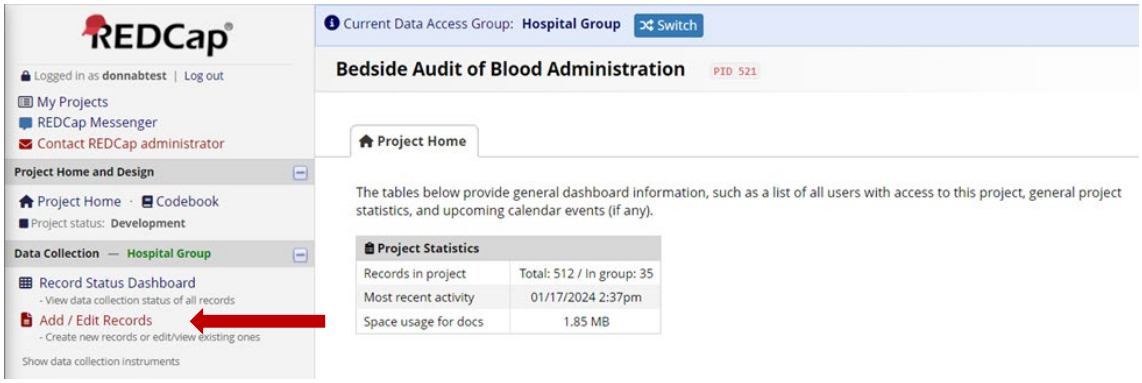
If you work in a single hospital / DAG you will not have the blue banner and Switch function as it is not required.



6. Adding and Editing Record (Audit Data)

6.1. Add a Record

- Click on "Add / Edit Records" on the left menu

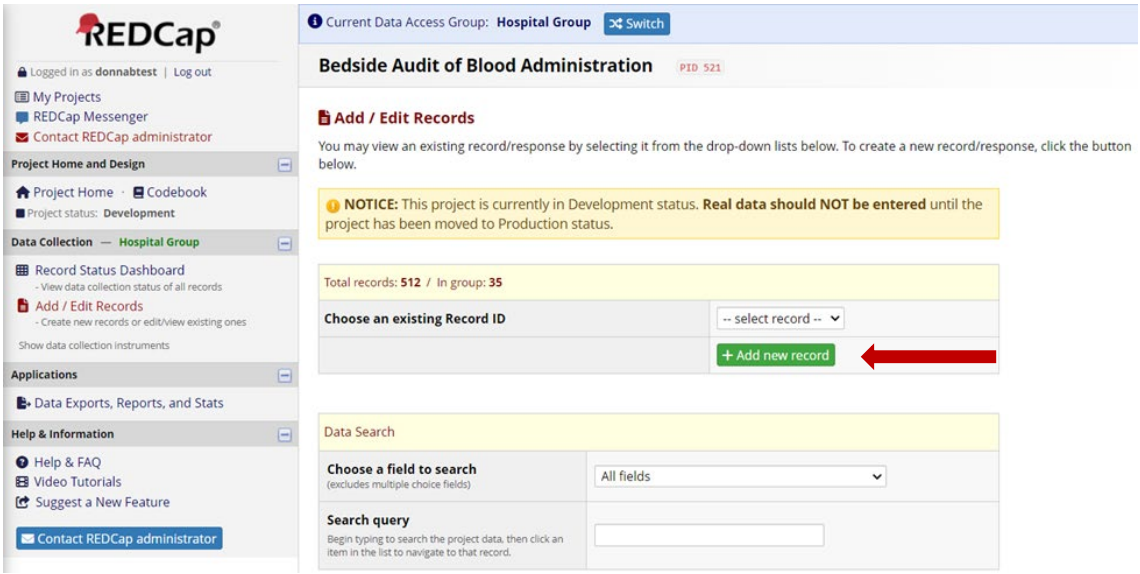


- Click on "+ Add new record"

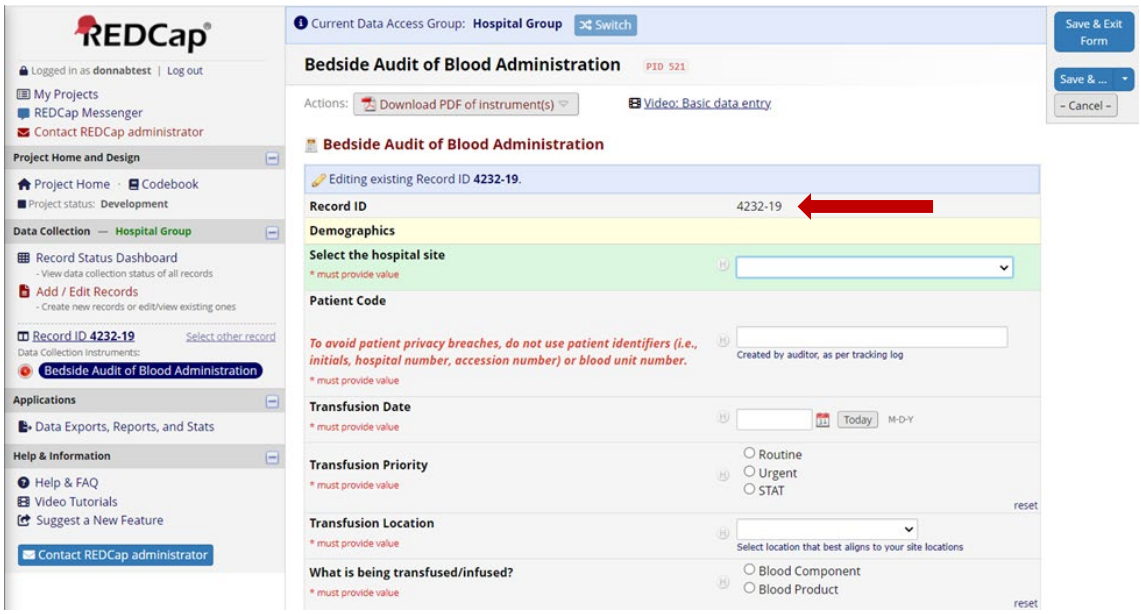
NOTE:

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.

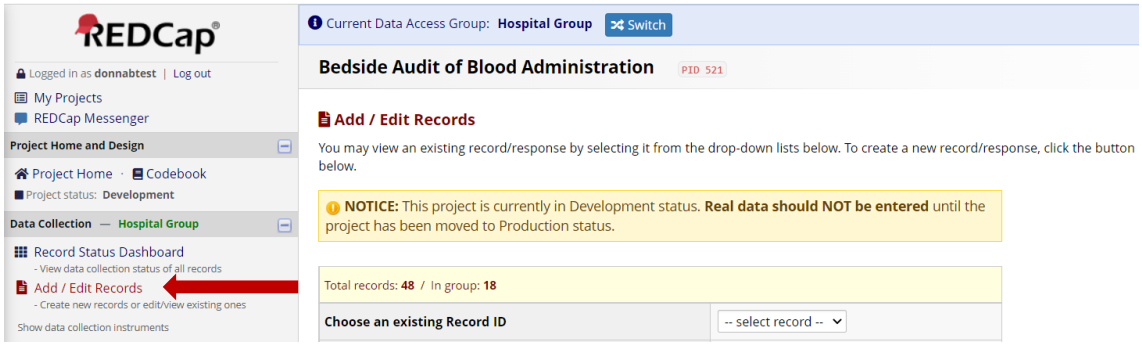


- REDCap auto generates the Record ID. Add the Record ID to your Bedside Audit of Blood Administration Tracking Log (refer to Section 3) and to the paper audit form.

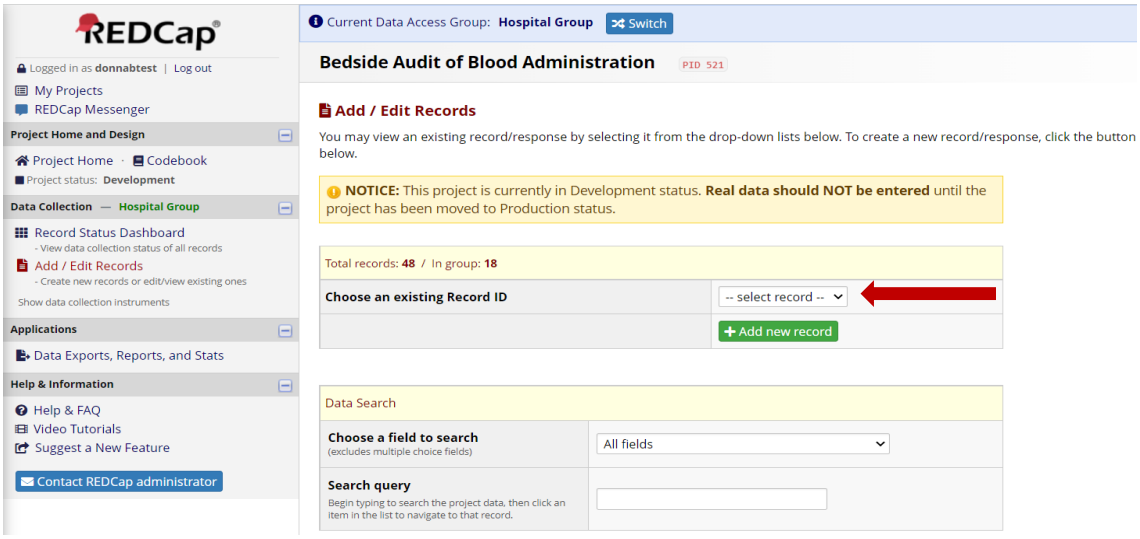
Demographics	**Hospital Name:**	
Record ID: *(REDCap generates)*	**Patient Code:** *(Created by Auditor, as per tracking log)* *To avoid patient privacy breaches, do not use patient identifiers (i.e., initials, hospital number, accession number) or blood unit number.*	**Transfusion Date:**

