University of Washington Medical Center 1959 NE Pacific Street. Seattle, WA 98195 Transfusion Services Laboratory Policies and Procedures Manual	Original Effective Date: 03/27/2021	Number: EQ-0014.01
	Revision Effective Date:	

TITLE: **Computer and Network Downtime at Northwest Campus**

PURPOSE:
To provide guidance for managing transfusion tests and blood product orders during a computer outage at Northwest Campus including EPIC (eHR), Sunquest Laboratory Information System (SQ), BloodTrack/HaemoBank and local network interruptions.

LOCATION:
Northwest Transfusion Support Service (TSS)

PRINCIPLE & CLINICAL SIGNIFICANCE:
Principle & Clinical Significance
Multiple electronic systems and applications are integral to routine patient care. The UWMC Transfusion Service Laboratory must have alternative processes in place to provide blood components when one or more electronic system fails, or downtime is planned.

POLICIES:

Notify Montlake TSL immediately of any unplanned computer outage

EPIC – electronic Health Record: Used by medical provider to place test and blood component order and request issue of blood component.
EPIC Downtime-Sunquest Online
- Orders cannot be placed in EPIC
  - Test and blood component orders will be placed using the paper UH3364 ***Transfusion Services Test & Blood Product Request Form*** and the form sent to the lab
- New patient registration in EPIC does not interface to SQ when offline
- Test results in SQ will interface to EPIC once EPIC is online

Sunquest Laboratory Information System (SQ): Used by Montlake TSL and NW TSS for all aspects of service including receive orders, recording test results that interface to EPIC, managing blood inventory, allocating and issuing blood components for transfusion.
Sunquest Downtime- EPIC may or may not be available
- Orders cannot be placed or received in SQ
  - Specimens for testing will be received and sent to Montlake TSL using the ***Downtime Specimen Receipt Log***
- ML TSL will
  - Montlake TSL (ML TSL) performs a daily backup of Sunquest regarding patient testing, history and blood components
    - Receive orders and perform history checks using the daily backup reports for test and blood component orders

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- o Perform testing and allocates blood components for STAT orders. Routine orders may not be completed until after SQ is back online
  - o During Sunquest (SQ) downtime all compatibility testing for red cell components will be performed serologically at ML TSL
    - Immediate spin crossmatch will be performed on all red cell component orders to determine ABO compatibility
    - AHG crossmatch will be performed for patients with antibodies or history of clinically significant antibodies
    - Universal blood components will be released if SQ backup reports are not available to provide type specific compatible blood components
  - o Send allocated ABO compatible blood components to NW TSS using the ***Downtime Component Transport Log***
- NW campus stock inventory will be utilized for emergency use only
  - o HaemoBank may be utilized, if online, to issue the following using the ***Downtime Issue Log***
    - Emergency release of group O uncrossmatched red blood cell components (RBC).
    - RBCs assigned prior to downtime
- All type compatible blood components not allocated prior to downtime will be sent from ML TSL
  - o Non-emergent blood component orders not filled prior to downtime will be allocated by Montlake TSL and sent to NW TSS using the ***Downtime Component Transport Log***.
  - o NW TSS will document receipt of components on ***Downtime Component Transport Log*** and issue components using the ***Downtime Issue Log***

BloodTrack Manager/HaemoBank Downtime-Sunquest Online: A blood storage refrigerator used to store red blood cell components (RBC). When offline, the TSL is unable to allocate RBC stored in the device and uncrossmatched group O RBCs cannot be removed for issue.

- NW TSS will remove all HaemoBank inventory and stored in the backup blood refrigerator
- If the HaemoBank is offline or otherwise unavailable; but Sunquest is online, RBC components will be allocated by Montlake TSL using non HaemoBank workflow. This is the same as standard workflow for plasma and platelet components.
  - o Blood components will be allocated by TSL using **NWBB2** location in SQ and a SQ Transfusion Record will print at NW from the same printer as plasma and platelet Transfusion Records.

