University of Washington Medical Center 1959 NE Pacific Street. Seattle, WA 98195 Transfusion Services Laboratory Policies and Procedures Manual Original Effective Date: 10-28-2020

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TITLE: Providing Blood Components and Managing the HaemoBank at Northwest Campus

PURPOSE:

This procedure outlines the policies and procedures to provide blood components to Northwest Campus and management of the HaemoBank refrigerator.

LOCATION

Montlake Transfusion Service Laboratory (TSL) Northwest Transfusion Support Service (TSS)

PRINCIPLE & CLINICAL SIGNIFICANCE:

The TSL stores blood components at NW TSS for allocation and issue at Northwest Campus - refer to SOP **Blood Storage and Inventory Management at Northwest Inventory** for component type and par levels.

The HaemoBank at Northwest Campus is a blood storage refrigerator electronically connected via BloodTrack Manager Software to the Sunquest Laboratory Information System (LIS) SQ via a one-directional print capture interface (PCI). The interface allows communication from SQ to the HaemoBank to remotely allocate RBCs stored in the HaemoBank. Alternately, RBC components allocated from inventory at Montlake TSL may be sent to NW TSS and loaded in the HaemoBank for issue by NW TSS.

Product orders print simultaneously at Montlake and NW campus or if placed on manual requisitions the NW TSS will fax a copy to Montlake. If the order is for a frozen component, NW TSS thaws, performs Blood Component Preparation and relabels the product using SQ. After processing, TSS contacts Montlake for allocation to the patient initiating printing of a SQ Transfusion Record at NW. Montlake allocates stock platelet at NW campus using the same process.

When RBCs are ordered, Montlake staff verifies patient history and remotely allocates RBC(s) from HaemoBank stock. The Transfusion Record does not print until the RBC is issued. If an RBC meeting the patient's requirements is not available in the HaemoBank, a RBC will be allocated from Montlake stock, labeled with the SQ Transfusion Record that prints and shipped to NW TSS to store in the HaemoBank until issue.

POLICIES:

- Blood component inventory at Northwest TSS is available at SQ inventory location NWBB
- There are two different SQ locations for allocating blood from Northwest campus inventory:
 - SQ location NWBB to allocate RBCs stored in the HaemoBank refrigerator via the PIC interface with BloodTrack
 - SQ location NWBB2 to allocate blood components that are not stored in the HaemoBank. This includes platelets, plasma, cryoprecipitate and any components stored in Northwest's backup blood refrigerator

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Transfusion Records

- Two Transfusion Records are in use at the Northwest Campus refer to <u>Appendix B</u>
 - HaemoBank Transfusion Record UH3919 used with RBCs that are allocated to the patient from stock stored in the HaemoBank
 - SQ Transfusion Record UH3363 used for platelet and plasma components and RBC allocated from Montlake inventory before being sent to Northwest TSS

• PATIENTS ELIGIBILITY FOR REMOTE ALLOCATION FROM THE HAEMOBANK

- Patients must meet specific requirement for RBC orders to be filled remotely from stock stored in the HaemoBank
- RBC orders for patients not eligible for remote allocation will be filled from Montlake stock and shipped to Northwest TSS. TSS will load these into the HaemoBank until requested for issue. While these RBCs can be stored in the HaemoBank, these patients are not considered to be remote allocation eligible
- Table1 lists the eligibility requirements for patient to qualify for remote allocation from HaemoBank stock. ALL eligibility conditions listed must be met to qualify. If any condition in the ineligibility column exists, the patient is ineligible

Table 1: Recipient Eligibility Requirements for HaemoBank Remote Allocation

Recipient Rec	quirements
ELIGIBLE	INELIGIBLE
Two consecutive concordant ABO/Rh results from testing performed by Montlake TSL One from an in-date eligible battery (TSCR, TSCREX, TXM) Second ABO/Rh from an independent collection with testing performed Current antibody screen is negative No history of clinically significant antibodies except anti-D or passive transfer anti-D (i.e. RhoGAM).	 Incompatible crossmatch Red cell exchange NTD ABO/Rh in SQ Clinically significant antibodies or antigen matched for which appropriate red cell components are not available in the HaemoBank Special Washed Autologous if patient history does not allow remote allocation