6.2. Edit a Record

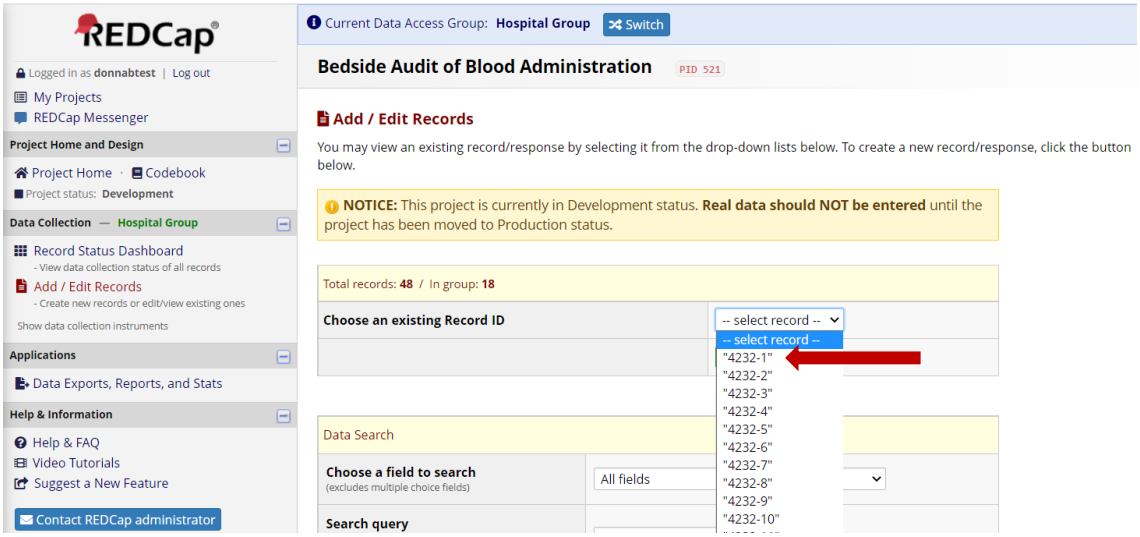
- Click on “Add / Edit Records” on the left menu.



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

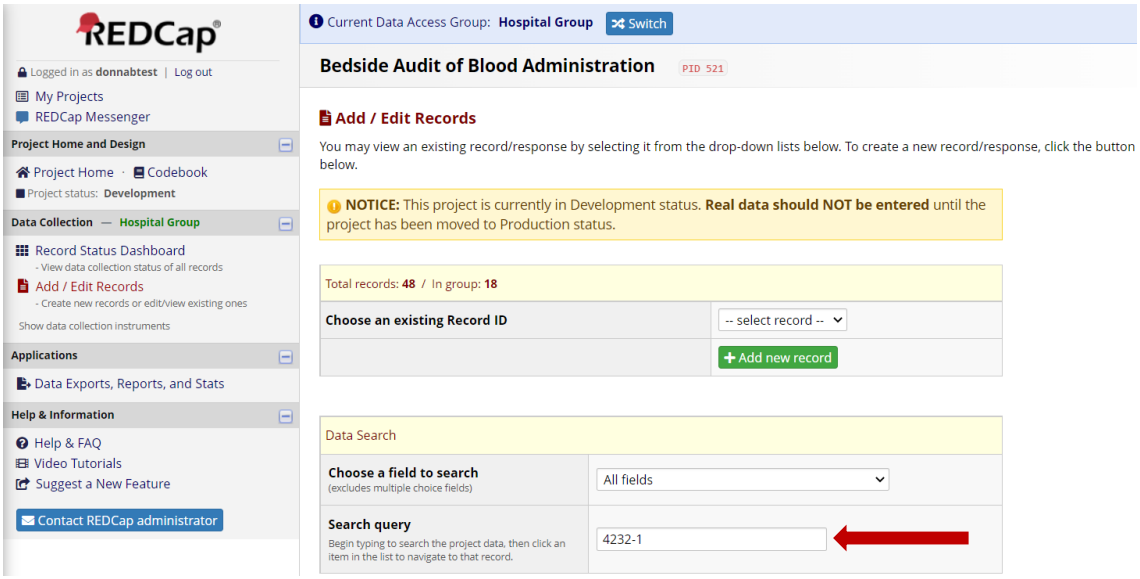


- A list of all the records within your DAG will display.
- Click on the Record ID number of the record you wish to edit.

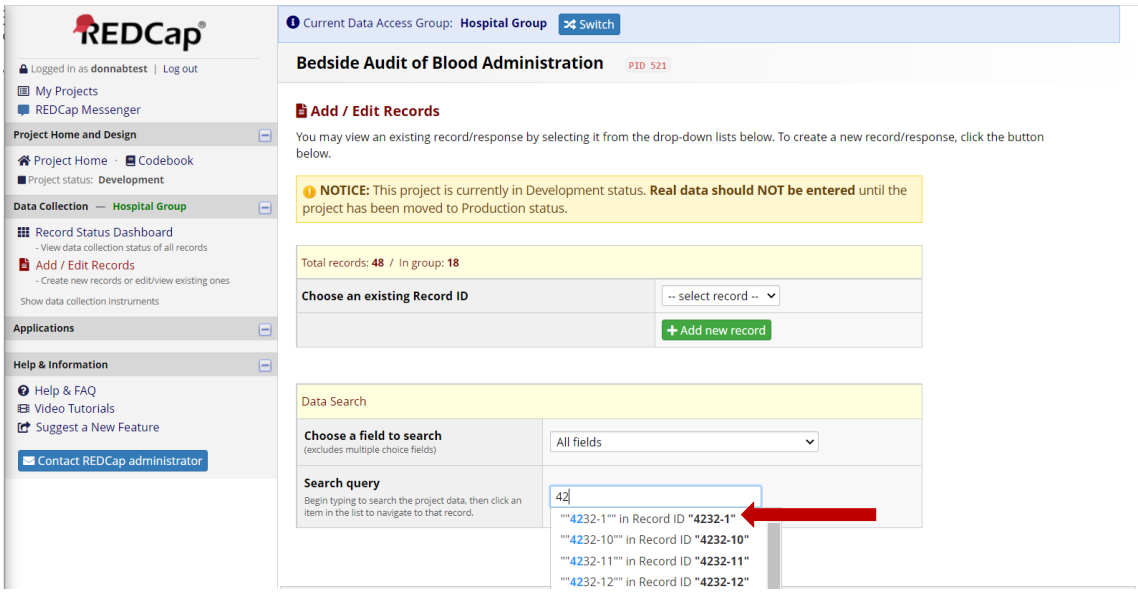


- The Bedside Audit of Blood Administration form will open. Make appropriate edits / changes to data previously entered or complete the form.

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



- 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.

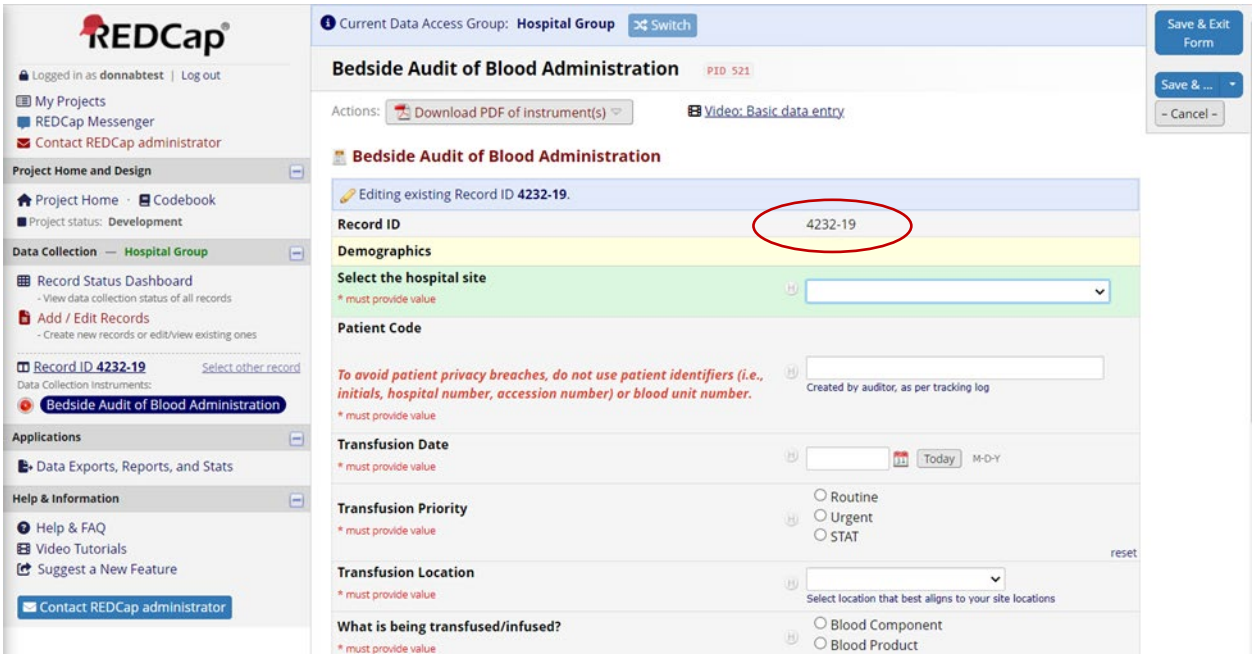


- The Bedside Audit of Blood Administration form will open. Make appropriate edits / changes to data previously entered or complete the form.

