TITLE: QE BT BloodTrack Enquiry and HemoSafe Usage Procedure	**Doc #:** 24764
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Final Approval: Robert S Liwski	

Purpose

This procedure provides instructions to authorized staff for the use of the HemoSafe refrigerator and BloodTrack Enquiry software for management of Red Cells to patients.

Abbreviations

BTS – Blood Transfusion Service
HI – Halifax Infirmary
ID – Identification number
MRN – Medical Record Number
NSHA – Nova Scotia Health Authority
OR – Operating Room
PIN – Personal Identification Number
RC – Red Cells
VG – Victoria General

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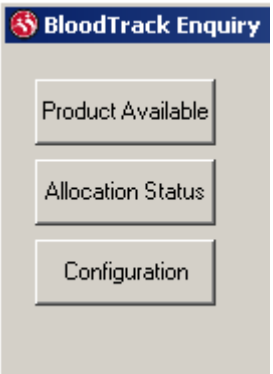
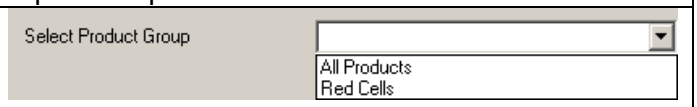
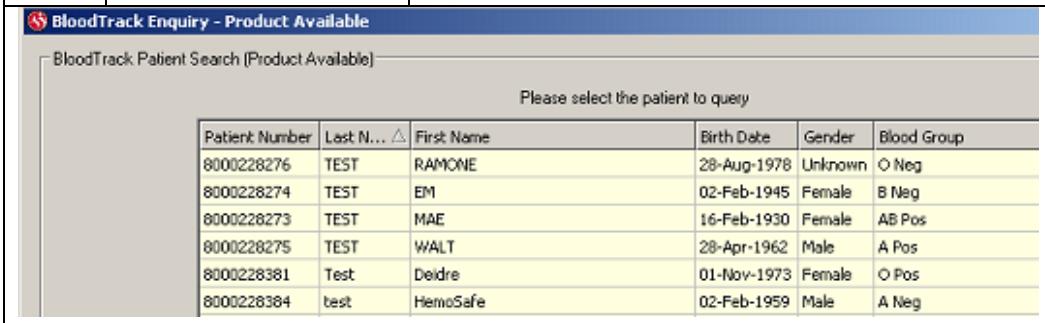
Procedure

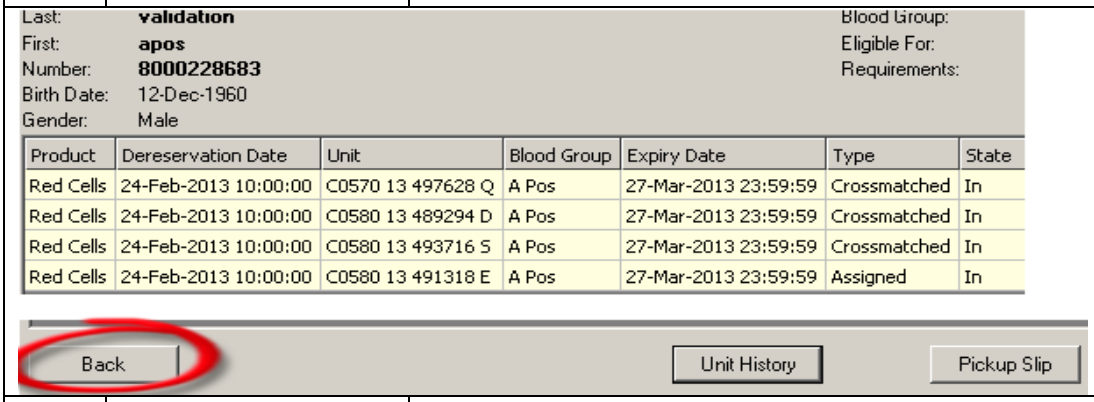
1. BloodTrack Enquiry – Checking For Crossmatched Red Cells

Step	Action	Details
1.1	Open BloodTrack Enquiry on the computer by double-clicking the icon on the desktop, if not already running. 	BloodTrack Enquiry is a simple program that is used to view information stored in the BloodTrack database about patients with available Red Cells. It can only **view** information, not add or edit anything.