Releasing RBC Stored in HaemoBank from Allocation

- BloodTrack Dereservation Date for RBC components is the same as crossmatch expiration in SQ. Once the dereservation date has passed:
 - RBC units with 'Assigned' status in BloodTrack must be unassigned in BloodTrack and released in SQ.
 - RBC units with 'Available" status and associated patient ID in BloodTrack must be removed from the HaemoBank by the Northwest TSS and returned to Montlake
- RBCs removed from the HaemoBank as emergency and returned unused to the HaemoBank must be returned to ML campus for release to inventory
- RBCs sent from ML campus as allocated with an attached Transfusion Record UH3363 and loaded into the HaemoBank must be returned to ML campus for release to inventory

Monitoring HaemoBank Inventory

 An Inventory Report for HaemoBank Refrigerator should be printed at the beginning of each work shift and reprinted as inventory changes throughout the shift

- Use the Inventory Report for HaemoBank Refrigerator to remotely allocate RBCs from the HaemoBank by scanning the donor identification number printed on report
- HaemoBank Alerts: The HaemoBank has built alerts to notify user via BloodTrack for a variety of reason. Appendix A – Systems Alerts is a complete list of possible alerts. Some will never be seen given the software, hardware and configuration in use.
 - o Alerts must be acknowledged and resolved, as soon as possible
 - Any alerts that occur during a work shift are acknowledged and resolved prior to the end of shift. Any alerts not resolved are documented on the communication log and verbally reviewed with the tech in charge on the next shift before leaving for the day
 - TSL Operation or QARA manager should be notified immediately when any alert that may result in harm to a patient or blood component cannot be resolved according to current Good Manufacturing Practices and the TSL Quality Plan.

REAGENTS/SUPPLIES/EQUIPMENT:

Reagents:	Supplies:	Equipment:
NA	NA	Sunquest LIS
		BloodTrack Manager

QUALITY CONTROL:

NA

INSTRUCTIONS:

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APPENDIX A: System Alerts

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Preparing Blood Components to Ship to NW TSS

STEP	ACTION	
	If component is	Then
	HaemoBank RBC stock	Go to next step
1	Stock PlateletsStock frozen plasmaStock frozen cryoprecipitate	 Do NOT attach a Transfusion Record to the component Move the component in SQ to 'in-transit' status to location NWBB SQ location— refer to SOP <i>Packing and Shipping Blood Components</i> Pack and send to NW TSS
	Any component allocated	Attach the SQ Transfusion Record UH3363 and

STEP	ACTION	
	from Montlake inventory Unit Compatibility Label to the component per SOP Attaching the Transfusion Record to Blood Components Move the component in SQ to 'in-transit' status to location NWBB SQ location—refer to SOP Packing and Shipping Blood Components Pack and send to NW TSS	
2	Fold a blank HaemoBank <i>Transfusion Record UH3919</i> in a manner with the top left quadrant facing out	
3	Attach a folded record to each RBC with a rubber band so the top left quadrant is facing out	
4	 Move the component in SQ to 'in-transit' status to location NWBB SQ location- refer to SOP Packing and Shipping Blood Components Pack and send to NW TSS 	

Allocating Plasma and Platelet Components at Northwest

7111000	ocating Plasma and Platelet Components at Northwest		
STEP	ACTION		
1	Receive Product Order:		
	If order is for	Then	
2	Platelet	Go to step 4	
	Plasma or cryoprecipitate	Go to next step	
3	 Receive call from NW TSS with the following information: Patient Medical Record Number Full Patient Name as it appears on the order Type of component Unit number of the component Verbally readback of all 4 items to the NW TSS tech 		
4	 Log into SQ location: NWBB2 and allocate the appropriate component - the SQ Transfusion Record will print at NW TSS when allocation is complete Refer to SOPs: Ordering and Processing Platelets at Northwest Campus, Ordering and Processing Plasma and Cryoprecipitate at Northwest Campus 		

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Printing Inventory Report for HaemoBank Refrigerator— Print at the beginning of each shift and use to remotely allocate components from HaemoBank inventory

