TRAINING UPDATE

Lab Location:	SGMC and WOMC	**Date Implemented:**	11.20.2019
Department:	Blood Bank	**Due Date:**	11.30.2019

DESCRIPTION OF PROCEDURE REVISION

Name of procedure:

Entering Blood Products Into Inventory

Description of change(s):

Added the requirement to record two additional fields when bringing blood products into inventory:

1. Temperature: In this field, you are only required to enter one of the following:
    a. P—"Pass" if the blood product was received within the acceptable temperature range
    b. F—"Fail" if the blood product was not received within an acceptable temperature range.
2. Visual Inspection:
    a. P—"Pass" if the blood product demonstrated an acceptable visual inspection
    b. F—"Fail" if the blood product did not have an acceptable visual inspection

Note: This changed with the last Sunquest upgrade, but the procedure was just updated.

SGAH.BB65 Entering Blood Products Into Inventory

Copy of version 5.0 (approved and current)

Last Approval or Periodic Review Completed 11/15/2019

Next Periodic Review Needed On or Before 11/15/2021

Effective Date 11/15/2019

Controlled Copy of a Manual ID 18927

Location SGMC & WOMC BB vol 6

Organization Adventist HealthCare

Approval and Periodic Review Signatures

Type	Description	Date	Version	Performed By	Notes
Approval	Lab Director	11/15/2019	5.0	Nicolas Cacciabeve	
Approval	BB approval	11/15/2019	5.0	Stephanie Codina	
Approval	QA approval	11/15/2019	5.0	Leslie Barrett	

Version History

Version	Status	Type	Date Added	Date Effective	Date Retired
5.0	Approved and Current	Initial version	11/15/2019	11/15/2019	Indefinite

Non-Technical SOP

Title	**Entering Blood Products Into Inventory**	
Prepared by	Stephanie Codina	Date: 11/22/2010
Owner	Stephanie Codina	Date: 11/22/2010

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:	

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1. PURPOSE

All blood products must be entered into the LIS inventory. Blood products can be entered individually or in batches.

2. SCOPE

This procedure applies to all blood products that will be put into inventory.

3. RESPONSIBILITY

All blood bank staff must adhere to this procedure and demonstrate competency for LIS entry of blood products.

4. DEFINITIONS

None

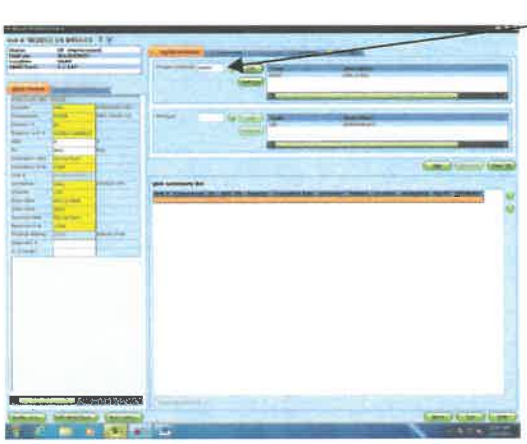
5. PROCEDURE

Receiving Blood Products

Step	Action
1	Blood products are received in special blood product transport boxes. The boxes will ensure each blood product is transported within the appropriate temperature range. Ensure the correct transport box was used. • Red blood cells = 1-10°C • Frozen cryoprecipitate and plasma products = ≤ -18°C • Platelet products = 20-24°C without agitation for a maximum of 24 hours
2	Unpack the blood product transport box. A. Verify that the blood products were delivered to the correct location by reviewing the "Ship to" information on the invoice. Notify the blood supplier if the products were shipped to the incorrect location. B. Verify that the correct quantity and product type were received.
3	If the blood supplier shipping document prompts for arrival temperature, take and record the temperature of the products upon receipt. Quarantine products if the temperature is outside the designated range. A. Document the variance on a PI/Variance form. B. Contact the blood supplier to determine resolution and unit disposition.
4	Visually inspect each blood product as it is unpacked. A. Visual abnormalities include segments that appear lighter or darker in color than the contents of the primary bag, purple color of red cells, clots, white particulate matter in the primary container, supernatant fluid that is discolored from normal appearance, gross lipemia, foreign objects in the primary container or ports, or evidence that a frozen product has been thawed and refrozen. B. Quarantine any blood products that do not pass the visual inspection immediately after entry. a. Document the variance on a PI/Variance form. b. Contact the blood supplier to determine resolution and unit disposition. C. Read all information printed on tags or labels attached to each unit. a. We do not routinely accept allogeneic or directed units that have antibodies. Quarantine the unit and contact the blood supplier to determine unit disposition. b. Autologous units with antibodies can be safely transfused to the recipient. D. Stamp the invoice to document that the units passed the visual inspection. Initial and date the stamp.
5	Access Sunquest function "Blood Product Entry."