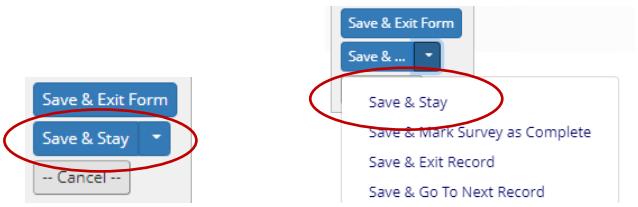
NOTE:
There are multiple options to access records to edit / view (i.e., Left menu: Record Status Dashboard; Add / Edit Records).

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)

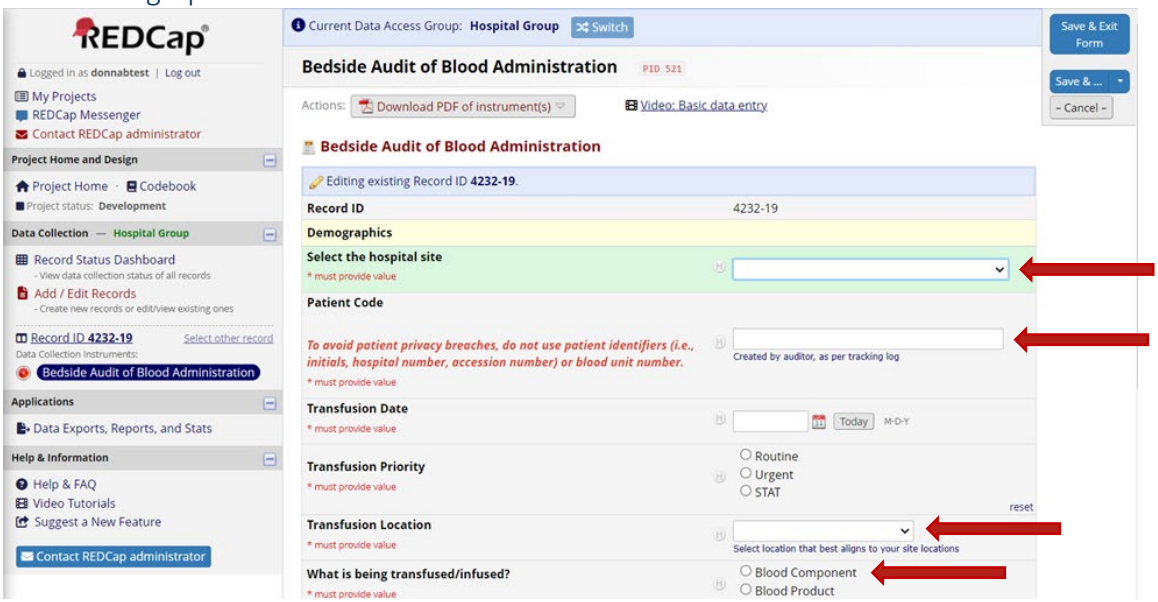


- If you need to pause/leave data entry and have not completed the record, you may select "Save & Exit Form".

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



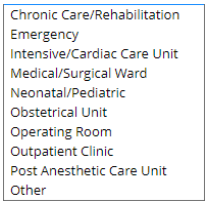
- **Hospital Site:** Click dropdown carrot to select. Hospital names are listed alphabetically.

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

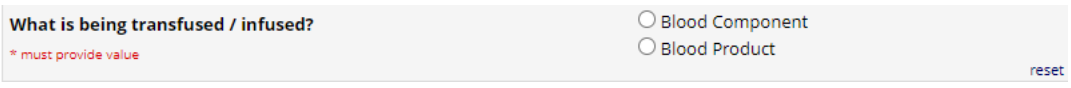
- **Patient code:** Mandatory REDCap field. Hospitals must create/define and record on their tracking log (refer to Section 3). Enter the Patient code from the tracking log.

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.



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

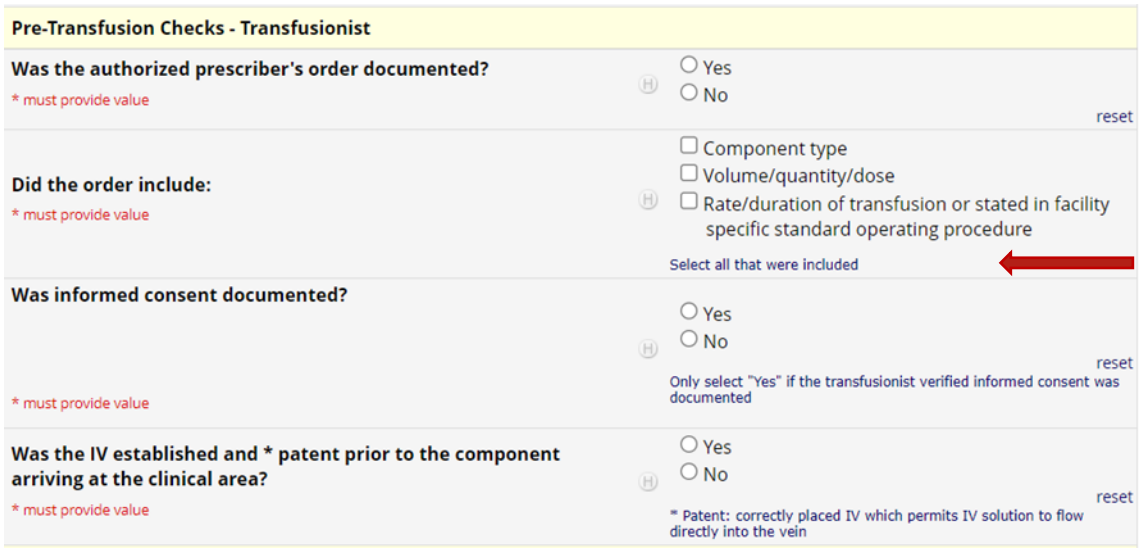


Select blood component or blood product which will auto direct to the appropriate form for data entry.

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.

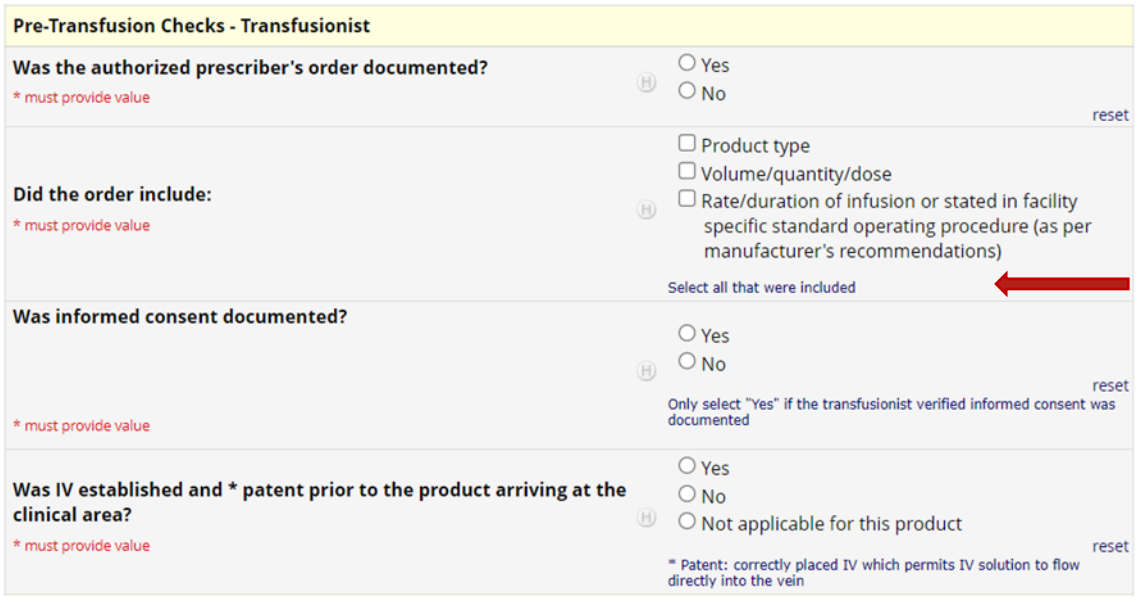
8.2. Pre-Transfusion Checks Transfusionist

Blood Components



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

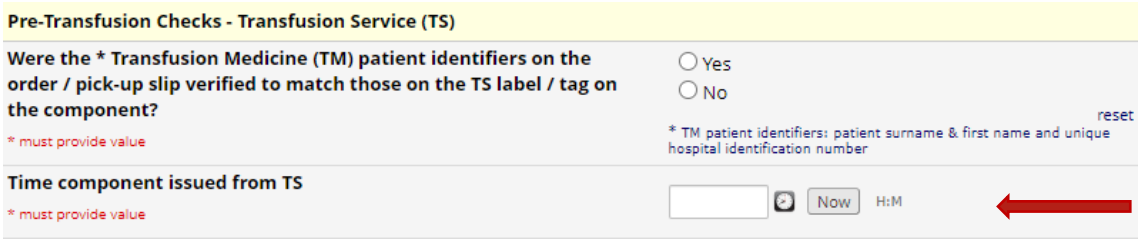
Blood Products



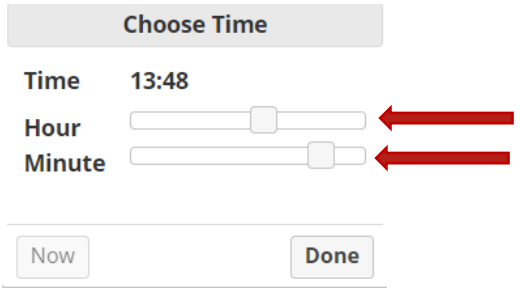
- **Did the order include:**
  - "Select all that were included": click the REDCap checkboxes corresponding to the "YES" responses on the paper audit form.