1.2	Click the “Product Available” button.	The “Product Available” feature is used to determine what Red Cells are available in the HemoSafe refrigerators, and for which patients.  The “Allocation Status” feature is used to determine whether a patient is eligible for crossmatch but does not work currently, with the uni-directional interface. This feature **will not** be used, as BTS will continue to determine crossmatch-eligibility in Millennium only, based on BTS protocols. The “Configuration” feature requires special access rights and is for BTS use only. **NOTE: <u>Most processes in BloodTrack Enquiry have a 10-second timeout limit.</u>** If a step is not completed before the timeout, you will need to repeat the process.
1.3	Select “All Products” for the product group.	
1.4	Enter patient’s 10-digit MRN in the “Patient Number” field and press “Enter” or click the “Search” button.	If only one matching patient record is found, it will be displayed. If no patient is found, either the MRN was entered incorrectly or the patient is not known to the BloodTrack system. Ensure you have the correct MRN and try again. If multiple partial matches for the entered MRN are found, a list of patients will be displayed.
		
1.5	Select the desired patient and click the “Search” button.	You will be presented with either a list of available Red Cells, or a message indicating there are no Red Cells available for that patient.

1.6	Call BTS if message indicates there are no Red Cells available for that patient.	If no patient record is found, or no Red Cells are available for the patient, call BTS to order Red Cells (473-4257 at HI site, 473-6670 at VG site). BTS will crossmatch Red Cells in the HemoSafe, whenever possible.
1.7	Review the screen to confirm patient info and assess product availability.	The resulting screen from a successful search shows all the Red Cells available in **ALL** of the HemoSafe refrigerators within CDHA, along with associated patient info: • **Location** (HI or VG HemoSafe – there could potentially be products associated with the patient at both sites <u>but this would be a rare occurrence)</u> • **Product** will always be "Red Cells" • Number of Red Cells **Crossmatched** (Red Cells that have patient label attached in the HemoSafe) • Number of Red Cells **Assigned** (Red Cells remotely crossmatched by BTS for the patient that will have patient labels printed when they are taken out of the HemoSafe refrigerator) Last: **test** First: **rusty** Number: **8000228400** Birth Date: 05-May-1970 Gender: Male Location | Prod... | Crossmatched | Assigned HI HemoSafe1 | Red Cells | 1 | 1 VG HemoSafe1 | Red Cells | 0 | 1 The sum of the **Crossmatched** and **Assigned** values is the number of Red Cells available for the patient. In the above example there are 2 Red Cells in the HI HemoSafe and 1 Red Cell in the VG HemoSafe for a total of 3.
1.8	Click Pickup Slip	Enables printing of a pickup slip to take to the HemoSafe refrigerator to take blood out for a specific patient. The pickup slip has a barcode used to scan at the kiosk when prompted.
1.9	Enter number of units	Enter total number of units available for the patient as seen in product available.

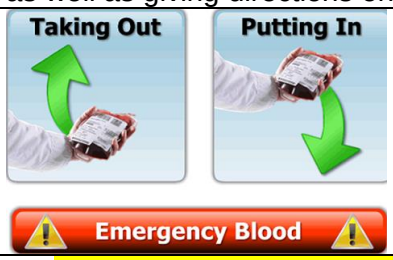
1.10	Print the Pickup Slip	The pickup slip will print to a laser printer associated with the computer you are using. Keep the Pickup Slip as it can be used to retrieve additional blood from the HemoSafe throughout the day.
1.11	Optional: Click the “Details” button	Click the “Details” button to see: a) Product type (always **Red Cells**) b) Dereservation date: (crossmatch expiry) c) Product unit numbers d) Product blood group e) Product expiry date f) Type: a. **Crossmatched** (Red Cells have a HemoSafe compatibility label, with patient information, attached) b. **Assigned** (Red Cells were electronically crossmatched and do not have patient information on the tag. The compatibility label, with patient information, will print when the Red Cells are taken out for the patent) g) State “In” means the Red Cells are in a managed storage location (i.e. the HemoSafe refrigerator).