Step	Action
6	Verify that you are entering the blood products into the **correct** hospital inventory by verifying the location in the upper, left-hand corner of the screen. 
7	At the "Supplier" prompt, scan the donor identification number (DIN) barcode into the computer (this is the barcode in the upper, left-hand corner beginning with a "W"). The "supplier" and "supplier unit #" boxes will autofill. Notes: A. All barcoded information **must** be scanned. ISBT labels will not print during blood component preparation if any information is manually entered. B. ISBT-128 barcodes are concatenated. This means that the barcodes can be scanned in any order and the information will add to the correct field. This procedure lists what is expected in each field. However, the scanning may be performed in any order. C. Quarantine any unit that contains a barcode that does not read. Document the incident on a PI/Variance form. Resolution may include adding a new product to our database or reprinting a defective label.
8	At the "Component" prompt, barcode the product barcode from the unit label. This is the barcode on the lower, left-hand side beginning with "E." Note: Sunquest will automatically update the E code to the following configuration for autologous and directed units: • EX#### for autologous, biohazard (E####X00) units • E####1 for autologous (E####100) units • ED#### for directed (E####D00) units Sunquest will give the warning message, "Warning: At least one unit with the same unit number and belonging to the same component type group has been identified. Do you wish to continue? Yes/No" when 2 products with the same unit number and different E codes are entered. Click "Yes" and continue entering the unit. This message appears when multiple units are collected from the same apheresis donation and both are sent to our facility. The units will be differentiated by the E codes as designed.

Step	Action
9	At the "ABO" prompt, barcode the ABO/Rh type from the unit label. This is the barcode in the upper, right-hand side of the label. This barcode will also autofill the "Rh" prompt.
10	At the "Expiration Date" prompt, barcode the expiration date of the unit from the unit label. This is the barcode located in the lower, right-hand corner of the label. The "Expiration Time" should autofill to read "2359." A. Enter the correct expiration time if different. B. Enter 2359 if the time does not autofill.
11	At the "Volume" prompt, enter the volume printed on the unit label. This field will autofill for some red cell/cryoprecipitate products.
12	At the "Temperature" prompt, type one of the following: A. Type "P" if the product was received at an acceptable transport temperature. B. Type "F" if the product was received outside of the acceptable transport temperature. Quarantine any unit that was received outside the acceptable temperature range.
13	At the "Visual Inspection" prompt, select one of the following from the dropdown menu: A. Select "Pass" if the visual inspection is acceptable. B. Select "Fail" if the visual inspection is not acceptable. Quarantine all units that fail visual inspection.
14	Click on the "ISBT Fields" tab and scan attribute barcodes that appear on the unit. These include: • CMV-negative (N0008 barcode) • HbS-negative (N0106 barcode) • Both CMV- and HbS-negative (N0107 barcode) The CMV-negative barcode can be scanned into the ISBT field. Hemoglobin S will need to be manually entered into the antigen-antibody field utilizing code "NSIK" also, per the next step.