Network Downtime at Northwest (NW)
- Communication is interrupted between Montlake TSL and the NW HaemoBank due to a NW communication or Internet problem
- All systems operating through Citrix are down including the HaemoBank, EPIC and Sunquest.
- Orders cannot be placed in SQ at NW
- TSL patient history and testing must be performed manually at ML
- Blood component testing, allocation and issue performed manually at ML
- Blood components will be transferred between ML and NW campus using the ***Downtime Component Transport Log***

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- Specimens for testing will be received and sent using the ***Downtime Specimen Receipt Log***
- Stock inventory at NW campus will be utilized for emergency issue of components only

SPECIMEN REQUIREMENTS:

NA

REAGENTS/SUPPLIES/EQUIPMENT:

Reagents:	Supplies:	Equipment:
NA		NA

QUALITY CONTROL:

NA

INSTRUCTIONS:

TABLE OF CONTENTS:

EPIC Downtime -Sunquest Online

STEP	ACTION
1	Receive and time stamp manual requisition *Transfusion Services Test & Blood Product Request Form* (UH3364)
2	Perform Blood Bank Inquiry in SQ <table><tr><td>**If**</td><td>**Then**</td></tr><tr><td>Patient found in SQ</td><td>Go to next step</td></tr><tr><td>Patient not found in SQ</td><td>Take sample and requisition to NW SPS to register patient in SQ</td></tr></table>
3	<table><tr><td>**If order is for**</td><td>**Then**</td></tr><tr><td>Testing</td><td>• Enter and receive the order in SQ per SOP ***Transfusion Service Specimen and Test Order Receipt at NW Campus*** • Batch specimens and send to ML TSL per SOP ***Batching and Transport of Transfusion Service Specimens***</td></tr><tr><td>Blood Component</td><td>• Fax blood component orders to Montlake TSL • Call Montlake TSL to verify order was received</td></tr></table>

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Sunquest Planned Downtime – Inventory Preparation

STEP	ACTION
1	Prior to planned downtime event perform the following in the preceding hour • Thaw, perform blood component processing and relabel any plasma or cryoprecipitate for any pending transfusion orders • Allocate thawed component to patient and attach Transfusion Records for any pending transfusion orders
2	Print inventory list of blood components at NW • Log into SmarTerm and enter the following at the specified prompt {table below}
3	Go to section Sunquest Unplanned Downtime

AT PROMPT	ENTER
FUNCTION	• BBR • Press <ENTER>
PRINTER	• SQ Printer # • Press <ENTER>
Use Host <A>	• Press <ENTER>
SELECT OPTION?	• 2 • Press <ENTER>
HOSPITAL ID	• U • Press <ENTER>
HOSPITAL ID	• Press <ENTER>
AREA	• NWBB • Press <ENTER>
AREA	• Press <ENTER>
HOSPITAL SELECTED	• A • Press <ENTER>
EARLIEST EXPIRATION DATE	• Press <ENTER>
EARLIEST EXPIRATION TIME	• Press <ENTER>
COMPONENT TYPE/GROUP	• Press <ENTER>
STATUS	• INV • Press <ENTER>
STATUS	• Press <ENTER>
ABO-RH	• Press <ENTER> to select default
PRINT DETAIL? Y/N	• Press <ENTER> to select default
UNITS WITH PRODUCT TESTING	• Press <ENTER> to select default
ACTIVE UNITS ONLY	• Press <ENTER> to select default
ACCEPT, MODIFY OR REJECT	• A • Press <ENTER>

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Sunquest Unplanned Downtime

STEP	ACTION
1	Call Montlake TSL to communicate SQ is offline at NW Lab
2	Receive and timestamp order requisition in lab **Test order:** Verify specimen acceptability – refer to SOP ***Transfusion Service Specimen and Test Order Receipt at NW Campus*** **NOTE:** You will not be able to perform a history check Document receipt of the specimen on the ***Downtime Specimen Receipt Log*** Send specimen and requisition along with a copy of the ***Downtime Specimen Receipt Log*** to ML TSL with the courier. **NOTE**: All specimens sent to Montlake TSL must be recorded on and accompanied with a Downtime ***Specimen Receipt Log*** **Blood component order:** Fax all blood component orders to Montlake TSL; Call Montlake TSL to verify order was received; Go to the next step

