TRAINING UPDATE

Lab Location:	SGMC and WAH	**Date Implemented:**	3.5.2019
Department:	Blood Bank	**Due Date:**	3.15.2019

DESCRIPTION OF PROCEDURE REVISION

Name of procedure:

LIS Downtime

Description of change(s):

- Removed requirement to print the BBR8
- Added requirement to print the carrier content report from DI
- Added clarification with regard to ABO retypes and cord bloods

SGAH.BB125 LIS Downtime

Copy of version 3.0 (in review)

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Organization Adventist HealthCare

Comments for version 3.0
Refer to Revision History section of SOP

Approval and Periodic Review Signatures

Type	Description	Date	Version	Performed By	Notes
Approval	QA approval	3/5/2019	3.0	Leslie Barrett	

Version History
This document has no approved or retired versions.

Non-Technical SOP

Title	**LIS Downtime**	
Prepared by	Stephanie Codina	Date: 11/17/2011
Owner	Stephanie Codina	Date: 11/17/2011

Laboratory Approval		
Print Name and Title	**Signature**	**Date**
Refer to the electronic signature page for approval and approval dates.		
Local Issue Date:	Local Effective Date:	

Review:		
Print Name	**Signature**	**Date**

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1. PURPOSE

To provide a procedure for when the laboratory information system (LIS) computer goes down.

2. SCOPE

This procedure applies to times when the LIS computer system is unavailable for use.

3. RESPONSIBILITY

All blood bank staff members must understand and adhere to this procedure for LIS computer downtimes.

4. DEFINITIONS

N/A

5. PROCEDURE

Steps to be performed prior to downtime when advanced notice available

Step	Action
Perform as time permits prior to scheduled downtime....	
1	Pull frequent pending log per procedure, "Blood Bank LIS Reports." A. Perform and enter the history check for all patients who have pending specimens per procedure, "Patient History Check." Document the results of the history check in the LIS computer **and** on the pending log form for use during the downtime. B. Allocate and crossmatch (if indicated) units to all patients with current transfuse orders.
2	Attempt to process all blood products that are not yet in the available inventory.

Form revised 3/31/00

Step	Action
Perform 30-40 minutes prior to the scheduled downtime...	
3	Perform a blood bank back-up per procedure, "Blood Bank LIS Reports."
4	Print a LO5 report for the previous 3 days (T to T-3). This report will print the patient's most current blood bank armband number (with additional information). A. Access Sunquest SmarTerm. B. At the "Function" prompt, enter "LO" and press the enter key. C. Select a printer. D. At the "Select Option" prompt, type "5" and press enter to print the Comprehensive Master Log. E. At the "Date" prompt, type "T" for today. F. At the "Department" prompt, type "BB" for blood bank. G. At the "Sort Option" prompt, press enter to default "Alpha by Last Name." H. At the "Hospital ID" prompt, type one of the following: a. Type "SGAH" for Shady Grove Adventist Hospital. b. Type "WAH" for Washington Adventist Hospital. I. At the "Accept (A), Modify (M), or Reject (R)" prompt, type "A" and press the enter key. J. The report will print on the selected printer. K. Hole punch the report and place it in the designated binder. Print the report an additional 3 times. However, change the entry at the date prompt to one of the following: A. T-1 B. T-2 C. T-3
5	Print a list of autologous and directed units in inventory per procedure, "Blood Bank LIS Reports."
6	Print a "Carrier Content Report" from Data Innovations. A. Determine which racks contain the current blood bank T&S specimens. B. Log into Data Innovations Specimen Tracker. C. Select the "SSR" tab. D. Select the "Carrier Content Report." E. Scan the carrier ID for the first rack. F. Print the report. G. Repeat these steps for each rack.

Form revised 3.1/00

Performing a Patient History Check during Downtime

Step	Action
1	Review the patient history using **both** of the following computer files. Record any information in the "Previous History" box on the downtime form. A. Blood type via blood bank back-up data a. Access the computer that contains the back-up data i. At SGAH this is SGQLAB022 ii. At WAH this is WAQLAB001 b. Click on the icon "Patient Blood Type Listing." c. When the screen opens, search for the patient information by name. B. Antibodies and problems via blood bank back-up data a. Access the computer that contains the back-up data. b. Click on the icon "Antibodies and Problems." c. When the screen opens, search for the patient information by name.
2	Look for current specimens and armband numbers using the printed LO5 report, if available.
3	Look for autologous or directed units using the printed autologous and directed unit report if available. If the report is not available, search the autologous and directed shelves of the blood product refrigerator.

Processing Patient Orders during Downtime

Step	Action
1	The patient access department will issue a downtime registration number for each patient admitted during a Cerner downtime. For these patients, the FIN (financial identification number) will be used as the medical record number. A. Labels will be printed containing the patient information. B. The MRN field will only contain zeros. 

