VistA Blood Establishment Computer Software
(VBECS) Version 2.1.0

Release Notes Version 5.0

Department of Veterans Affairs
Product Development

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Revision History

Date	Revision	Description	Author
10/19/15	1.0	Initial version	BBM team
12/04/15	2.0	Rearranged the Complaint numbers in sequential order, and added HD 488893. Serologic Crossmatch: Added DR 4112 and HD 488893. (Defect 236189) Updates by Option table, first row: Revised to read "The reports listed below will no longer allow printing while the report is compiling for preview." Table 1 and Table 2 – Revised formatting for consistency.	BBM Team
2/5/16	3.0	Global: Readability updates. Changed "Test Scenario Group" to "Test Group". Updated Changed Features and Functions section. Return Issued Units to Blood Bank, DR 4999: Edited the note in Validation Scenario. Update local policy and procedure to meet documentation requirements of the unit's evaluation for continued use suitability. DR 4625: Added Note: Does not include Buffy Coat product codes. DR 4112 corrected reference to Appendix B, Table 2. DR 4527 Removed "in TT_40.01". DR 4112 & DR 4527: Combined the two rows for Serologic Crossmatch Test. DR 4112 and DR 5157: Revised Resolution summary for clarity. Added a generic warning to the warning area before Test Group One: "All test scenarios have a suggested user role, this may require adjustment to align with the patient or unit data selected to execute the scenario. Process any overrides as well, based on patient or unit selection." Test Group 1: Scenario 2, Step 3, revised sentence to read: User A then enters ABO/Rh results that also match the historic and is allowed to save the ABO/Rh. Test Group 1, Scenarios 1 and 2 – Changed "Test Results section" to "Test Details section". Test Group 2: Scenario 1, Data: Added "Accept the order in VBECS." and Scenario 1, Step 3, revised to read: "User B does not process the test and exits the test grid without saving any entries." Test Group 3: Added a Note to clarify about ER issue optional testing. Added a Note about Step 5 verifying existing checks. Removed ABO/Rh discrepancy test information and edited for readability. Scenario 1 Added a note.. Step 3. Added, "Review the popup message." Test Group 3, Scenario 1, Step 3 and Test Group 2, Scenario 2, Step 3: Changed "should" to "may". Test Group 5, Scenario 1, User section: Changed "Any two users, A and B" to "2 users, any role (User A and User B)" Test Group 4: Scenario 1, Lead Tech or above needed to inactivate the transfusion requirement. Steps,2 and 6, changed "Antibody Specificity" to "Antibody Identified". Appendix A: Flowchart entries edited to fit. Appendix B table 1, change "Gel" to "AHG. Table 2, removed "available". (Task 270949) Added Appendix C, National implementation schedule, moved implementation text to this appendix (Defect 259687). Appendix C: Updated.	BBM Team

Date	Revision	Description	Author
3/17/16	4.0	DR 5169: Added note explaining required TAS order of operations change due to data refreshing update. (Defect 277970) DR 3145: Added note regarding Audit Trail entry having incorrect time. Appendix C: Revised and removed table.	BBM Team
4/4/16	5.0	Corrected revision history for v 4.0. Defect 277970 is associated with DR 5169 not DR 3145. DR 3145: Edited Note: Verify the new specificity appears under Maintenance: Antibody Configuration, ignore the associated time. This change appears with an incorrectly calculated time on the Audit Trail report immediately after the patch installation. Added to the warning box at the Testing Scenarios: The Expected Outcome numbering corresponds to the step number where the change verification appears. (Defect 300014) Appendix C: Edited: Emphasized "Request" and added (Do not file an Incident)	BBM Team

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Introduction

VistA Blood Establishment Computer Software (VBECS) Version 2.1.0 Release Notes contains information and examples of test scenarios for changes and corrections made to VBECS.

Appendix A: Validation Planning and Example Test Scenarios contains examples of test scenarios for changes and corrections made in this release.

Changed Features and Functions

The scope of VBECS 2.1.0 includes a variety of changes, complete information listed in the Updates by Option section in Changes and Corrections.