STEP	ACTION	
1	Open the BloodTrack Manager SloodTrack Manager M	
2	Right click on storage <haemobank refrigerator=""> Storage Temp (C) Red Con HaemoBank Refrigerator 4.0 30 Storage Temp (C) Red Con HaemoBank Refrigerator 4.0 30 Storage Temp (C) Red Con HaemoBank Refrigerator 4.0 30 Storage Temp (C) Red Con HaemoBank Refrigerator 4.0 30 Storage Temp (C) Red Con HaemoBank Refrigerator 4.0 30 Red Con HaemoBank Refrigerator 4.0 30 Red Con HaemoBank Refrigerator 4.0 30 Red Con HaemoBank Refrigerator 4.0 Red Con HaemoBank Refrigerator HaemoBan</haemobank>	
	Select <inventory list=""></inventory>	
	Click < Print> Click = OK	
3	Click <ok></ok>	
	NOTE : RBCs with patient ID are already allocated to a patient and are not available for allocation even though Unit Status - available	
4	Reprint the report throughout the shift, as needed	

Remote Allocating RBCs from HaemoBank - Perform when blood component is available in SQ NWBB location and in BloodTrack Manager

STEP	ACTION		
1	Login into SQ loca	tion: NWBB	
	Review patient history to determine if they are eligible for remote allocation from HaemoBank stock		
	If	Then	
2	Eligible	Go to next step	
	Not eligible	Allocate RBC from Montlake inventory and ship to NW TSS, SQ location NWBB – refer to SOP <i>Packing and Shipping Blood Components</i>	
3	Refer to SOP Selection of Red Blood Cell and Granulocyte Components for Transfusion to select the appropriate RBC		
	Review the <i>Inventory Report for HaemoBank Refrigerator</i> or BloodTrack Manager to determine if RBC can be allocated from the HaemoBank		
	If RBC is Then Available Go to next step		
4			
	Not Available	 Allocate RBC from Montlake inventory Attach a SQ Transfusion Record and Unit Compatibility Label to the RBC(s) Ship to NW TSS, SQ location NWBB – refer to SOP Packing 	

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STEP	ACTION		
		and Shipping Blood Components	
5	Open SQ 'Blood Order Processing' application Scan unit# from the inventory report or select from Blood Inventory Search Perform applicable crossmatch Click <save></save>		
	CRITICAL: Do NOT use BloodTrack manager <assign unit=""> function to allocate components NOTE: Once allocated, the RBC will now appear as "Assigned" in BloodTrack Manager inventory and the patient ID will display</assign>		

Releasing Assigned/Allocated RBCs in HaemoBank – Component was allocated from HaemoBank stock and never issued

STEP	ACTION	
1	Open BloodTrack software from Citrix Receiver	
2	Click on <transactions></transactions>Login in by scanning your employee ID badge or entering your EID	
3	Click on <unassign unit=""> and a list of assigned RBCs will display</unassign>	
4	 Click <unassign unit=""> at the bottom of the screen</unassign> A 'Good' message indicates the transaction was successful 	
	Log into SQ and release the RBC from allocation	
5	NOTE: Unless expired, the RBC should be available for allocation to a new patient in SQ location NWBB and BloodTrack manager	

Releasing Expired Crossmatch/Dereservation Date RBCs in HaemoBank

STEP	ACT	TION
	Print Expired Crossmatch List in SmarTerm	
	Prompt	Enter
	FUNCTION:	BBR, press [Enter]
	PRINTER:	LIS Device# of the SQ printer, press [Enter]
1	SELECT OPTION:	1- Expired Crossmatch List
	HOSPITAL ID:	U, press [Enter] twice
	HOSPITAL SELECTED:	U display, Enter A to accept
	LOCATION:	Press [Enter] to default to <all>, Enter A to accept</all>
2	Print Inventory Report from BloodTrack – re HaemoBank Refrigerator	fer to section Printing Inventory Report for