1.12	Click the “Back” button	Click the “Back” button until you are back at the main screen. The Unit History button is not used.

2. “Taking Out”: Retrieving Crossmatched Red Cells From The HemoSafe Refrigerator

Step	Action	
2.1	Log in at the	**NOTES:** Most processes on the HemoSafe

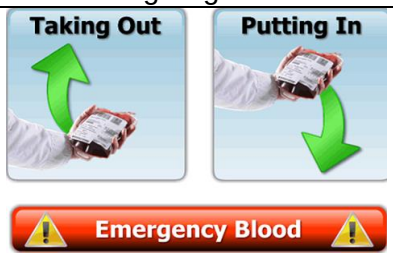
	HemoSafe refrigerator using your BloodTrack user ID.	refrigerator have a 90-second timeout limit. If a step is not completed before the timeout, you will need to repeat the process. One exception is taking out Red Cells which require that compatibility labels be attached – this has a 60-second timeout limit, with an extra 90 seconds, if you request it. The HemoSafe refrigerator will play audible prompts and instructions at every step of a process as well as giving directions on the screen.
2.2	Tap "Taking Out".	
2.3	Scan the Pickup Slip **or** go to next step. Proceed to step 2.6 if you did scan the Pickup Slip	3. The Pickup Slip is preprinted from a computer in the operating room , using the BloodTrack Product Available button. See procedure 1 BloodTrack Enquiry – Checking For Crossmatched Red Cells
2.4	Enter patient's **full** 10-digit MRN and tap "Select".	Patient's **full** 10-digit MRN includes the leading zeroes. Patient's name and info will load.
2.5	Tap "Yes" or "No" accordingly to confirm that the displayed patient is the correct one.	If this question appears: *"There are crossmatched Red Cells available for <patient> at <HemoSafe site>. Do you want to attempt to release unallocated blood from your current location?"* always answer "**Yes**".
2.6	Push to open the door and remove the Red Cells when you hear the door unlock and are prompted.	Do not let the door close before you remove the Red Cells as the door will lock and you cannot reopen it. If the open compartment is empty, tap the "Touch Here if Compartment is Empty" button. The HemoSafe will attempt to find Red Cells in a different compartment if more is available for the patient. **NOTE:** There should only ever be one compartment open at a time. If more than one compartment is open, **this is a critical error. Do not remove any Red Cells. Contact BTS as**

		soon as possible!
2.7	Scan the Red Cells Donor number when prompted.	
2.8	Inspect the Red Cells and answer the question, **"**Visual inspection OK?"	If the Red Cells pass inspection, tap "Yes". **If the Red Cells fail visual inspection, the Red Cells CANNOT be transfused to the patient**. Tap "No" and you will see a red screen with the message "A visual inspection of the Red Cells has revealed that it is not suitable for transfusion." Tap "OK" and **put the Red Cells back in the HemoSafe** when the door unlocks and you are instructed to "Store unit".
2.9	Retrieve the two printed "Compatibility Report" labels, if applicable.	No labels will print if the Red Cells already have **HemoSafe patient compatibility labels** attached.
2.10	Tap "Yes" or "No" to answer the question "Did the compatibility label print OK?"	Two copies of a "Compatibility Report" will print The HemoSafe will prompt you to answer the question, "Did the compatibility label print OK?" a) If two labels printed, tap "Yes". b) If two labels **did not print**: i. Check the tag to ensure there is not a label already attached. ii. Check the printer to ensure it is not paused. The LED light must be solid green. If flashing green then press the button and all your labels will print. If the LED light is red