Step 2 detail

If	Then
Test order	• Verify specimen acceptability – refer to SOP ***Transfusion Service Specimen and Test Order Receipt at NW Campus*** **NOTE:** You will not be able to perform a history check • (see table below) • Document receipt of the specimen on the ***Downtime Specimen Receipt Log*** • Send specimen and requisition along with a copy of the ***Downtime Specimen Receipt Log*** to ML TSL with the courier. **NOTE**: All specimens sent to Montlake TSL must be recorded on and accompanied with a Downtime ***Specimen Receipt Log***
	If / **Then** Labeled with Epic ADT label — Without covering patient ID, label the specimen with a SQ Downtime Accession Label ("N" labels with barcode) and place a corresponding label on the requisition. Labeled with Sunquest label — Do not relabel
Blood component order	• Fax all blood component orders to Montlake TSL • Call Montlake TSL to verify order was received • Go to the next step

Step 3 — Filling blood orders

If order priority is	Then
Routine or STAT Priority	• Receive allocated blood components from MT TSL and document receipt on the Downtime **Component Transfer Log** • Store allocated components in non-HaemoBank storage devices. • Communicate product availability to patient units • Go to step 5 to issue platelet

STEP	ACTION		
		If order priority is	**Then**
		Emergency Priority (including MTP or OB Hemorrhage)	**Red Blood Cells:** o Prepare appropriate uncrossmatched red cells for emergency release per SOP: **Massive Transfusion Protocol and Emergency Release of Blood Components at Northwest Campus.** o Manually complete **Emergency Release of Uncrossmatched Blood Form (U3934).** Use unit stickers if possible. o Go to next step **Plasma and Cryoprecipitate:** o Thaw frozen AB plasma and cryoprecipitate per SOP **Ordering and Processing Plasma and Cryoprecipitate.** o Label thawed AB plasma and cryoprecipitate units using the stand-alone HemaTrax PC/printer per SOP: **Downtime Blood Component Labeling.** o Go to next step **Platelets:** o Select platelet o Go to next step

4	• Manually document the following on a SQ Transfusion Record (UH3363) for each blood component– refer to Appendix A
	  o Patient Name
	  o Patient MRN
	  o Current Date under the patient information section
	  o Donor ABO/Rh
	  o Donor Unit # (including container or division #)
	  o Component (type of component including attributes such as irradiated)
	  o Unit expiration (date and time component expires)
	  o Volume in mL
	• Initial the bottom right had corner of the Transfusion Record form
	• Have a second tech review documentation for accuracy and then initial
	• Make a photocopy of the transfusion report to maintain with the request for blood components
	• Attach record to blood component		

5	Issuing blood components • Handwrite patient name & MRN on the *Downtime Issue Log* • Issue all blood components using the *Downtime Issue Log* • Fax a copy of the log to Montlake TSL when completed. **NOTE**: This applies to emergency release and allocated blood components		
6	Ordering stock blood components • Call Montlake TSL and request needed components – specify if for a bleeding emergency in progress		

STEP	ACTION

7	Receiving Blood Components from ML TSL
	• Document receipt of blood components (allocated or stock) on the ***Downtime Component Transport Log*** sent with the components
	• Fax a copy of the completed form to UWMC TSL and return the hardcopy with the next available courier
	• Store allocated and stock blood components in the backup refrigerator in the following manner:
	    o Allocated components separated from non-allocated components
	    o Components separated by ABO/Rh

8	Blood Component Returns • Document return of issued components using the *Downtime Issue Log and QI Form per SOP* ***Returning Issued Blood Components to Inventory at Northwest Campus*** • Fax a copy of both forms to ML TSL | If component is	Then
Acceptable for reissue	Place in appropriate storage device
Unacceptable for reissue	Quarantine and return to Montlake TSL per SOP ***Quarantine and Final Disposition of Blood Components at Northwest Campus*** | •