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STEP		ACT	ION
3	Release all components with expired crossmatched in SQ		
4		erator and the SQ Expirerate from allocation Inventory Report for HB Ref. Expired dereservation date	BloodTrack Inventory Report for d Crossmatch List to determine which Then Go to section Releasing Assigned/Allocated RBCs in the
	Expired crossmatch	 Assigned status Expired dereservation date Available status NO dereservation date Available 	HaemoBank Go to section Requesting Return of RBCs stored in HaemoBank NOTE: Component not available for release from HaemoBank with an expired dereservation date. Component returns to ML campus for return to inventory Open BloodTrack Click on <transactions> Login by EID or scan badge</transactions>
		Available	 Select <update unit=""></update> Scan blood component from inventory report Update <unit status=""> to Unusable from the dropdown</unit> Click <update></update> Go to section Requesting Return of RBCs stored in HaemoBank NOTE: Component not available for release from HaemoBank with an expired dereservation date. Component returns to ML campus for return to inventory

Requesting Return of RBCs stored in HaemoBank

Requesting Return of RBCs stored in Haemobank		
STEP	ACTION	
1	 Print Inventory List from BloodTrack Manager Open <bloodtrack manager=""></bloodtrack> Right click <haemobank refrigerator=""> under the storage column</haemobank> Select <inventory list=""></inventory> Select the unit(s) to be returned by holding the <ctrl> key down, while clicking on each unit</ctrl> Click <print></print> Click <selected> at "Do you want to print all of the rows in the report or only those rows that have been selected?"</selected> 	

STEP	ACTION				
	Click <ok></ok>				
2	Write "Return to Montlake" on printed report				
3	 Call NW TSS to to let them know you are faxing a report of inventory to return to Montlake TSL Fax return inventory report to NW TSS Send appropriate shipping container with the required amount of wet ice to NW TSS with the lab medicine hourly courier NOTE: Blood components will be returned to Montlake TSL by the lab medicine hourly courier. Utilize contracted UW courier if blood component needs to be returned outside of hourly courier service hours 				
4	Maintain inventory report in TSL until return and reconciliation of blood components from NW campus				

Responding to Alerts in BloodTrack Manager

Responding to Alerts in Blood Frack Manager					
STEP	ACTION				
1	Open BloodTra	ck software	om Citrix Receive	er	
2	 Click on <alerts></alerts> Login in by scanning your employee ID badge or entering your EID 				
3	Double click on the alert to review the details of the alert				
	Alert	Reason for Alert		Action to take	
Removed for Emergency Use Use Use Use Use Use Use Use		nit(s) on the Downtime Issue one(s) associated with the dTrack issue in SQ to the appropriate			
	Blood group mismatch Generated at time of allocation in SQ. The unit ABO/Rh is not identical to the patient ABO/Rh	Verify the ABO and Rh substitution is acceptable			
		not identical to the	If ABO/Rh is	Then	
			Acceptable	Go to next step	
		Unacceptable	 Release in Sunquest and Unassign RBC in BloodTrack Manager Select and allocate appropriate RBC 		

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TEP	ACTION			
				Go to next step
	Alert	Reason for Alert	Action to take	
	Unit is not group	Generated at time of removal from	acceptable	
	specific for	HaemoBank	If ABO/Rh is	Then
	patient		Acceptable	Go to next step
			Unacceptable	 Contact NW TSS to facilitate return of blood component to TSS Quarantine blood component in SQ and return to Montlake campus per SOPs Quarantine and Final Disposition of Blood Components at Northwest and Returning Blood Components to Montlake from Northwest Campus
	Unit Quarantined	Unit was removed from HaemoBank and returned unused	o Remove the unit from the HaemoBassed o Perform Return Stock o Quarantine unit in Sunquest o Return to Montlake TSL per SOPs	
	Invalid Unit Condition	Unit is in a condition unacceptable for transfusion		
	Unit visual inspection	Occurs if the user is prompted to visually inspect the unit and indicates the unit is not suitable for transfusion	isually it and it and in the image of the isually is and in the image of the isual is a second of the is a second of the isual is a second of the	components at Northwest and ng Blood Components to re from Northwest Campus
	Unit already in circulation	Occurs if an 'Activate Out' transaction is attempted on a unit that is already in circulation	BloodTrack o 'Retu o 'Activ o Load	TSS to perform the following in urn Stock' vate Out' the component into the noBank tep
	Unknown Unit	Unit is scanned and there is no record of the unit in the BloodTrack database	• Instruct NW o Retrie Active Load	TSS to eve component and perform ate Out the component into the noBank