		then the lid is not closed properly on the printer. iii. Again answer the question, "Did the compatibility label print OK?" If it failed again, you can select either "No" to try again or "Cancel" and the system will abort the process. iv. **If you can't get labels printed, the Red Cells CANNOT be transfused to the patient**. Select "Cancel" and you will see a red screen with the message "Electronic Issue has been cancelled. Please return the Red Cells to storage location." Tap "OK" and **put the Red Cells back in the HemoSafe** when the door unlocks and you are instructed to "Store unit". Call BTS for further instruction.
2.11	Attach the labels to the first and second copy of the tag	Labels are not placed on the bag although the HemoSafe prompts you to attach the label to the bag. The tag is attached to the bag and the tag is used for all documentation.
2.12	Scan the unit number when prompted.	The HemoSafe will prompt you to attach the label to the bag and scan the unit number. Hold the blood bag under the scanner so the light is on the unit number bar code as shown on the HemoSafe screen. 
2.13	Scan the patient compatibility label.	There are three 2-D identical barcodes on the patient compatibility label. Only one needs to be scanned. Hold the label under the scanner. It will take a couple seconds to read. Lay the tag on the ledge to scan so it is not too close to the barcode reader.
2.14	Tap "Yes "or "No" when asked if you require additional Red Cells for this patient.	You will be asked if you require additional Red Cells for this patient: a) Tap "No" and the system will return you to the "Select Patient" screen. Tap "Logout" to return to the main logon

		screen. b) Tap “Yes” and the system will check for any additional available Red Cells. If none are found, it will display a message that there are no suitable units available.
	Return all completed transfusion tags to BTS.	1. Complete the transfusion tag ensuring: a) The Patient Name and MRN are on both copies of the tag. b) “Transfusionist” and “verified by” signatures certify that the patient info on the tag matched the patient info on the armband/chart before the transfusion was started. c) The date and time recorded for start and completion of transfusion are used to ensure that the Red Cells were infused within 4 hours of being removed from the refrigerator. d) The volume transfused is important, especially for investigation of transfusion reaction. 2. Place top copy on the patient’s chart. 3. Return completed tags to BTS. BTS will pick them up each day when the HemoSafe is restocked.

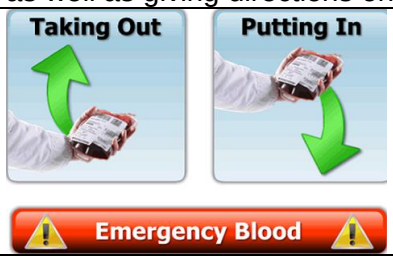
4. “Putting In”: Returning Red Cells To The HemoSafe Refrigerator

Step	Action	Details
3.1	Log in at the HemoSafe refrigerator using your BloodTrack user ID.	**NOTE:** All HemoSafe refrigerator processes have a 90-second timeout limit. If a step is not completed before the timeout, you will need to repeat the process. The HemoSafe refrigerator will play audible prompts and instructions at every step of a process as well as giving directions on the screen.
3.2	Tap “Putting In”.	

3.4	Scan the Red Cells Donor number when prompted.	
3.5	Wait while "Unlocking" is displayed and the HemoSafe positions the desired compartment.	The door unlocks and prompts you to store the Red Cells. If the open compartment already has Red Cells in it, tap the "Touch Here if Compartment is NOT Empty" button. The HemoSafe will open a different compartment.
3.6	Push to open the door and insert the Red Cells in the open compartment.	Fold the tag neatly behind the Red Cells and place it in the compartment port-end first and as far into the compartment as possible. **NOTE:** There should only ever be one compartment open at a time. If more than one compartment is open, **this is a critical error. Store the Red Cells and contact BTS as soon as possible (473-4257 at HI site, 473-6670 at VG site).**
3.7	Repeat the process if you have more Red Cells to put in.	**NOTE:** Once the door closes, a green screen will briefly pop up indicating "Good" and you will be prompted to scan the next unit or touch logout.
3.8	Tap the "Logout" button.	The system will automatically logout after 90 seconds.