Step	Action
2	All specimen orders are documented using a downtime order form. A. A copy of the lab downtime form will accompany all blood bank specimens to the department. B. If Cerner is down, verify that the downtime order form contains all of the mandatory information. This includes patient location (unit and bed) and provider's full name (first and last) or provider number. a. This information is required for patient registration and order entry. b. If missing call the patient care area immediately and request the information for the form. DO NOT wait until recovery to do this. C. Cord blood specimens must be labeled with the baby's name and medical record number and the mother's medical record number must be on the requisition (in addition to baby's). D. Document the date and time the specimen was received on the downtime order form. E. Do not accept specimens that do not have an order form. This includes specimens arriving from the outpatient laboratory collection area.
3	Pull specimens from storage as indicated. Specimens storage locations can be found on the "Carrier Content Report". Document the rack number, row (letter), and space (number) on the downtime form, so the specimen can be returned to the appropriate location after testing is complete.
4	Prepare a downtime result form for each specimen received. Document the following on the form. A. Patient's full name B. Patient's medical record number C. Blood bank armband number
5	Perform a history check per above procedure. Document the history check in the "Previous History" box of the downtime form.
6	Perform the testing required per blood bank procedures. A. Verify the patient name and medical record number at the time of testing. B. Document all results on the downtime form. If testing was performed on the Echo, A. Manually enter the patient's full name, medical record number, and accession in to the Echo. B. Print a copy of each patient's results (print each patient separately; do not batch print). C. Staple the downtime form to the front of the Echo results for the patient.

Step	Action
6 Cont	**All documentation must be legible to facilitate manual data entry when the LIS is usable.** A. Use one form per patient specimen received. B. All manual testing will be documented on the form. C. Allocation and issuing of blood products will be documented on the form. D. Staple forms for a given patient together. For example, if you receive a T&S and an ABO confirmation on a patient. a. The T&S will be written on one form. b. The ABO retype on a second form. c. The forms will get stapled together.
7	Results for Cord Evaluations, ABO/Rh for RhIG candidacy, fetal cell screens, and other tests that will be used to direct patient care will be sent, faxed, or called to the patient care area. A. If Sunquest is down, send a copy of the downtime testing form to the floor. B. If Sunquest is up, print results from Laboratory Inquiry per procedure and fax to the floor. C. When results are called to the patient care area, document the date and time of the call as well as the name of the person called on the downtime form.
8	File all forms (order and result forms) alphabetically by first letter of last name in the accordion file.

Allocating and Issuing Blood Products during Downtime

Step	Action
1	Blood product requests will be documented on the "Transfusion Orders" form and faxed or sent to the blood bank. A. The provider must indicate the following on the form: a. Type and quantity of blood products requested. b. Laboratory values that pertain to the blood product being transfused. c. The indication for transfusion. d. Special transfusion attributes. B. Document the date and time the transfuse order was received on the form.

Form revised 3/1/00

Step	Action
2	When blood product orders are received during downtime, A. If the patient's T&S was completed manually on a downtime testing form, obtain the form. B. If the patient's T&S was completed in the computer prior to downtime or on the Echo during downtime, a. Obtain a downtime form. b. Fill in the following information: i. Patient's full name ii. Patient's medical record number iii. Blood bank armband number c. Perform a history check per above procedure and document on the form. d. Obtain units that meet the patient's transfusion criteria. e. Document the unit numbers on the form (allocation). Document crossmatch testing on the form if indicated.
3	Obtain units that meet the patient's transfusion requirements. Document the unit numbers on the downtime form. A. If the unit needs modification (thawing, aliquoting, etc). Document the change using the product modification log. Time and date of modification must be documented, because they are critical to establish correct expiration dates. B. Red cell and whole blood units must be crossmatched. Document crossmatch results on the downtime testing form.
4	Handwrite all information on **both** the Blood Bank Product Tag and Administration Record (pink form and label). **The documentation must be legible.** The required information is as follows: A. Blood Bank Administration Record a. Recipient's full name b. Recipient's medical record number c. Recipient's blood group and type d. Recipient's blood bank armband number e. Unit number of DIN of blood product f. Product type (RBCs, Plasma, Platelet, Cryoprecipitate will suffice) g. Blood group and type of blood product h. Volume of blood product i. For red cells, use 270 mL for CPDA-1 units and 335 mL for adsol units. ii. Use the actual volume printed on the blood product label for non-red cell products and apheresis red cell products.

Step	Action
4 Cont	i. Expiration date and time, if indicated, of blood product j. Crossmatch results for red blood cells and whole blood only k. Unit antigen typing and special attributes l. Tech B. Blood Bank Product Tag a. Recipient's full name b. Recipient's medical record number c. Recipient's blood bank armband number d. Recipient's blood group and type e. Unit number of DIN of blood product f. Blood group and type of blood product g. Crossmatch results for red blood cells and whole blood only
5	Notify the patient care area when blood products are available for transfusion. Document the phone call on the downtime form.
6	Store the blood product at the appropriate temperature until the floor requests the product for transfusion.
7	Issue the blood product when requested for transfusion. A. Be especially careful to review all data at the time a blood product is issued to ensure the ABO retype has been performed and the blood product meets all recipient transfusion requirements. If you cannot determine if an ABO retype is needed, err on the side of caution and request a second specimen or issue group O red cells and AB plasma products. B. Document the date and time of issue as well as to whom the product was issued on the downtime testing form. C. File the forms (order and downtime result) in the accordion file alphabetically by last name.