Changes required by regulatory and accreditation changes include:
- ABO/Rh confirmation testing of Granulocyte products
- Changes to the serologic crossmatch test grid to allow IS with an AHG Only test phase selection
- Removal of the "30 minute" out of storage warning and override
- Update of the Blood Transfusion Record Form (BTRF)

Changes related to customer reported defects:
- A background check on a selected pending task, to verify its status was not changed by another user
- Gap in ABO/Rh discrepancy alerts was closed
- Maximizing the Enter QC window no longer causes a system error
- Order Alert Report, transposed Lab Order numbers
- Problems with large reports and freezing
- Transfusion Requirements report update for case sensitive pairs
- A background check on the selected unit in Issue Blood Unit to verify patient requirements were not updated by another user since selection
- Selectable "antibody specificity" that will allow local disabling of electronic crossmatch for a patient

There is no blood product description code update included in this release.

Validations of updates are performed per local evaluation and risk assessment of the changes .Example validation scenarios are available where the validation requires specific conditions in Appendix A: Validation Planning and Example Test Scenarios for the application.

Changes and Corrections

This section lists changes and corrections to the existing VBECS application. Some items correspond to an item in *Known Defects and Anomalies* and some have a corresponding test objective in Appendix A.

Resolution of Customer problem reports related to VBECS:

- HD 367084
- HD 460273
- HD 488893
- INC 791547
- INC 814517
- INC 1009241
- INC 1083461
- INC 1280760
- INC 1282130
- INC 1296749
- R5219698FY15

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Updates by Option

Option	Problem Summary	Resolution Summary	Validation Scenario
Throughout VBECS Large reports (20+ pages) CR 3581 R5219698FY15	While the report is compiling for preview, clicking the Print button causes the VBECS session to freeze as well as the printer.	The reports listed below[1] will no longer allow printing while the report is compiling for preview. • Administrative Data (will only be 3 pages) • Audit Trail • Blood Availability • Cost Accounting • C:T Ratio • Division Transfusion • Exception Report • Testing Worklist • Transfusion Effectiveness • Transfusion Requirements	None Provided.
Transfusion Requirements Report CR 3575 INC 1280760	A patient with an instance of both antibody specificities, in a pair that differ by case of the letter, e.g., Anti-E, Anti-e, the lower case specificity does not appear on the report.	The report displays all antibody specificities, e.g., Anti-E, and Anti-e, or any other such pair.	None Provided.
Order Alert Report CR 3574 INC 1282130 INC 1296749	The Lab Order number included in an Order Alert printout is not correct intermittently when multiple CPRS orders are processed.	The Lab Order number included in an Order Alert printout is correct when multiple CPRS orders are released simultaneously.	Test Group Five

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[1] Reports not listed are not repaired in this build and may continue to cause the problem described.

Updates by Option

Option	Problem Summary	Resolution Summary	Validation Scenario
Return Issued Units to Blood Bank DR 4999 DR 5175 CR 3553	The warning and override based on time out of controlled storage is no longer applicable (i.e., the 30-minute rule). The AABB Standards no longer use time as the trigger to determine if a unit is acceptable for reuse after issue to a location without monitored storage. The Exception report will no longer include this override.	The warning message, override and exception report related to 30 minutes out of controlled storage no longer display. Update local policy and procedure.	Issue a blood component unit. Return it from issue 30 minutes or more after issue was completed. The "30 minute" warning and its associated override do not display. Update local policy and procedure to meet documentation requirements of the unit's evaluation for continued use suitability.
Patient Testing, ABO/Rh test DR 5169 CR 3356	ABO/Rh discrepancy rules are not enforced when performing two ABO/Rh tests that were opened at the same time before a discrepancy exists and filing one of these tests creates a discrepancy with a previous result. There is no warning to the second opened ABO/Rh test when it is saved and it may clear the discrepancy indicator.	Data is refreshed when the user attempts to save the second instance and will cause VBECS to emit an audible alert and display a warning message that the current ABO/Rh does not match previous interpretations **Note:** When the patient has a previous ABO/Rh of "NR": Save the TAS ABO/Rh test prior to entry of a repeat ABO/Rh test ordered using the same specimen UID. *When performed in the reverse,* a discrepancy is created and the repeat must be invalidated to proceed with patient testing. (Defect 277970)	Test Group One