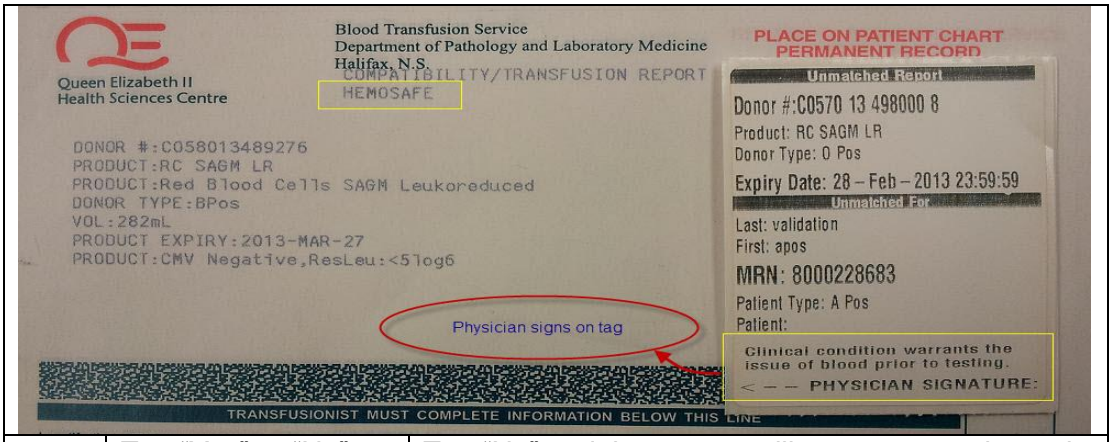
5. Taking Out "Emergency Blood"

Step	Action	Details
4.1	Check BloodTrack Enquiry on computer at the nursing station for crossmatched Red Cells for the patient.	See Procedure 1 of this document.
4.2	Proceed to the HemoSafe to take out unmatched Red Cells	Unmatched Red Cells must be requested by the physician.
4.3	Log in at the HemoSafe	**NOTES:** All processes on the HemoSafe refrigerator have a 90-second timeout limit. If a

	refrigerator using your BloodTrack user ID.	step is not completed before the timeout, you will need to repeat the process. The HemoSafe refrigerator will play audible prompts and instructions at every step of a process as well as giving directions on the screen.
4.4	Tap “Emergency Blood”	
4.5	Tap the button corresponding to the blood type required - O Neg or O Pos	The physician will decide whether to use O Rh Negative or O Rh Positive Red Cells: a. Group O Rh Negative is the first choice for all Rh negative patients, Rh negative patients with anti-D or patients with unknown blood group. **NOTE:** Rh negative patients should receive Rh negative red cells to prevent development of anti-D that may affect future bone marrow transplants and/or pregnancies b. Group O Rh Positive will be used for Rh positive patients. **NOTE:** Rh positive red cells can be used for Rh negative patients only in emergency situations and the lab hematopathologist will follow up with the attending physician. If there are no Red Cells of the required type, a message appears indicating there are no available Red Cells of the desired Blood type available. If this occurs, contact BTS (473-4257 at HI, 423-6670 at VG) to request Red Cells for the patient, otherwise continue with the next step.

4.6	Enter patient's **full** 10-digit MRN including leading zeroes and tap "Search".	If a matching patient record is found, it will be displayed. If the MRN entered has more or less than 10 digits a message will display "The patient number entered is invalid. Please check the patient number and then reenter it again". Retype the correct 10-digit MRN. If the MRN is valid but no patient record is found, the patient has never had Red Cells crossmatched in the HemoSafe. The message appears: "A patient record for the information you entered could not be found. Do you wish to proceed?"
4.7	Tap "Yes" or "No" accordingly to confirm that the displayed patient information is correct.	If "Yes", the system will search for appropriate Red Cells. If "No", the system will prompt for a new patient MRN
4.8	Push to open the door and remove the Red Cells when you hear the door unlock and are prompted to.	There should only ever be one compartment open at a time. If more than one compartment is open, **this is a critical error. Do not remove any Red Cells. Contact BTS as soon as possible.**
4.9	Scan the Red Cells donor number when prompted.	
4.10	Inspect the Red Cells and answer the question, **"**Visual inspection OK?"	If the Red Cells pass inspection, tap "Yes". **If the Red Cells fail visual inspection, the Red Cells CANNOT be transfused to the patient**. Tap "No" and you will see a red screen with the message "A visual inspection of the Red Cells has revealed that it is not suitable for transfusion." Tap "OK" and **put the Red Cells back in the HemoSafe** when the door unlocks and you are instructed to "Store unit".