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

Blood Components



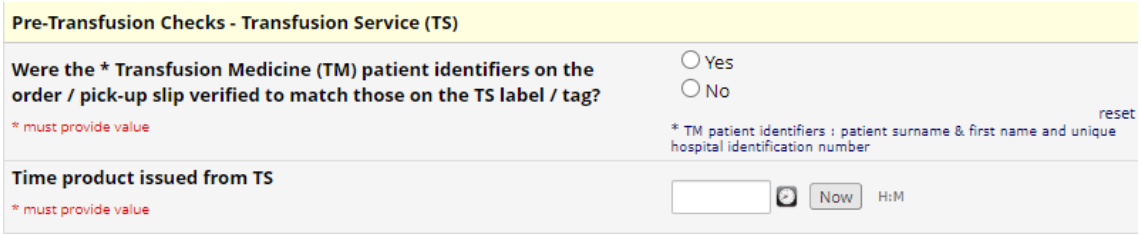
- **Time component issued from TS**
  Note: *Entering Time in REDCap*
  - Option 1: Enter the time in the free text box. The format "hours: minutes" (e.g., 08:45; 14:03) is mandatory.
  - Option 2: Click on the clock icon. The following pop up will display.



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.

  - 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



- **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? * must provide value	○ Yes ○ No reset
Were all the checks done in the presence of the patient, at the bedside? * must provide value	○ Yes ○ No reset

Blood Products

Transfusion	
Was the product type received from TS verified to match the authorized prescriber's order? * must provide value	○ Yes ○ No reset
Were all the checks done in the presence of the patient, at the bedside? * must provide value	○ Yes ○ No reset

8.5. Patient Identification Checks

Blood Components

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

- **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: * must provide value	☐ Patient's arm band ☐ Authorized prescriber's order ☐ TS label/tag Select all that were verified. * TM patient identifiers: patient surname & first name and unique hospital identification number
Were the patient identification checks documented in the paper/electronic medical record (EMR)? * must provide value	○ Yes ○ No reset

- **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? * must provide value	☐ Patient ABO/Rh(D) test results (Group & Screen test) ☐ Canadian Blood Services (CBS) label ☐ 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 ***were not identical*, was compatibility * validated?** * must provide value	○ Not applicable ○ Yes ○ No reset * Transfusionist knowledge stated; compatibility chart consulted
Was the unit number verified as identical on: * must provide value	☐ CBS label ☐ TS label/tag Select all that were verified
Was the expiry date on the blood component verified to be acceptable? * must provide value	○ Yes ○ No reset
Were date and time of issue from TS checked to determine the maximum timeframe for completing the transfusion? * must provide value	○ Yes ○ No reset
Were the component checks documented in the paper/electronic medical record (EMR)? * must provide value	○ Yes ○ 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: * must provide value	☐ Manufacturer labelling ☐ TS label/tag ☐ Not applicable for this product Select all that were verified
Was the expiry date on the blood product verified to be acceptable? * must provide value	○ Yes ○ No reset
Were date and time of entering/spiking product vial/bottle checked to determine maximum timeframe for completing the infusion? * must provide value	○ Yes ○ No ○ Not applicable for this product reset
Were the product checks documented in the paper/electronic medical record (EMR)? * must provide value	○ Yes ○ 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? * must provide value	○ Yes ○ No ○ Not applicable for this patient reset
Was blood administration tubing with 170-260 micron filter used? * must provide value	○ Yes ○ No reset
Was IV fluid 0.9% sodium chloride used? * must provide value	○ Yes ○ No reset
Was transfusion start time documented? * must provide value	○ Yes ○ No reset
Were vital signs checked within 30 minutes prior to transfusion? * must provide value	○ Yes ○ 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? * must provide value	○ Yes ○ No ○ Not applicable for this patient situation reset
Were vital signs checked 15 minutes after start of the transfusion? * must provide value	○ Yes ○ No reset
For vital signs checks, select the vital sign parameters assessed: * must provide value	☐ Temperature ☐ Blood Pressure ☐ Pulse ☐ Respiration ☐ Oxygen saturation ☐ Other Multiple parameters may be selected
Was the transfusionist aware of the steps to manage a transfusion reaction? * must provide value	○ Yes ○ No reset

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

Was transfusion start time documented? * must provide value	◉ Yes ○ No reset
Time transfusion started * must provide 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? * must provide value	○ Yes ○ No ○ Not applicable for this patient reset
Was appropriate IV tubing used (as per the manufacturer e.g., vented tubing, standard IV tubing)? * must provide value	○ Yes ○ No ○ Not applicable for this product reset
Was compatible IV fluid used (as per the manufacturer)? * must provide value	○ Yes ○ No ○ Not applicable for this product reset
Was the infusion start time documented? * must provide value	○ Yes ○ No reset
Were vital signs checked within 30 minutes prior to infusion? * must provide value	○ Yes ○ No reset
Was the infusion rate within the manufacturer's recommendations? * must provide value	○ Yes ○ No ○ Not applicable for this product reset
Were vital signs checked 15 minutes after start of the infusion? * must provide value	○ Yes ○ No ○ Not applicable for this product reset
For vital signs checks, select the vital sign parameters assessed: * must provide value	☐ Temperature ☐ Blood Pressure ☐ Pulse ☐ Respiration ☐ Oxygen saturation ☐ Other Multiple parameters may be selected
Was the transfusionist aware of the steps to manage a transfusion reaction? * must provide value	○ Yes ○ No reset

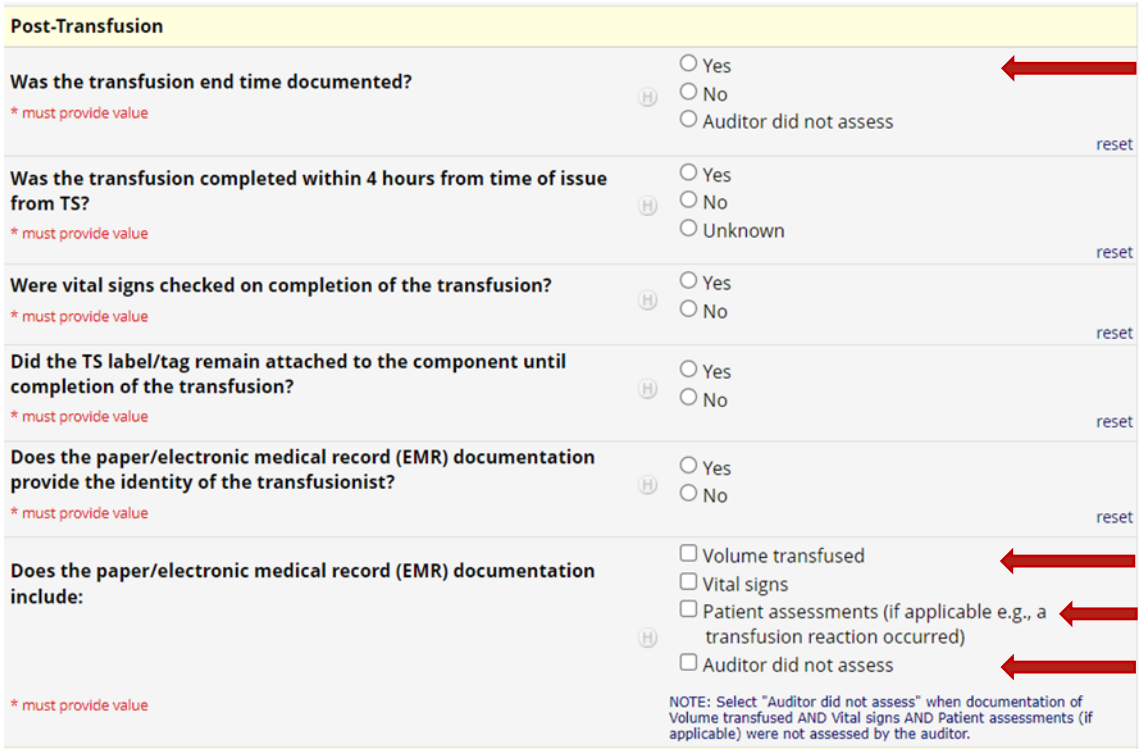
- **Was infusion start time documented?**
  - If "YES" is selected, the following displays:

Was the infusion start time documented? * must provide value	◉ Yes ○ No reset
Time infusion started * must provide value	Now H:M

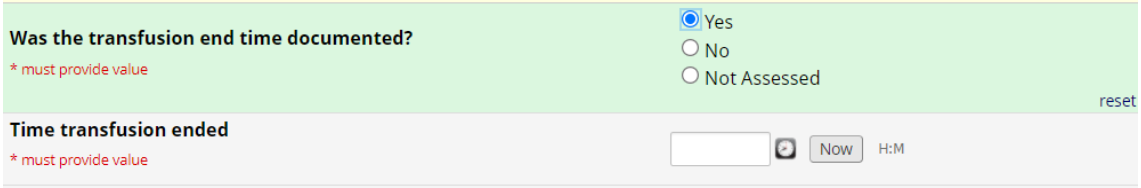
Refer to information about "***Entering Time in REDCap***" on page 28.