Updates by Option

Option	Problem Summary	Resolution Summary	Validation Scenario
Pending Task List (PTL) DR 5169 KDA CR 3523 INC 1083461	When performing two patient tests that are started at the same time and are saved with discrepant antibody screen tests, an incorrect messaging occurs for electronic crossmatch.	Data is refreshed when the user attempts to save the second instance of a discrepant antibody screen tests and message appropriately.	Test Group Two
Issue Blood Component DR 5176 KDA CR 3550	Patient information does not refresh when the Issue Blood Component window is open and a user changes patient pre-compatibility information in a different session, this may lead to an inappropriate unit being issued to the patient.	Data will be refreshed when the user attempts to save the blood product issue and will message appropriately if pertinent data were changed preventing issue of the blood product in this session.	Test Group Three
Unit ABO/Rh Confirmation Test DR 4625 DR 5177 CR 3558 KDA CR 2396	Unit ABO/Rh Confirmation testing requires an update to include Granulocyte Product Types per AABB Standard 5.12. Note: Does not include Buffy Coat product codes.	Granulocytes are now 'Limited" in Full Service facility configurations and require ABO/Rh confirmation testing.	None provided.
	A system error occurs when attempting to save Unit Confirmation tests with an invalid test between valid test results.	System error no longer occurs.	None provided.
Enter Daily QC KDA CR 1911 HD 367084 HD 460273	A VBECS system error occurs when a user maximizes the reagent rack selection window while performing QC on the rack.	System error no longer occurs. The window may be maximized.	None provided.
Blood Transfusion Record Form (BTRF) DR 3595 DR 3649	Joint Commission is citing hospital for failure to date signatures on the BTRF. (RC 01.01.01)	Added trigger wording to include date with their signature.	None provided.

Updates by Option

Option	Problem Summary	Resolution Summary	Validation Scenario
	Display autologous/ directed information on the BTRF.	The unit's donation type information is available on the BTRF.	None provided.
	Add an eye readable 8-digit ICCBBA product code	An eye readable Product Code is printed on the BTRF.	None provided.
	Add the specimen expiration date/time to the BTRF.	The specimen expiration date/time is available on the BTRF.	None provided.
Antibodies DR 3145 CR 3567	Add a mechanism to disallow electronic crossmatch for an individual patient.	Adding an antibody specificity for selection "*Serologic Crossmatch Test Required*" that may be selected to prevent electronic crossmatch on the patient.	Test Group Four Note: Verify the new specificity appears under *Maintenance: Antibody Configuration*, ignore the associated time. This change appears with an incorrectly calculated time on the Audit Trail report immediately after the patch installation.
Serologic Crossmatch Test DR 5157 CR 3556 INC 814517	CLIA regulations, 493.1271 (a) (1), IS XM and AHG/GEL require a different pattern in a full AHG grid.	Reaction and interpretation patterns modified to allow for appropriate save when Testing Details selected for serologic crossmatch is *AHG Only.* See Appendix B: Table 1	None Provided.
Serologic Crossmatch Test DR 4112 DR 4527 DR 4586 CR 3556 HD 488893 INC 791547	Allow for a serologic PEG crossmatch with a disabled grid cell for "37". Update crossmatch testing patterns to allow save with Medical Director Approval.	Reaction and interpretation patterns modified to allow for appropriate save when Testing Details selected for serologic crossmatch is *All Phases.* See Appendix B: Table 2	None Provided.
Serologic Crossmatch Test DR 5187 CR 3570	Serologic crossmatch displays the wrong format of grid after invalidation of a partially completed AHG test.	The grid format initially selected re-displays after invalidation of a partially completed AHG test.	None Provided.

Untestable System-Level Corrected Code Requests

None.

VistA Software Dependencies

- VBEC*1*87

This is an Informational Patch to announce the release of VBECS 2.1.0.

VBECS User Documents

To update VBECS documents, retrieve the update packages for these guides from the VA Software Document Library (VDL):

See each guide's revision history for change details:

- *VistA Blood Establishment Computer Software (VBECS) 2.1.0 Technical Manual-Security Guide*
- *VistA Blood Establishment Computer Software (VBECS) 2.1.0 User Guide*
- *VistA Blood Establishment Computer Software (VBECS) 2.1.0 Known Defects and Anomalies*
- *VistA Blood Establishment Computer Software (VBECS) 2.1.0 Release Notes*

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Customer Support

Problems?

Contact your **Local** Information Resource Management (IRM) or Laboratory Automated Data Processing Application Coordinator (ADPAC) if you encounter VistA or CPRS connection problems and for training support **before** contacting the National Service Desk (NSD).

Please ensure local VistA Support contact information is available at all times. National Support will engage Enterprise Operations (EO) personnel as needed.