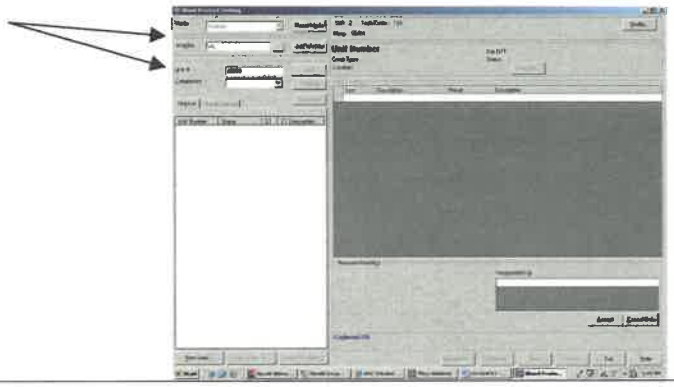
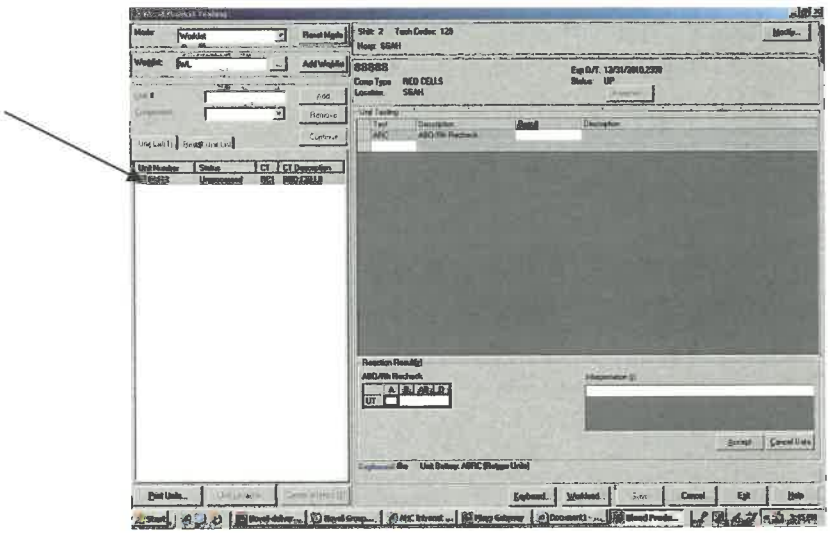
Step	Action
15	Click on the "Antigen/Antibody" box and enter any antigens or antibodies present in the unit, if applicable. Refer to appendix A for English text codes (ETC). 
16	For autolgous and/or directed donor blood products, click on the "Assignees" tab and enter the appropriate information. A. If the patient's medical record number is known, a. Type the medical record number into the "Patient ID" box and press the "tab" key. b. The patients name and last 4 digits of SSN (if available) will appear. c. Verify the information for accuracy. If the information matches the autologous or directed donation unit tag, click on the "Add" button. B. If the patient's medical record is unknown, a. Click on the ellipse (…) button. b. A pop-up screen will appear. In the "Lookup By" field, select "Patient Name" from the dropdown menu. c. At the "Value" prompt, type in the patient's last, first name and click the "Search" button. d. A list of patient's will appear. i. Compare the patient information that appears in the LIS to the patient information on the autologous or directed donation unit tag. ii. Choose the correct patient from the list using at least 2 patient identifiers such as full name, last 4 digits of the social security number, or date of birth. C. If the patient who donated the autologous blood product is not registered, type all available information into the boxes. a. Type the full patient's name in the "Patient's Name" box. b. Type in the last 4 digits of the patient's social security number in the box using the format 000-00-####. c. Type the patient's birthdate in the "ID Information" field using format "DOB MM/DD/YY."