BloodTrack Manager/HaemoBank Downtime-Sunquest Online

STEP	ACTION
1	Call Montlake TSL and request release of allocated inventory for components stored in the HaemoBank
2	Remove all inventory from HaemoBank and place in the backup refrigerator – refer to SOP ***HaemoBank Operation and Troubleshooting*** *section* Emergency Access for Evacuation of blood Components
3	Place inventory into the backup refrigerator in the following manner: • Allocated components separated from non-allocated components • Components separated by ABO/Rh **NOTE:** NW inventory can be viewed in SQ inventory location **NWBB2**
4	Montlake TSL will allocate blood components via SQ and a SQ ***Transfusion Record (UH3363)*** will print at NW Lab the same as when plasma or platelets are allocated **NOTE:** Patient and product information will print on the Transfusion Record
5	Retrieve the Transfusion Record (UH3363) from the SQ printer and the allocated RBC from the backup refrigerator
6	Attach it to the allocated blood component - refer to SOP ***Attaching Sunquest Transfusion Record to Blood Components at Northwest Campus***
7	Issue blood component in SQ – refer to SOP ***Issuing Blood Components at Northwest Campus***

Network Downtime at Northwest (NW)

STEP	ACTION
1	Contact NW/UW Medicine ITS Helpdesk @ 206-543-7012 and submit an urgent high-level ticket
2	Call Montlake TSL to communicate the outage and to release allocated inventory stored in the Haemobank and to let you know as soon as release is complete **NOTE:** If necessary TSL will send emergency uncrossmatched O blood via courier to NW campus
3	Notify the following persons "the lab is in full computer downtime and urgent blood needs will be filled with uncrossmatched RBC and universal components. All other blood orders will be filled and sent from Montlake TSL" • Nursing supervisors in the Emergency Department, Childbirth Center, Operating Room, and ICU/CCU • NW Laboratory Medical Director and Operations Director
4	Remove a minimum, depending on need, of 4 group O positive and 4 group O negative red blood cell from the HaemoBank and place in the backup refrigerator – refer to SOP *HaemoBank Operation and Troubleshooting* section Emergency Access for Evacuation of blood Components **NOTE:** Available group O inventory in the backup refrigerator should be refreshed based on clinical need
5	Place inventory into the backup refrigerator in the following manner: • Allocated components separated from non-allocated components Components separated by ABO/Rh
6	Go to section Sunquest Unplanned Downtime

CALCULATIONS/INTERPRETATIONS/RESULTS REPORTING/NORMAL
NA

VALUES/CRITICAL VALUES:
NA

CALIBRATION:
NA

NOTES AND LIMITATIONS:

REFERENCES:
Standards for Blood Banks and Transfusion Services, American Association of Blood Banks, Bethesda, MD. Current Edition.

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RELATED DOCUMENTS:
FORM *Downtime Issue Log*
FORM *Downtime Component Transport Log*
FORM *Downtime Specimen Receipt Log*
FORM *Downtime Blood Component Prep Log*
FORM *UH3363 Transfusion Record*
FORM *U3934 Emergency Release of Uncrossmatched Blood*
FORM *Blood Product Release Form*

SOP *Transfusion Service Specimen and Test Order Receipt at NW Campus*
SOP *Attaching Sunquest Transfusion Record to Blood Components at Northwest Campus*
SOP *Issuing Blood Components at Northwest Campus*
SOP *Returning Issued Blood Components to Inventory at Northwest Campus*
SOP *Quarantine and Final Disposition of Blood Components at Northwest Campus*
SOP *Massive Transfusion Protocol and Emergency Release of Blood Components at Northwest Campus*

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UWMC SOP Approval:

UWMC CLIA Medical Director
_____
Mark H. Wener, MD   Date _____

Transfusion Service Manager
_____   Date _____
Nina Sen

Compliance Analyst
_____   Date _____
Christine Clark

Transfusion Service Medical Director
_____   Date _____
Monica B. Pagano, MD

UWMC Biennial Review:

_____   Date _____

_____   Date _____

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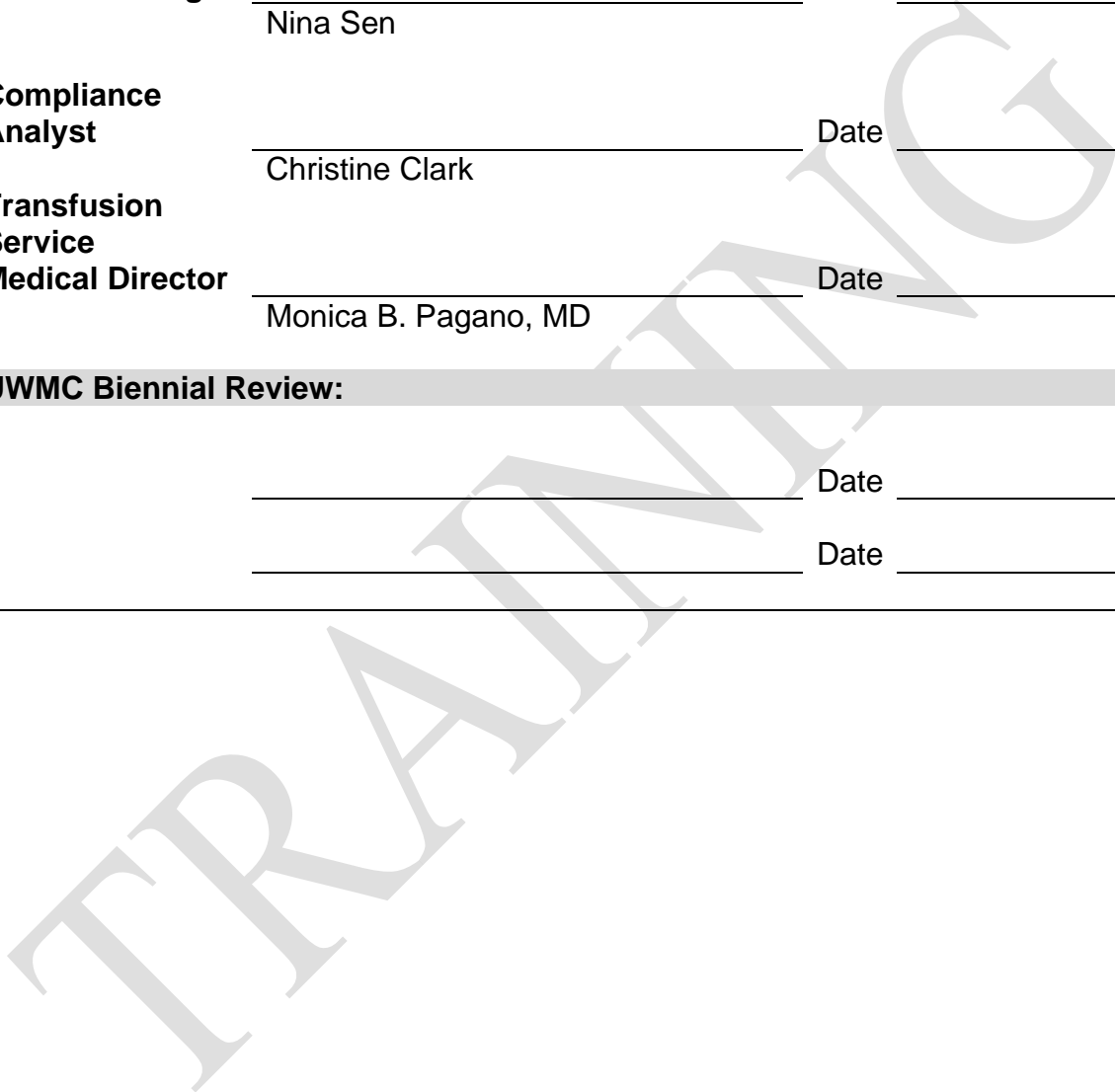
APPENDIX:
Appendix A: DowntimeTransfusion Records (Printed from SunQuest)

UW MEDICINE TRANSFUSION RECORD

NAME: ZZZ test, DI   **MRN:** U1234567

Patient Information		Donor Information	
Patient ABO/Rh		**Donor ABO/Rh**	O-NEGATIVE
Antibody Screen		Donor Unit#	W1416 21 081041
Location		Component	RBC IL DIV 00
Physician		Crossmatch	EXP
Date	02/16/2021	Unit Expiration	03/12/2021 2359
Accession #		# of Units in Pool	
Comments		Volume	350
		Unit Antigens	