Problems with connectivity to VistA and CPRS may require personnel from EO with VBECS server administrator access and VistA IT support access.

If the problem remains unresolved after local VistA triage, contact the national Information Technology (IT) support service or request a region ticket to be reassigned to:

National VA Service Desk Contact

For Information Technology (IT) support, call the National Service Desk (NSD), 888-596-HELP (4357) (toll free), 24 hours per day, 7 days per week. [Users with access to the VASD-supported request tool (e.g., CA SDM) may file a ticket in lieu of calling the NSD.]

National VA Service Desk Alternate Contacts
- Web site: http://vaww.aac.va.gov/servicedesk/ (National Service Desk Tuscaloosa).
- Email : NSDTuscaloosaUSD@va.gov

References
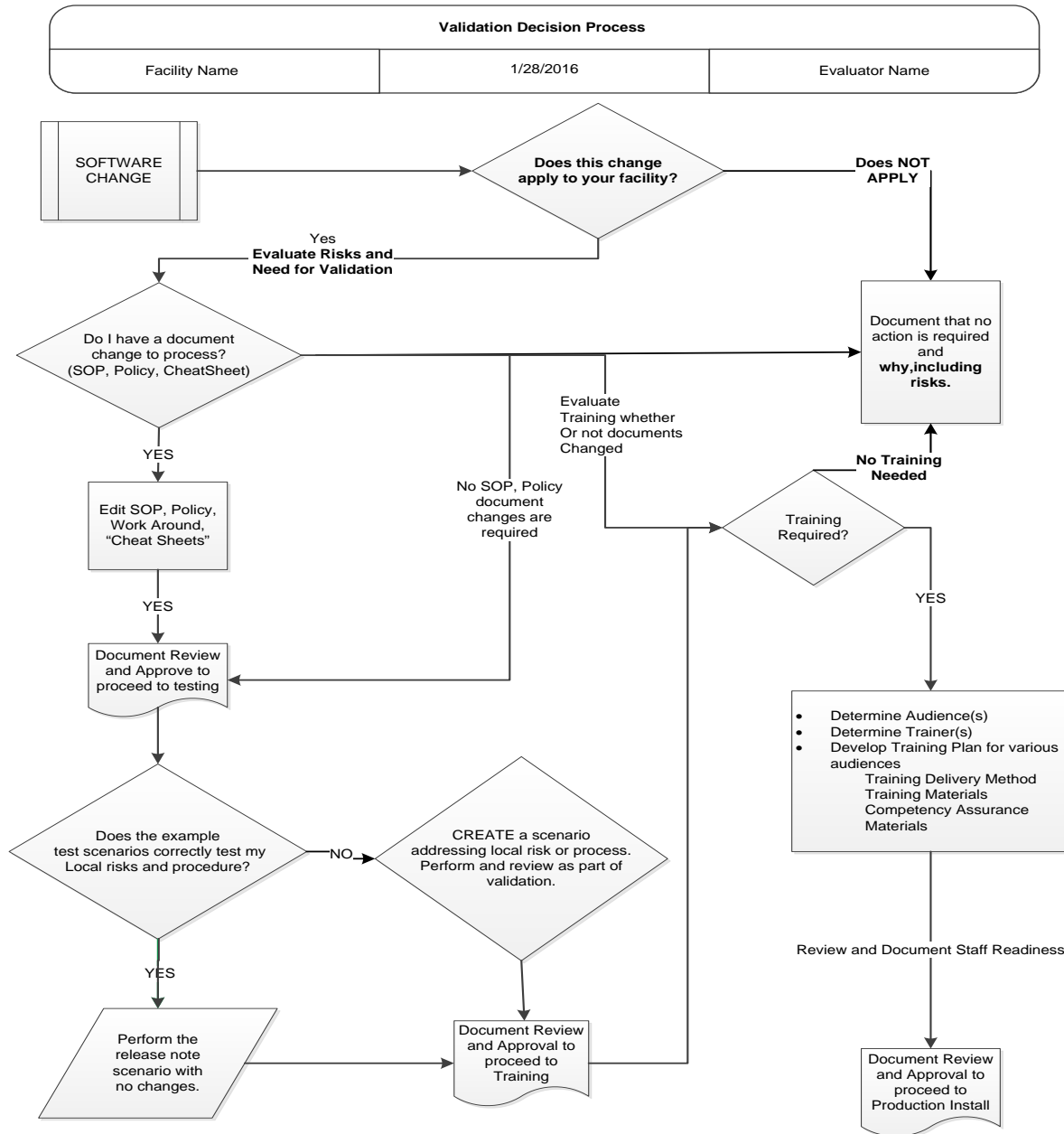- AABB Standards 29th Edition, 5.12
- CLIA regulation, 493.1271 (a) (1) (http://www.ecfr.gov/ and search for the regulation)
- Joint Commission (http://www.jointcommission.org/)

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Appendices

Appendix A: Validation Planning and Example Test Scenarios

The following is a flowchart to help assess any one change and plan accordingly.