4.11	Retrieve the two printed “Unmatched Report” labels.	Unmatched Report labels will have no patient name if the patient is not known to BloodTrack and there will be no 2-D barcode.
4.12	Tap “Yes” or “No” when asked “Did the emergency label print OK?”	If two Unmatched Report labels printed, tap “Yes” If two labels **did not print** Check the printer to ensure it is not paused. The LED light must be solid green. If flashing green then press the button and all your labels will print. If the LED light is red then the lid is not closed properly on the printer. If two labels still do not print tap “No” and the system will try to print again. a) Again answer the question, “Did the emergency label print OK?” If it failed again, you can select either “Yes” or “Cancel” and continue with the Red Cells to the patient. b) **Remember** to attach a patient addressograph label to the bottom copy of the BTS tag attached to the Red Cells, without obscuring any information already there (or handwrite the patient’s full name).
4.14	Confirm patient and Red Cell information match on the Red Cell donor label, the attached BTS tag and the HemoSafe “Unmatched Report” label.	
4.15	Place one “Unmatched Report” label on each of the two copies of the stock tag attached to the Red Cells.	



4.16	Tap “Yes” or “No” when asked “if you want more emergency Red Cells for the same patient?”	Tap “No” and the system will return you to the main logon screen. You can now walk away. Tap “Yes” and the system will check for any more available Red Cells of the same type. If none are found, it will display a message that there are no suitable units available.
4.17	Return all completed transfusion tags to BTS	Complete the transfusion tag ensuring: **a) The patient name and MRN are on both copies of the tag.** You may need to attach a patient addressograph or handwrite the info on the tag. b) Physician signs the tag next to the disclaimer. Sign on an area of the tag not covered by compatibility labels so that it goes through to both copies. c) “Transfusionist” and “verified by” signatures certify that the patient info on the tag matched the patient info on the armband/chart before the transfusion was started. d) The date and time stamped when taken out, the date and time recorded for start and completion of transfusion are used to ensure that the Red Cells were infused within 4 hours of being removed from the refrigerator. e) The volume transfused is important, especially for investigation of transfusion reaction. BTS will pick up transfused tags each evening when the HemoSafe is restocked.

Procedural Notes

There are two types of crossmatching available for Red Cells:

a) **Electronic** (Performed using the Laboratory Information System computer)
b) **Serological** (requires specialized manual testing by BTS techs), and they are not put in the HemoSafe.

BTS will receive an alert whenever "Emergency Blood" is taken out and may call regarding the patient's history or specimen availability.

Related Procedures and Documents

Document Name	Document #	Location
QE BT BloodTrack Courier Product Available Job Aid	30141	Paradigm BTS Website
QE BT BloodTrack CourierTaking Out or Putting In Job Aid	30142	Paradigm BTS Website
QE BT BloodTrack Courier Emergency Blood Job Aid	30143	Paradigm BTS Website
PLM BT Packaging Blood Components and Plasma Derivatives For Transport to Outside Facilities Procedure	750	Paradigm
PLM BT Transfer and Receipt of Blood Components and Derivatives Between Sites Procedure	761	Paradigm
PLM BT Release of Crossmatched and Assigned Blood Components Procedure	777	Paradigm
PLM BT Electronic Crossmatch Procedure	805	Paradigm
PLM BT Visual Inspection of Blood Components and Derivatives Procedure	6398	Paradigm
QE BT BloodTrack Enquiry and HemoSafe Usage Procedure	26061	Paradigm

References

- ASK User Guide (Haemonetics Software Solutions). Haemonetics. Current Edition.
- American Association of Blood Banks. Standards for Blood Banks and Transfusion Services. Current edition.
- BloodTrack Courier User Guide (Haemonetics Software Solutions). Haemonetics. Current Edition.
- Canadian Standards Association. CSA Standards Z902, Blood and Blood Components. Current edition.
- Capital Health, Pathology and Laboratory Medicine. Safety Manual. Current edition.
- Clinical Guide to Transfusion, Canadian Blood Service. Current edition.
- CSTM Standards for Hospital Transfusion Services. Current edition.