8.8. Post-Transfusion

Blood Components



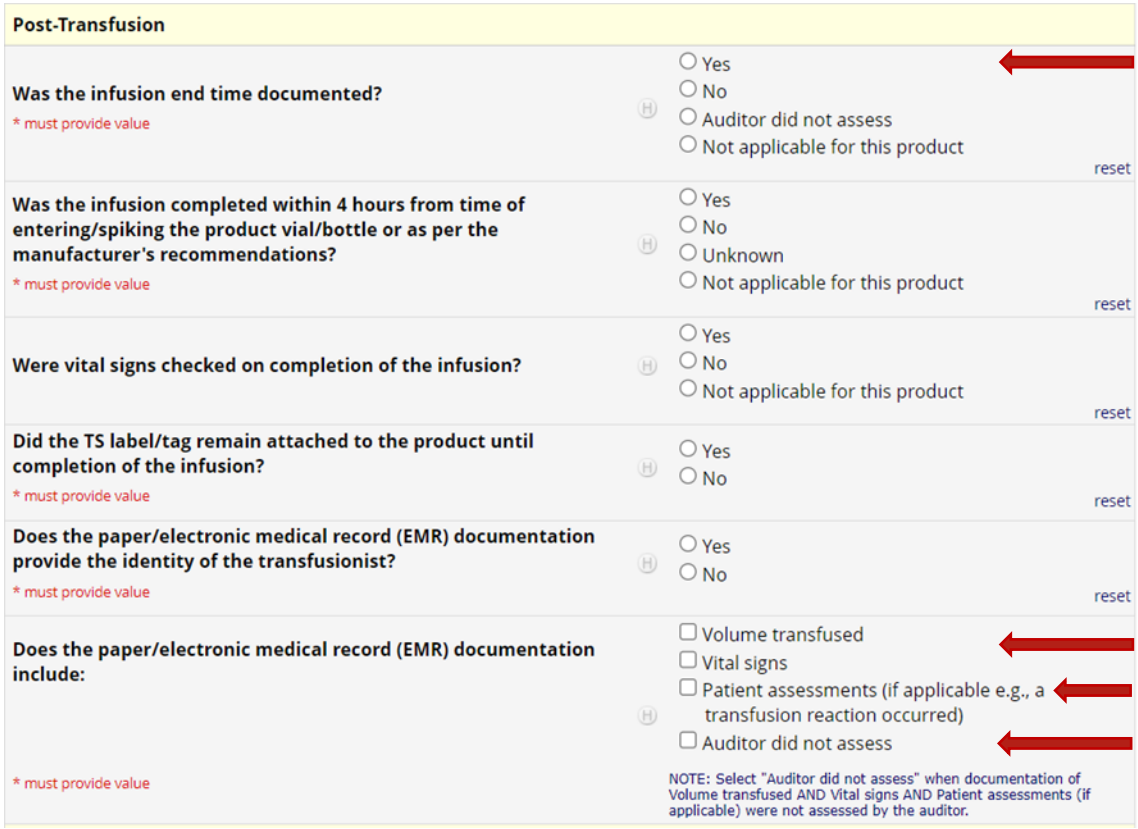
- **Was transfusion end time documented?**
  - If "YES" is selected, the following displays:



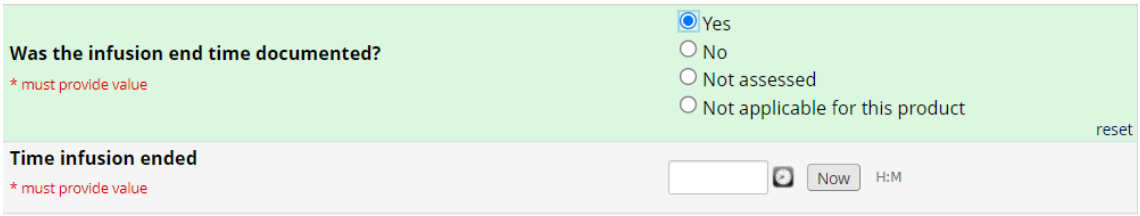
Refer to information about "***Entering Time in REDCap***" on page 28.

- **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



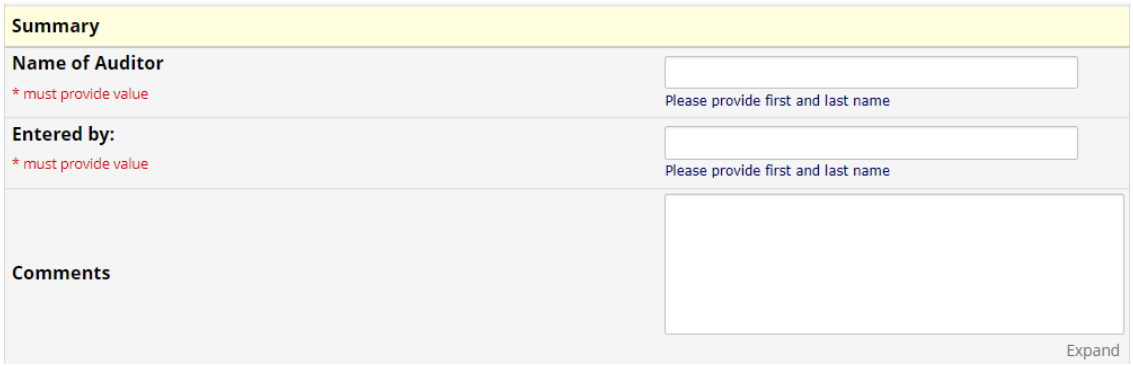
- **Was infusion end time documented?**
  - If "YES" is selected, the following displays:



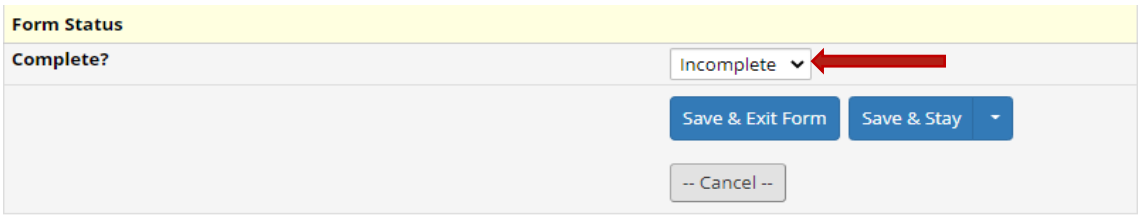
Refer to information about "***Entering Time in REDCap***" on page 28.

- **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



8.10. Form Status

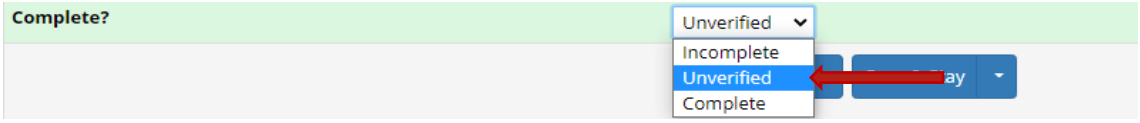


Once a record has been added, the Form Status is “Incomplete”.

It is recommended:

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

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).

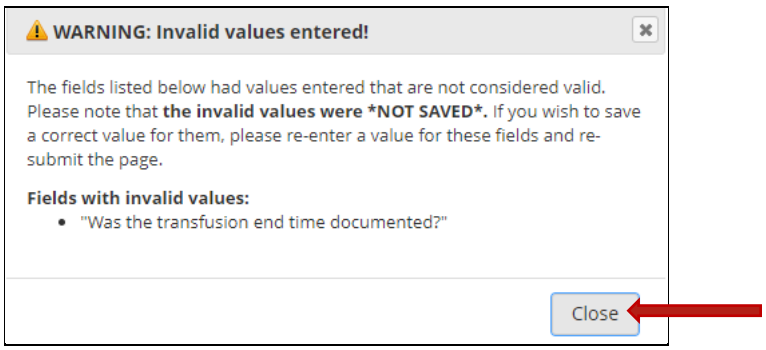


Always save your data entry by clicking “Save and Exit Form” or “Save & Stay”

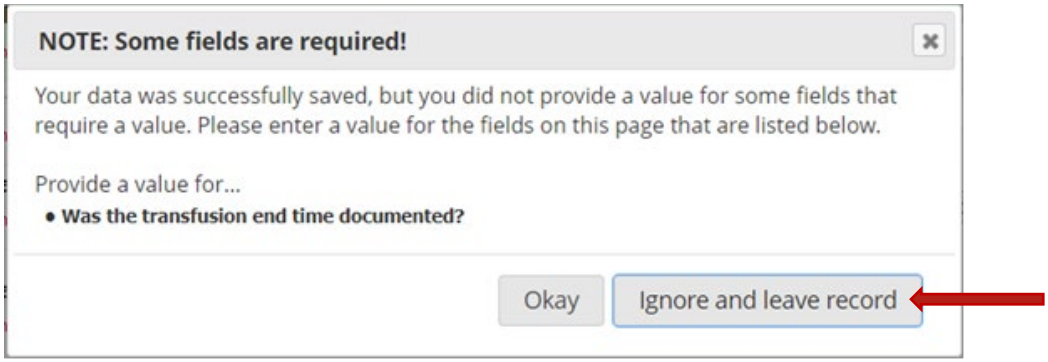
These “save” options are available at the bottom of form as well as top right corner of form (refer to Section 7 Bedside Audit of Blood Administration REDCap Form, page 25).