Entering Blood Products into Inventory during Downtime

Step	Action
1	Whenever possible, blood products should not be processed during downtimes. A. If the downtime is scheduled, increase inventories leading up to the downtime to ensure we have enough blood products through the downtime event. B. If unscheduled downtime, only process blood products as needed for patient care. C. Store unprocessed blood products in their shipping boxes or on the designated shelf of the blood product storage containers.

Form revised 3/31/00

Step	Action
2	Document the following information on a "Downtime Blood Processing Sheet." Use one sheet per invoice/box received. A. Supplier name B. Received date C. Received time
3	Document the following information on the "Downtime Blood Processing Sheet" for EACH unit entered into inventory during downtime. A. Unit number B. Product code (number from bag) C. ABO/Rh D. Volume a. 270 for CPDA-1 units b. 355 for Adsol units c. Volume written on bag for all other units E. Expiration date F. Special Attributes G. Tech
4	Perform unit retypes on red blood cells and whole blood units per departmental procedure. A. Document testing results for each unit on the form. B. It is permissible to leave blank spaces where reagents were not tested.
5	Interpret the blood type and confirm that the blood product label matches the testing interpretation for all red blood cell and whole blood units.

Product Modification during Downtime

Step	Action
1	Blood product modification will be documented on the modification-specific forms. A. Irradiation will be documented on the Irradiation Log Sheet. B. Neonatal aliquots will be documented on the Product Modification Log. C. Thawing of plasma and cryoprecipitate will be documented on the ISBT-128 Label Verification Log. D. Modified apheresis platelets will be documented on the ISBT-128 Label Verification Log. **Be sure to verify the appropriate expiration date and time with the procedure manual!**
2	Blood product labels for modified products will be manually printed using the HemaTrax Unity system.

Step	Action
3	Label verification by a second tech is required per procedure.

Recovery

Step	Action
1	When the computer system comes back up, begin by entering all patient orders and transfusion orders into the LIS. A. Obtain the date and time of collection from the sample labels. B. Obtain the date and time of receipt from the downtime order forms. C. Register patients in the lab system as indicated.
2	Enter any blood products into the computer that were entered into inventory during the downtime (if any). Be sure to enter the date and time of original processing.
3	Result all patient testing, blood product allocation, blood product issuing, and all other remaining downtime transactions into the system. A. Modify blood products in the computer as needed for each patient from the downtime records. Be sure to enter the original date and time of modification to ensure the expiration date is calculated properly. B. Replace handwritten blood product tags with computer-generated tags for all allocated products in inventory.
4	A second person must review the data entry of all results for accuracy. A. This can be done in "Blood Order Processing" or in "Blood Bank Inquiry" by clicking on the "Reaction Results" button. The person must initial the "Computer Review Tech" line of the downtime results form to document the results were entered accurately. For all other forms, the reviewer will stamp the form with the "Reviewed by:_____" stamp and initial the form
5	Print pending logs to verify that all patient testing has been resulted in the LIS.
6	Verify the blood product inventory by printing a BBR2 Product File List and reconciling the blood product inventory.
7	File downtime forms per departmental policy. A. Downtime testing order forms get returned to processing for filing and storage. B. Downtime "Transfusion Order" forms will be filed in the appropriate file. C. Downtime results get filed with other manually entered result records.

6. RELATED DOCUMENTS

SOP: Blood Bank LIS Reports
SOP: Patient History Check
SOP: ISBT-128 Label Production
Form: Downtime Blood Bank Testing Form (AG.F144)
Form: Downtime Blood Processing Sheet (AG.F145)
Form: Irradiation Log Sheet (AG.F109)
Form: Product Modification Log (AG.F01)
Form: ISBT-128 Label Verification Log (AG.F82)

7. REFERENCES

None

8. REVISION HISTORY

Version	Date	Reason for Revision	Revised By	Approved By
		Supersedes WA.B730.01, SGAH B730.01		
000	12.12.14	Section 5: Updated downtime process for blood product orders with CPOE, updated process for filing forms, added requirement to check downtime forms for completeness before accepting, added requirement for downtime form before testing. Footer: version # leading zero s dropped due to new EDCS in use as of 10/7/13.	SCodina	NCacciabeve
1	1.16.17	Header: add WAH Section 5: Removed comment for HemaTrax Unity network connection; system is now direct connect	SCodina	NCacciabeve
2	2.28.19	Header: Updated parent facility Section 5: Removed requirement to print the BBR8 (staff felt this did not add value). Added instructions to print a carrier content report from DI. Added clarification regarding ABO retype and cord bloods.	SCodina	NCacciabeve

9. ADDENDA AND APPENDICES

None