STEP	ACTION				
	Alert	Reason for Alert	Action to take		
	Transport Occurs when unit time was returned to the exceeded HaemoBank ≥ 30		Contact NW TSS and obtain the temperature		
	configured limit	HaemoBank ≥ 30 minutes room temp or >4 hours in cooler from removal	If the unit is Acceptable Unacceptable	 Click <transactions></transactions> Click update unit Enter the unit number Change Unit Status to 'Available' Create a QI Go to next step Instruct NW TSS to: 	
				 Remove the unit from the HaemoBank Perform Return Stock Quarantine unit in Sunquest Return to Montlake TSL per SOPs Quarantine and Final Disposition of Blood Components at Northwest and Returning Blood Components to Montlake from Northwest Campus Go to next step 	
	Any alert related to the temperature	Occurs when temperature breaches high and	Contact Northwest staff immediately to returned to the temperature acceptable range of 1.5 to 5.5°C		
	inside the HaemoBank	low alarm settings: High = 5.5 °C Low =1.5 °C OR when temperature is	If temperature Recovers	Then	
			within 30 minutes	Go to next step	
		not being recorded	Cannot be recovered within 30 minutes	 Instruct Northwest TSS to evacuate the HaemoBank and place the RBCs in the backup blood refrigerator Go to next step 	
				·	

STEP	ACTION					
	Alert	Reason for Alert		Action to take		
	Any alerts related to the	Refer to Appendix A for reason for the		Contact Northwest staff immediately to resolve the problem		
	function of BloodTrack	alert		If	Then	
	or the			Resolved	Go to next step	
	HaemoBank			Unable to resolve	Notify a MLS lead or managerGo to next step	
5	Click on theClick the <a< li=""></a<>	ne Alert in BloodTrace alert to highlight it acknowledge> button om the <unacknowledge< td=""><td colspan="3">ck n at the bottom of the screen and the alert will</td></unacknowledge<>	ck n at the bottom of the screen and the alert will			
	If		Then			
	Alert was NOT resolved		 Create a QI and ensure any implicated components are not available for issue Notify a TSL lead or manager of emergency issues immediately 			
	Alert was resolved and any of the following Unit Removed for Emergency Use Blood group mismatch Unit is not group specific for patient Unit removed for emergency use		Go to next step			
6			Ensure component is returned to Montlake and a QI explaining the reason is complete			
	Any alert resulting in quarantine and return of the blood component to Montlake campus		N d a re		Then Discard component Document discarded on the QI Attach a copy of the BBI Unit History showing the unit is discarded Go to next step Place the component in the appropriate quarantine location and file the QI	

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STEP	ACTION				
	Resolve the Alert				
6	 Click on the Acknowledged Alerts tab Click on <resolve></resolve> Choose the most appropriate resolution from the Choose Alert Resolution dropdown "Blood Unit Update" 				

PROCEDURE NOTES/LIMITATIONS:

NA

REFERENCES:

- Standards for Blood Banks and Transfusion Services. Bethesda, MD; AABB, current edition.
- BloodTrack Manager, Braintree, MA, Haemonetics Corporation, Version 4.11.0

RELATED DOCUMENTS:

- FORM Downtime Issue Log
- SOP Packing and Shipping Blood Components
- SOP Attaching the Transfusion Record to Blood Components
- SOP Returning Blood Components to Montlake from Northwest Campus
- SOP Blood Storage and Inventory Management at Northwest Inventory
- SOP Ordering and Processing Platelets at Northwest Campus
- SOP Ordering and Processing Plasma and Cryoprecipitate at Northwest Campus
- SOP Selection of Red Blood Cell and Granulocyte Components for Transfusion

UWMC SOP Approval:		
CLIA Medical Director	Mark H. Wener, MD	26Oct2020 Date
Transfusion Service Manager		Date
Transfusion Service Compliance Analyst	Nina Sen	Date
Transfusion Service	Christine Clark	
Medical Director	Monica Pagano, MD	Date
UWMC Biennial Review:		
		Date
		Date

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APPENDICIES:

APPENDIX A: System Alerts

APPENDIX B: Examples of Transfusion Records