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”



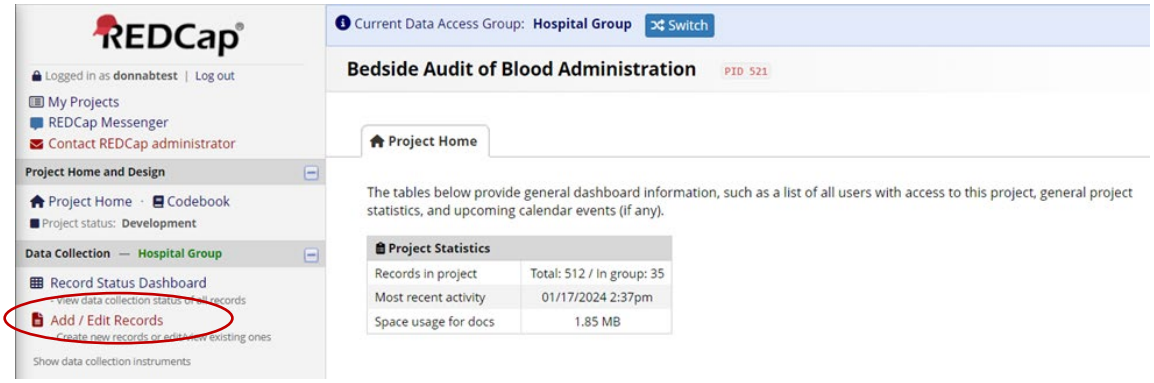
Next, the following pop up will appear. Select “Ignore and leave record”.



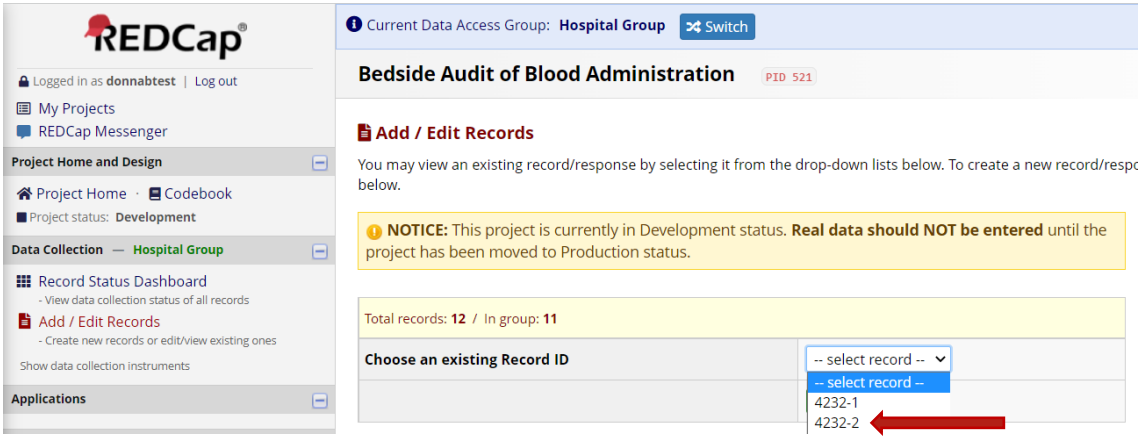
9. Download and Print a Record PDF

This functionality is available only to Location Manager Profile.

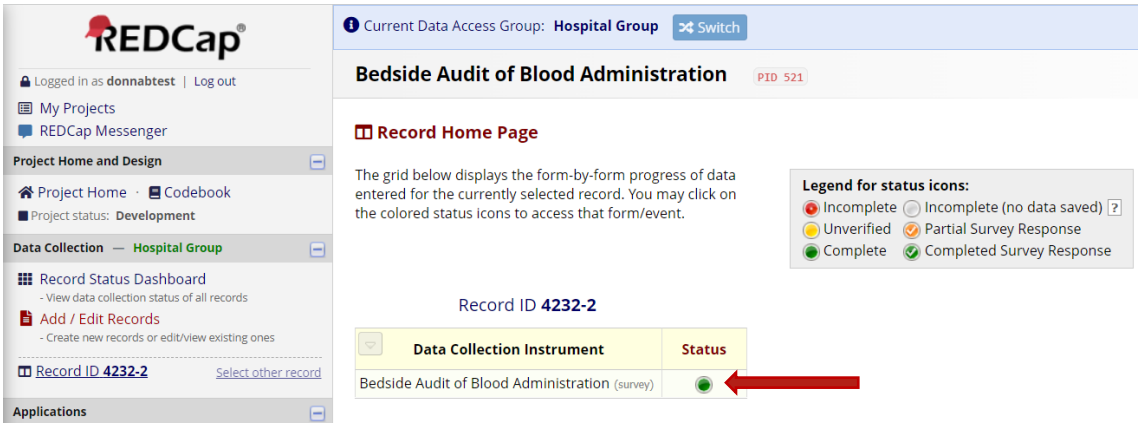
9.1 Select “Add / Edit Records”.



9.2 Select the record you wish to download and print.

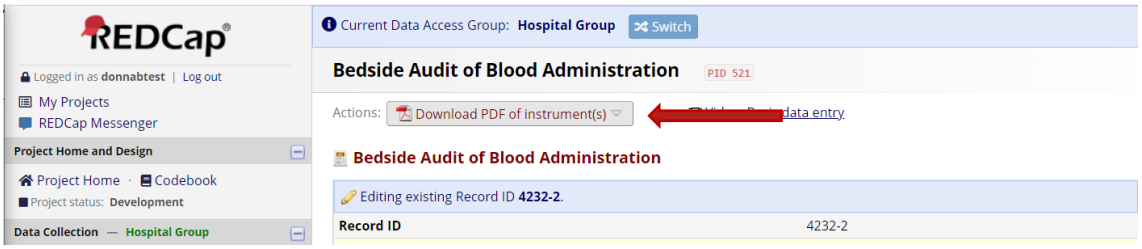


9.3 The following screen will open:

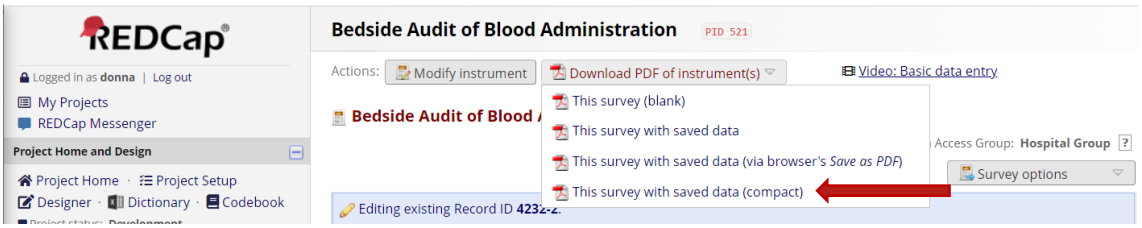


Click on the radio button below “Status” to open the record.

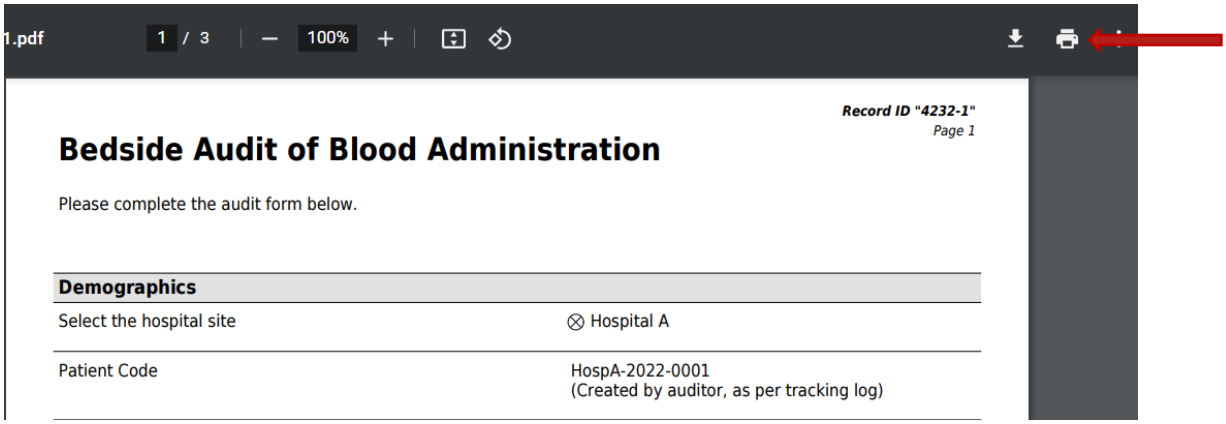
9.4 The record will open. Click on the drop-down carrot “Download PDF of Instrument(s)”