Step	Action
	D. For all patients with autologous units, type the expected date of surgery in the "ID Information" field from the autologous donation unit tag using the format "DOS = MM/DD/YY." E. Click the "Add" button to add the identifiers to the blood product. F. Click the "Save" button.
17	When all data is entered for a unit, click on the "Add" button, or press the "Alt" key and the "D" key at the same time to add the unit.
18	Repeat these steps for any additional units.
19	When all units have been entered, compare the unit numbers on the screen to the unit numbers on the invoice. Verify that all units have been entered, the numbers were entered correctly, and no erroneous unit numbers exist. Check off units on the invoice as they are verified. If issues are noted, double-click on the unit entry (right column) to bring the information up on the left side of the screen. Make changes as needed then click on the "Add" button, or press the "Alt" key and the "D" key at the same time to add the unit back to the list.
20	Click on the "Save" button to save the units to the inventory.
21	The computer will assign a worklist number to units that need additional processing (such as red cells that need unit retypes). Document the worklist number on the invoice.
22	Place the blood products in the appropriate storage container. A. Autologous and directed units will be segregated from the homologous inventory. B. Autologous, Biohazard units will be stored in a plastic bag.
23	Place the invoice in the appropriate location for billing reconciliation.

Unit Retypes (Applies Only to Red Blood Cell and Whole Blood Products)

Step	Action
1	All red cell, whole blood, and granulocyte products (including autologous and directed donor) require a unit retype to change the status from UP (unprocessed) to AV (available).
2	Pull a minimum of 2 segments from each unit to be processed. Segments may be pulled before or after computer entry. A. Place one segment in a test tube and label with the complete unit number. Use of a unit number label is preferred. B. Place a second unit number label around the second segment.

Step	Action
3	When all segments have been pulled, return the blood products to the storage refrigerator. A. Store one set of segments in the refrigerator in a plastic bag labeled with the date of processing. B. Use the second segment (the segment in the test tube) for unit retype testing. C. Note: Do not retest antigen typing for antigens that have been typed by the blood supplier.
4	Label test tubes for unit retype testing. All tubes must be labeled, at a minimum, with the last 3 digits of the unit number. Additional identifiers must be used if needed to differentiate between units. A. For A-positive, B-positive, and AB-positive units, label 2 tubes. a. Label one tube "A." b. Label one tube "B." B. For A-negative, B-negative, and AB-negative units, label 3 tubes. a. Label one tube "A." b. Label one tube "B." c. Label one tube "D." C. For O-positive units, label 1 tube "AB." D. For O-negative units, label 2 tubes. a. Label one tube "AB." b. Label one tube "D."
5	Place 1 drop of antisera in each labeled test tube. A. Place 1 drop of anti-A in each tube labeled "A." B. Place 1 drop of anti-B in each tube labeled "B." C. Place 1 drop of anti-D in each tube labeled "D."
6	Prepare a cell suspension from each label using the tube labeled with the unit number or unit number sticker. Refer to procedure, "Preparing a 2-4% Red Cell Suspension for Testing."
7	Add 1 drop of cell suspension to each test tube that was prepared for the unit number.
8	Serofuge the tubes for the saline time listed on the serofuge (generally 15 seconds).
9	Access Sunquest function "Blood Product Testing."

Step	Action
10	Enter either the worklist number (to enter results in batch) or the unit number(s) (to enter results in smaller batches or individually). 
11	Press the "Tab" key, then click on the "Continue" button, then press the "Home" key.
12	Pull one set of tubes from the serofuge and verify that the unit number highlighted in the LIS matches the unit number labeled on the test tubes. 
13	Read each set of tubes for agglutination using an agglutination viewer. Immediately enter the strength of agglutination for each tube in the LIS grid. A. "A" corresponds to the anti-A tube. B. "B" corresponds to the anti-B tube. C. "AB" corresponds to the anti-AB tube. D. "D" corresponds to the anti-D tube. Agglutination is read as follows: A. Enter 4 for 4+ agglutination. B. Enter 3 for 3+ agglutination. C. Enter 2 for 2+ agglutination. D. Enter 9 if the tube was not tested.

Step	Action
	Note: Positive agglutination in strengths <2+ needs further workup. Refer to a supervisor.
14	Interpret the results in the interpretation field. A. Type "A" for group A. B. Type "B" for group B. C. Type "C" for group AB. D. Type "O" for group O. E. Type "N" for Rh-negative. F. Do not type anything for Rh-positive.
15	Click the "Save" button.
16	The pop-up message "Product test result has been filed for unit ########." Click the "OK" button.
17	Click the "Continue" button to enter additional unit retypes. Exit Sunquest when the testing is complete.