Bedside Verification

Before administering the unit, verify in the patient's presence:

- **Patient's name & medical record number are identical** on the unit compatibility label, wrist band(s), and transfusion record.
- **Donor ABO/Rh & the donor unit number** on the transfusion record, unit compatibility label and donor unit face label are identical.
- **Patient ABO/Rh**, interpretation of compatibility testing (if performed), and special requirements (if applicable) are verified.
- **Unit is normal in appearance & not expired.**

Date		Time	
Transfusionist			
Witness			

Attach patient label here ONLY if there is no patient name or MRN in the top line above

IF A TRANSFUSION REACTION IS SUSPECTED

- **STOP THE TRANSFUSION IMMEDIATELY and call the physician and the Transfusion Service Laboratory**
- Refer to the Nursing Blood Administration Policy
- Complete the Report of Suspected Transfusion Reaction Form
- Draw a 6 mL Pink or Purple top EDTA blood sample from the patient (if required)
- Send the completed Suspected Transfusion Reaction form, blood sample (if required), blood bag with attached tubing and remaining contents (remove needle), and a copy of the Transfusion Record to the Transfusion Service Laboratory as soon as possible.

UNIT COMPATIBILITY LABEL

NAME:
MED REC#
ABO/RH:
CROSSMATCH:
DATE: 02/16/2021

DONOR ABO/RH: DIV   00   O-NEGATIVE
DONOR UNIT#: W1416 21 081041
Unit EXP: 03/12/2021 2359

UW Medicine Center Transfusion Service Laboratory
Harborview Medical Center Transfusion Service Laboratory
Seattle, Washington

TRANSFUSION RECORD

U3363

UH3363 REV JAN 21

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Downtime Transfusion Record (Handwritten)

UW MEDICINE TRANSFUSION RECORD

NAME: ZZZTEST, DI   MRN: U1234567

Patient Information		Donor Information	
Patient ABO/Rh		Donor ABO/Rh	AB Positive
Antibody Screen		Donor Unit#	W1416 21 2347 Part B
Location		Component	Thawed Plasma
Physician		Crossmatch	
Date	2/18/2021	Unit Expiration	2/20/2021 @ 2359
Accession #		# of Units in Pool	
		Volume	257 mLs
Comments		Unit Antigens	

Bedside Verification

Before administering the unit, verify in the patient's presence:

- Patient's name & medical record number are identical on the unit compatibility label, wrist band(s), and transfusion record.
- Donor ABO/Rh & the donor unit number on the transfusion record, unit compatibility label and donor unit face label are identical.
- Patient ABO/Rh, interpretation of compatibility testing (if performed), and special requirements (if applicable) are verified.
- Unit is normal in appearance & not expired.

Date		Time	
Transfusionist			
Witness			

IF A TRANSFUSION REACTION IS SUSPECTED

- **STOP THE TRANSFUSION IMMEDIATELY and call the physician and the Transfusion Service Laboratory**
- Refer to the Nursing Blood Administration Policy
- Complete the Report of Suspected Transfusion Reaction Form
- Draw a 6mL Pink top EDTA blood sample from the patient
- Send the completed Suspected Transfusion Reaction form, blood sample, blood bag with attached tubing and remaining contents (remove needle), and the Transfusion Record to the Transfusion Service as soon as possible.

UNIT COMPATIBILITY LABEL

NAME:
MED REC#
ABO/RH: DONOR ABO/RH:
CROSSMATCH: DONOR UNIT#:
DATE: Unit EXP:

Attach patient label here ONLY if there is no patient name or MRN in the top line above

UW Medicine
Harborview Medical Center – University of Washington Medical Center
UW Neighborhood Clinics – Valley Medical Center
University of Washington Physicians   Seattle, Washington

UW MEDICINE TRANSFUSION RECORD

U3363   WHITE - MEDICAL RECORD

UH3363 REV JAN 20

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