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



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

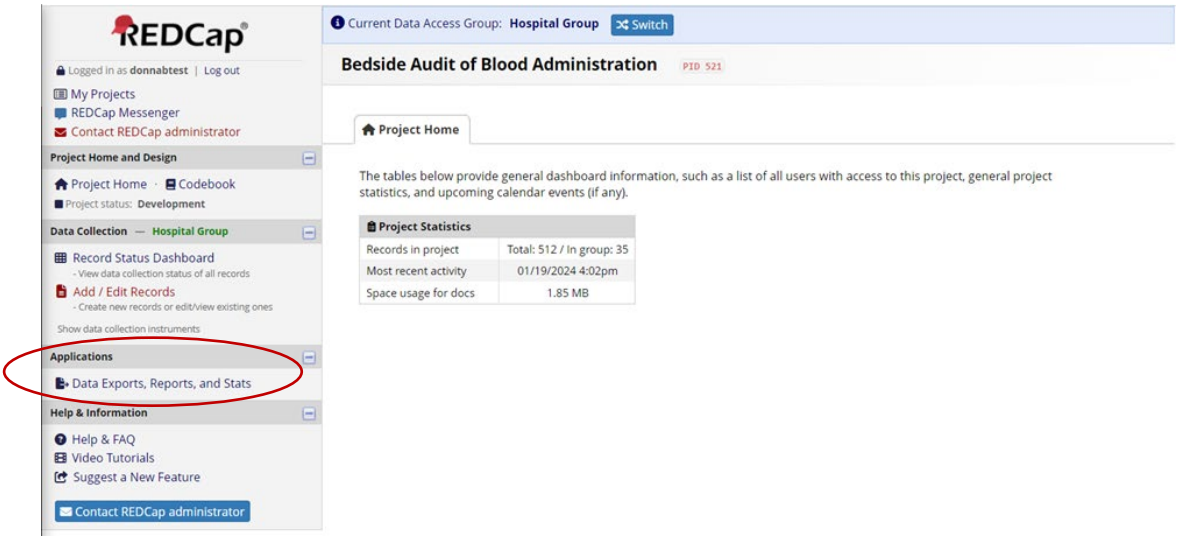


10. Viewing and Exporting Data from REDCap

This functionality is available only to Location Manager Profile.

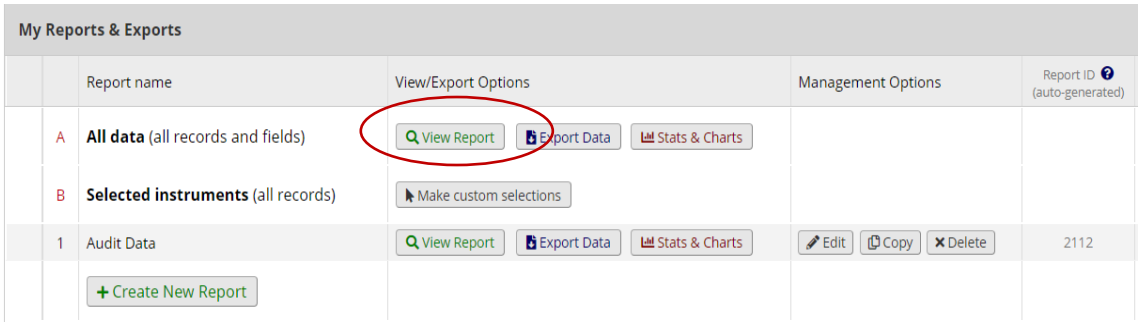
NOTE:
When adding records in REDCap was initiated, if your DAG had 12 or fewer historical records, then you must contact ORBCoN to validate these Record ID numbers prior to exporting your data.

10.1. Select “Data Exports, Reports and Stats”

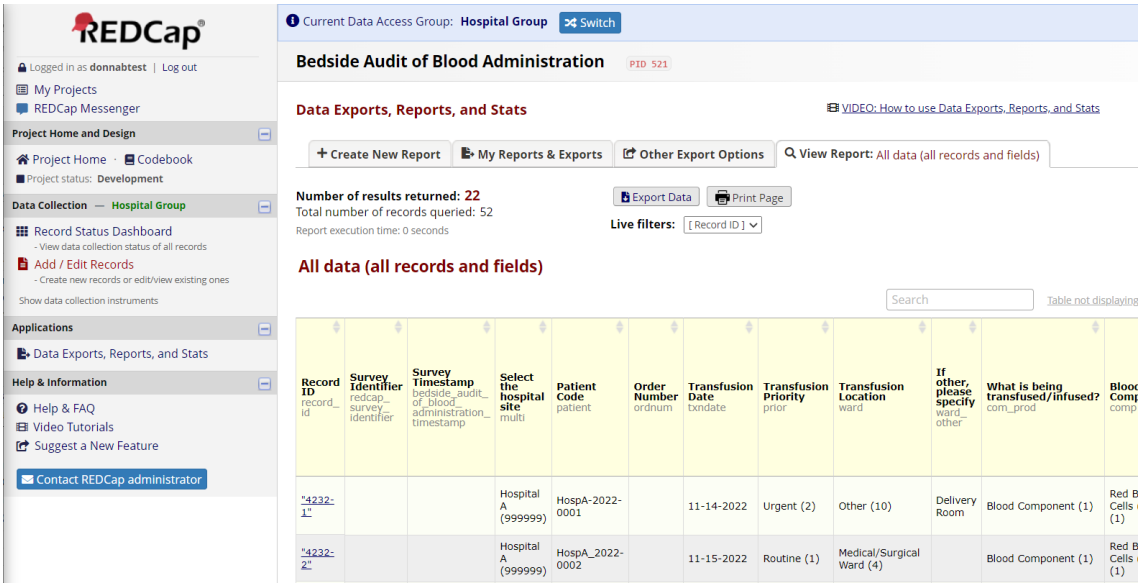


10.2. View Report

Click on “View report”.



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

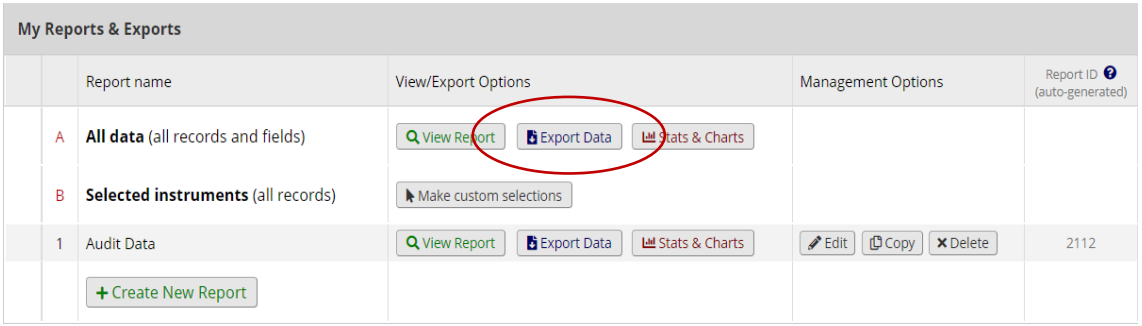


10.3. Export Data

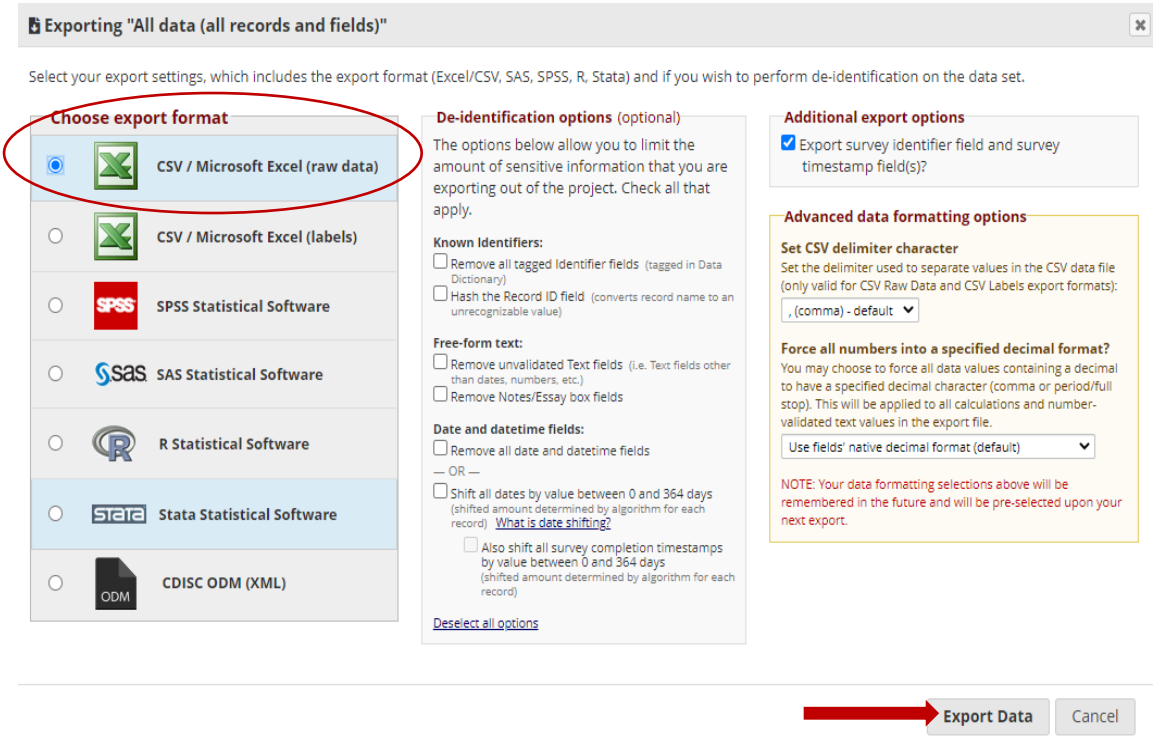
Select “Data Exports, Reports and Stats” as in 10.1.

