Department of LABORATORY MEDICINE

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 Revision Effective Date:

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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 Laboratory Information System (LIS) SQ via a onedirectional 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

• Transfusion Records

- Two Transfusion Records are in use at the Northwest Campus refer to Appendix B
 - 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 and unit status in BloodTrack is:
 - 'Assigned' RBCs must be unassigned in BloodTrack and released in SQ.
 - 'Available" RBCs with 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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Preparing Blood Components to Ship to NW TSS

STEP	ACTION		
	If component is	Then	
	HaemoBank RBC stock	Go to next step	
1	 Stock Platelets Stock frozen plasma Stock 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> 	
	Any component allocated from Montlake inventory	 Attach the SQ Transfusion Record UH3363 and Unit Compatibility Label to the component per SOP Attaching the Transfusion Record to Blood 	

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STEP	ACTION
	 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 Transfusion Record UH3919 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 <i>Packing and Shipping</i> <i>Blood Components</i> Pack and send to NW TSS

Allocating Plasma and Platelet Components at Northwest

STEP		ACTION	
1	Receive Product Order: Electronic orders print on UW ML printer Manual Requisition faxed from NW TSS 		
	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: NWBI Transfusion Record will print Refer to SOPs: Ordering and and Processing Plasma and 	B2 and allocate the appropriate component - the SQ It at NW TSS when allocation is complete Processing Platelets at Northwest Campus , Ordering Cryoprecipitate at Northwest Campus	

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
2	Right click on storage <haemobank refrigerator=""></haemobank>
3	 Select <inventory list=""></inventory> Click <print></print> 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 locat	ion: NWBB	
	Review patient history to determine if they are eligible for remote allocation from HaemoBank stock		
	lf	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>Invent</i> to determine if RBC	ory Report for HaemoBank Refrigerator or BloodTrack Manager	
	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 and Shipping Blood Components 	

STEP	ACTION
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	ΓΙΟΝ
	Print Expired Crossmatch List in SmarTerm	1
	Prompt	Enter
	FUNCTION:	BBR, press [Enter]
1	PRINTER:	LIS Device# of the SQ printer, press [Enter]
	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	efer to section Printing Inventory Report for
3	Release all components with expired crossi	matched in SQ

STEP	ACTION		ON
	Compare the status HaemoBank Refrige components to relea	of component between E erator and the SQ Expired ase from allocation	BloodTrack Inventory Report for d Crossmatch List to determine which
	SQ Exp. Crossmatch List	Inventory Report for HB Ref.	Then
		 Expired dereservation date Assigned status 	Go to section <u>Releasing</u> <u>Assigned/Allocated RBCs in the</u> <u>HaemoBank</u>
		 Expired dereservation date Available status 	 Go to section <u>Requesting Return of</u> <u>RBCs stored in HaemoBank</u> NOTE: Component not available for release from HaemoBank with an expired dereservation date. Component returns to ML campus for return to
4	Expired crossmatch	 NO dereservation date Available 	 Open BloodTrack Click on <transactions></transactions> Login by EID or scan badge 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

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> Click <ok></ok>

STEP	ACTION
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

STEP	ACTION						
1	Open BloodTrack software from Citrix Receiver						
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 o	details of the alert				
	Alert	Reason for Alert		Action to take			
4	Unit Removed for Emergency Use Blood group mismatch	Unit is removed uncrossmatched from the HaemoBank via the Emergency Blood function Generated at time of allocation in SQ.	 NW TSS will Downtime Is Montlake TS Reconcile ur Log with the alert in Blood Allocate and patient Go to next st Verify the ABO a acceptable 	NW TSS will document issue on the Downtime Issue Log and fax a copy to Montlake TSL Reconcile unit(s) on the Downtime Issue Log with the one(s) associated with the alert in BloodTrack Allocate and issue in SQ to the appropriate patient Go to next step ify the ABO and Rh substitution is			
		The unit ABO/Rh is	If ABO/Rh is	Then			
	patient ABO/Rh	Acceptable	Go to next step				
		Unacceptable	 Release in Sunquest and Unassign RBC in BloodTrack Manager Select and allocate appropriate RBC Go to next step 				

STEP	ACTION						
	Alert	Reason for Alert	Action to take				
	Unit is not group specific for	Generated at time of removal from HaemoBank	Verify the ABO and Rh substitution is acceptable If ABO/Ph is Then				
	patient		Acceptable Go to next	sten			
			Unacceptable Contact Gord Hext Contact facilita compo return campu Quara Dispo Comp North Return Comp Monta North	t NW TSS to te return of blood onent to TSS ntine blood onent in SQ and to Montlake is per SOPs <i>intine and Final</i> <i>sition of Blood</i> <i>onents at</i> <i>west</i> and <i>hing Blood</i> <i>onents to</i> <i>ake from</i> <i>west Campus</i>			
	Unit Quarantined	Unit was removed from HaemoBank and returned unused	 Instruct NW TSS to: Remove the unit from Perform Return Stoce 	n the HaemoBank			
	Condition	unacceptable for transfusion	 Return to Montlake 1 Quarantine and Fin 	irn to Montlake TSL per SOPs rantine and Final Disposition of			
	Unit visual inspection	Occurs if the user is prompted to visually inspect the unit and indicates the unit is not suitable for transfusion	 Blood Components at Northwest and Returning Blood Components to Montlake from Northwest Campus Go to next step Instruct NW TSS to perform the following in BloodTrack 'Return Stock' 'Activate Out' Load the component into the HaemoBank 				
	Unit already in circulation	Occurs if an 'Activate Out' transaction is attempted on a unit that is already in circulation					
	Unknown Unit	Unit is scanned and there is no record of the unit in the BloodTrack database	 Instruct NW TSS to Retrieve compor Activate Out Load the compor HaemoBank Go to next step 	nent and perform			