Wrong Number

Step	Action
1	If a blood product gets entered with the incorrect unit number or product type, the entered blood product must be removed from the system and the correct blood product entered.
2	To delete the incorrect unit: A. Access Sunquest function "Blood Status Update." B. At the "Unit #" prompt, type in the ***incorrect*** unit number and press the "Tab" key. C. At the "Component" prompt, type in the ***incorrect*** blood product type and press the "Tab" key. D. Press the "Tab" key twice to default the current date and time. E. At the "New Status" prompt, type "WN" or select "wrong number" from the drop-down menu. F. Press the "Tab" key twice. G. Click the "Save" button.

6. RELATED DOCUMENTS

SOP: Quarantine of Blood Products
SOP: Preparing a 2-4% Red Cell Suspension for Testing

7. REFERENCES

N/A

8. REVISION HISTORY

Version	Date	Reason for Revision	Revised By	Approved By
		Supersedes WAH.BB13.000, WAH.BB14.000, SGAH.BB16.000, SGAH.BB17.000		
000	5.19.2014	Section 5: Removed instructions for entering codabar-labeled units. Updated procedure to include instructions for entering units into Sunquest v6.4. Section 9: Deleted appendix showing a codabar label. Footer: version # leading zero's dropped due to new EDCS in use as of 10/7/13.	SCodina	NCacciabeve
1	1.27.2015	Section 5: Added requirement to perform unit retype on granuloctyes per new AABB standard 5.12, changed SSN to last 4 digits of SSN, and added wording to enter the CMV- and HbS-negative barcode when the unit contains both attributes. Footer: version # leading zero's dropped due to new EDCS in use as of 10/7/13	SCodina	NCacciabeve
2	1.30.17	Header: Added WAH Section 5: Added N codes for Zika testing	SCodina	NCacciabeve
3	4.7.17	Section 5: Added step 3 to receiving blood products Section 9: Correct NJKB in appendix A; deleted appendix B	SCodina	NCacciabeve
4	11.15.19	Section 5: Added temperature and visual inspection prompts; removed requirement to enter Zika testing (this has been FDA approved and no longer requires special labeling)	SCodina	NCacciabeve

9. ADDENDA AND APPENDICES

Appendix A: English Text Codes for Entering Antigen Testing on Units

Appendix A
English Text Codes for Entering Antigen Typing on Units

Code	Translation
NA1	A1 negative
NBGC	C negative
NBGD	D negative
NBGE	E negative
NBGM	M negative
NBGN	N negative
NBGS	S negative
NBGV	V negative
NCEL	k negative
NCW	Cw negative
NFYA	Fya negative
NFYB	Fyb negative
NJKA	Jka negative
NJKB	Jkb negative
NJSA	Jsa negative
NJSB	Jsb negative
NKEL	K negative
NKPA	Kpa negative
NKPB	Kpb negative
NLEA	Lea negative
NLEB	Leb negative
NLUA	Lua negative
NLUB	Lub negative
NP1	P1 negative
NSMC	c negative
NSME	e negative
NSMS	s negative
NSIK	Sickle negative

Code	Translation
PA1	A1 positive
PBGC	C positive
PBGE	E positive
PBGM	M positive
PBGN	N positive
PBGS	S positive
PCEL	K positive
PCW	Cw positive
PFYA	Fya positive
PFYB	Fyb positive
PJKA	Jka positive
PJKB	Jkb positive
PJSA	Jsa positive
PJSB	Jsb positive
PKEL	K positive
PKPA	Kpa positive
PKPB	Kpb positive
PLEA	Lea positive
PLEB	Leb positive
PLUA	Lua positive
PLUB	Lub positive
PP1	P1 positive
PSMC	c positive
PSME	e positive
PSMS	s positive
PSIK	Sickle positive