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

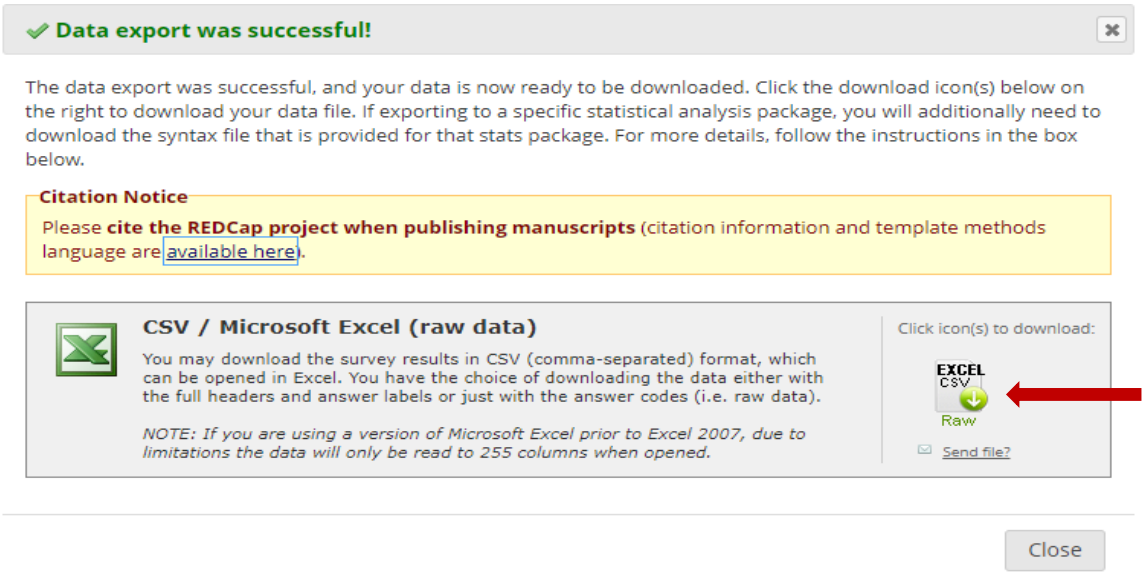
Click on “Export Data”



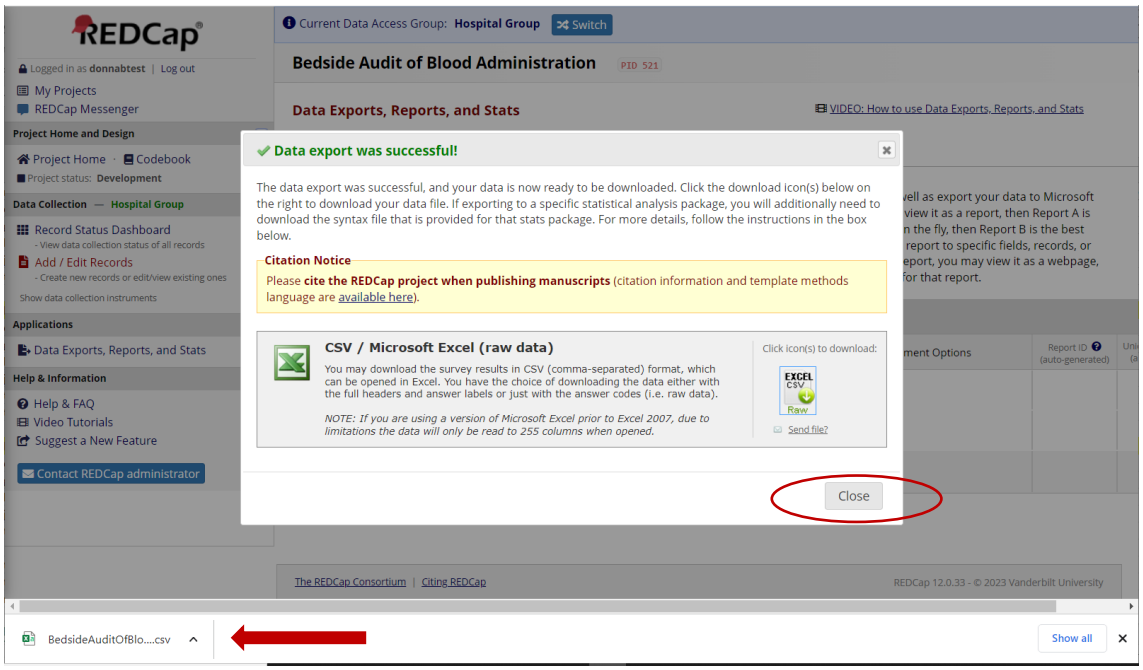
Choose export format by selecting radio button “CSV / Microsoft Excel (raw data)”
Click “Export Data”



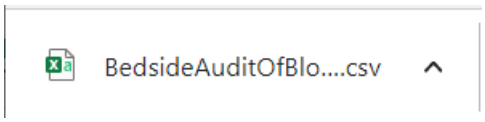
Click icon “EXCEL CSV Raw” to download file.



File will download. Click “Close”.



Click on the downloaded file to open it.



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_a	multi	patient	ordnum	txndate	prior	ward	ward_othe	com_prod	comp	prod	prod_othe
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_	redcap_	bedside	multi	patient	ordnum	txndate	prior	ward	ward_o	com_pr	comp	prod	prod_o
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

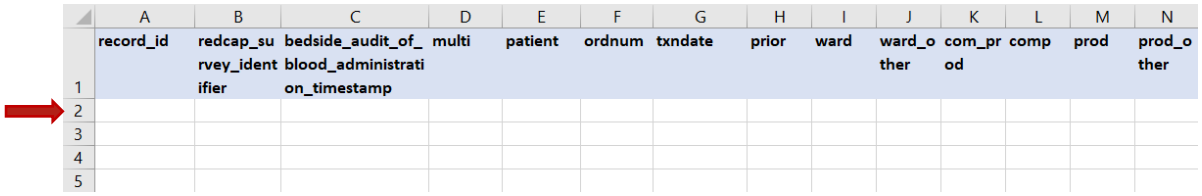
11. Using the Data Report Template

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.

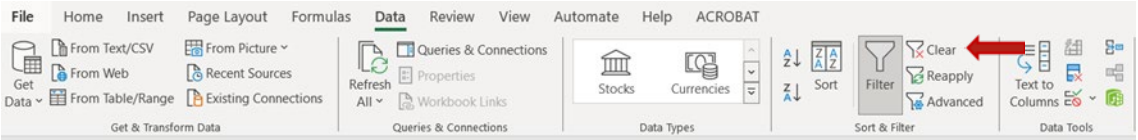


	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	record_id	redcap_survey_identifier	bedside_audit_of_blood_administration_timestamp	multi	patient	ordnum	txndate	prior	ward	ward_other	com_prod	comp	prod	prod_other
2														
3														
4														
5														

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

1. Ontario Regional Blood Coordinating Network (ORBCoN). Blood Utilization Graphs [Internet]. Toronto (CA); ORBCoN: 2022 Aug [cited 2022 Aug 16]. Available from: https://transfusionontario.org/en/category/blood-utilization-audits/blood-utilization-graphs/
2. Irina Maramica, Ira A. Shulman. Approaches to Blood Utilization Auditing in Technical Manual 19th edition, AABB Press, Bethesda MD; 2017:557-566
3. PA Harris, R Taylor, R Thielke, J Payne, N Gonzalez, JG. Conde, Research electronic data capture (REDCap) – A metadata-driven methodology and workflow process for providing translational research informatics support, J Biomed Inform. 2009 Apr;42(2):377-81.
4. PA Harris, R Taylor, BL Minor, V Elliott, M Fernandez, L O’Neal, L McLeod, G Delacqua, F Delacqua, J Kirby, SN Duda, REDCap Consortium, The REDCap consortium: Building an international community of software partners, J Biomed Inform. 2019 May 9 [doi: 10.1016/j.jbi.2019.103208]
5. Saol Therapeutics Research Limited Distributor (in Canada) Emergent BioSolutions Canada Inc. WINRHOR SDF product monograph [Internet]. Winnipeg (MB); [Publisher unknown] 2020 Mar 31 [cited 2022 Nov 29]. Available from: https://winrho.com/pdfs/WinRho%20PM-EN042420.pdf