STEP	ACTION						
	Alert	Reason for Alert	Action to take				
	Transport time exceeded	Occurs when unit was returned to the HaemoBank ≥ 30	Contact NW temperature	TSS and obtain the			
	configured limit	minutes room temp or >4 hours in cooler from removal	It 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 			
	Any alert related to the temperature	Occurs when temperature breaches high and	Contact Northwe the problem and the acceptable r	est staff immediately to resolve d returned to the temperature to range of 1.5 to 5.5°C			
	inside the HaemoBank	low alarm settings: High = 5.5 °C	If temperature	Then			
		Low =1.5 °C OR when temperature is	Recovers 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				Action to take					
	Any alerts related to the	Refer to <u>Appendix</u> for reason for the	A Contact Northwest staff immediately to resolve the problem					A Contact Northwest staff immediately to res					
	function of BloodTrack	alert		lf		Then							
	or the			Resolved		Go to next step							
	HaemoBank		Unable to resolve			Notify a MLS lead or managerGo to next step							
5	 Acknowledge th Click on the Click the <a disappear="" fr<="" li=""> 	te Alert in BloodTrac alert to highlight it acknowledge> button om the <unacknowled< th=""><th colspan="5">ack on at the bottom of the screen and the alert will wledged Alerts> tab</th></unacknowled<>	ack on at the bottom of the screen and the alert will wledged Alerts> tab										
	lf		Th	nen									
	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 			Go to next step									
6	use		•	 Ensure component is returned to Montlake and a QI explaining the reason is complete 									
6	Any alert resulting in quarantine and return of the blood component to Montlake campus			Component s to be iscarded lot liscarded nd/or equires nanager eview for liscard	Tr • •	Discard component Document discarded on the QI Attach a copy of the BBI Unit History showing the unit is discarded <u>Go to next step</u> Place the component in the appropriate quarantine location and file the QI							

STEP	ACTION				
6	 Resolve the Alert 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	Date
Transfusion Service		
Manager		Date
	Nina Sen	
Transfusion Service		
Compliance Analyst		Date
	Christine Clark	
Transfusion Service		
Medical Director		Date
	Monica Pagano, MD	
UWMC Biennial Review:		
		Date
		Date

APPENDICIES:

APPENDIX A: System Alerts

APPENDIX B: Examples of Transfusion Records

Components remotely allocated from Haemobank			Used for thawed plasma, thawed cryoprecipitate, and RBC components allocated from Montlake stock					
HaemoBank <i>Transfus</i>	ion Record UH3919		SQ 1	Trans	fusion Re	cor	d UH	3363
UW MEDICINE TRA	ANSFUSION RECORD		UW MEDICINE TRANSFUSION RECORD					
			N	AME: 1551.3	EN			MRN: 010141001
					Patient Information			Donor Information
				Patient ABO/Rh	n-POSITIVE		Donor ABO/Rh	0-POSITIVE
			2	Antibody Screen	NEGATIVE		Donor Unit#	W1415 30 012350
				Location	802E		Component	RECIL DEV OD
			_	Physician	UNRNOW	_	Crossmatch	Compatible Exp 09/11/2020
				Date	09/17/2020		Unit Expiration	10/15/2020 2359
			A	ccession #	M1000874		# of Units in Pool	
							Volume	350
			C	Comments			Unit Antigens	
IF A TRANSFUSION REACTION IS SUSPECTED Before administering the unit, verify in the patient's presence that: STOP THE TRANSFUSION IMMEDIATELY and call the physician and the Transfusion Service Laboratory • Patient's name & medical record number are identical on the unit compatibility wrist band(s), and transfusion record. Complete the Report of Suspected Transfusion Reaction Form office the Narring Blood Administration Policy • Observ ABORR & the donor unit number on table and donor unit face table are identical. Patient ABORR, interpretation of compatibility testing (if performed) & special requirements (if applicable) are verified • Unit is normal in appearance & not expired. Transfusion Reaction form. Board the completed Suspected Transfusion Reaction form the completed Suspected Transfusion Reaction form. Board the completed Suspected Transfusion Reaction Reacting the suspect of the transfusion Service as soon as possible.			Bedside Verification Before administering the unit, verify in the patient's presence: Patient's name & medical record number are tidentical on the unit compatibility the second the unit compatibility the second the done unit number on the transfusion record, unit compatibility testing if performed, and special requirements (if applicable) are verified. Unit is normal in appearance & not expired. Date Time			IF A TRANSPUSION REACTION IS SUSPECTED 9. CONTINUE TRANSPUSION IMMEDIATELY and call the subscription of the Narising Blood Administration Policy 1. Complete the Report of Suspected Transfusion Reaction Form. 1. Smart the completed Suspectated Transfusion Reaction Form. 1. Smart the completed Suspectation Transfusion		
		Ν	Te	ansfusionist		CROBIN	and the second	Dowolt umble
Witness			w	itness				
Attach patient label here ONLY if there is no patient name or MRN above UH3919 REV AUG 20				Attach p ONLY if ti name top	atient label here here is no patient or MRN in the line above	UW Mee Harborvi UW Neig Universit UW ME	dicine ew Medical Center- hoorhood Citrics – y of Washington PP EDICINE TRAN	- University of Weshington Medical Center Valley Medical Center Settler, Washington SPUSION RECORD