> ⚑ *These are examples of test scenarios. Each site is responsible for evaluating changes for their intended use, assess risk, and for establishing additional validation test scenarios.*
>
> *All test scenarios have a suggested user role, this may require adjustment to align with the patient or unit data selected to execute the scenario. Process any overrides as well, based on patient or unit selection.*
>
> **The Expected Outcome numbering corresponds to the Step number where the change verification appears.*

Test Group One

Test Objective: Demonstrate that the patient data is refreshed when the user attempts to save the second instance and will cause VBECS to emit an audible alert and display a warning message that the ABO/Rh will not be saved as it was modified by another user .

Scenario 1: Verify that VBECS emits an audible alert and displays a warning message that the ABO/Rh will not be saved as it was modified by another user when there is no historic ABO/Rh record.
(NR changes to ABO/Rh)

Data	VBECS: Select a patient where historic ABO/Rh is NR and no other complications. CPRS: Place 2 orders for ABO/Rh or TAS for the patient.
User	2 users, any role (User A and User B)
Steps	1. User A: Go to Patients→Patient Testing. Select the ABO/Rh or TAS order for patient and stop at the patient-testing screen. (Do not complete testing. The grid may be partially filled or blank at this point.) 2. At the same time, User B: Select the other ABO/Rh or TAS order for the same patient and fully save the order (thus creating the patient's ABO/Rh record normally). View the Patient History Report, Test Details section. 3. User A: Enter ABO/Rh results and attempt to save their results (discrepant or not). 4. User A: Click OK on the message stating ABO/Rh will not be saved as it was modified by another user. View the Patient History Report, Test Details section.
Expected Outcome*	2. Verify the Patient History Report, Test Details section shows that the patient's ABO/Rh test is saved and presents as the historic record as recorded by User B. (User A's window remains unchanged.) 3. Verify that the system recognizes the modified patient's ABO/Rh, notifying User A, does not allow the saving of their entered results. 4. Verify the Patient History Report, Test Details section shows that User B's patient ABO/Rh test are saved and presents as the historic record. There is no record of User A's test results.

Scenario 2: Verify that VBECS does not display a warning message and allows a normal save of the current ABO/Rh when the ABO/Rh test match historic and test created in the interim. (all ABO/Rh match)

Data	VBECS: Select a patient with a historic ABO/Rh and no other complications. CPRS: Place 2 orders for ABO/Rh or TAS for the patient.
User	2 users, any role (User A and User B)
Steps	1. User A: Select the ABO/Rh or TAS order for patient and stop at the patient-testing screen. (Do not complete testing. The grid may be partially filled or blank at this point.) 2. At the same time, User B selects the other ABO/Rh or TAS order for the same patient and fully saves the order creating an ABO/Rh that matches the historic ABO/Rh. View the Patient History Report, Test Details section. 3. User A then enters ABO/Rh results that also match the historic and is allowed to save the ABO/Rh. View the Patient History Report, Test Details section.

Test Group One

Expected Outcome*	2. Verify that the patient's ABO/Rh test is saved by User B and on record. 3. Verify that the system allows the save of User A's ABO/Rh test that continues to match the ABO/Rh of User B and the historic ABO/Rh record. User A's test Details and User B's test Details are shown in the Patient History Report, Test Result section.

Scenario 3: Verify that VBECS emits an audible alert and displays a warning message that the ABO/Rh will not be saved as it was modified by another user (when a ABO/Rh discrepancy is created in interim)

Note: Optionally, you can repeat this with the User A with an ABO/Rh matching the interim (discrepant) result. The response is the same as when the discrepancy was created by the interim specimen.

Data	VBECS: Select a patient with a historic ABO/Rh and no other complications. CPRS: Place 2 orders for ABO/Rh or TAS for the patient.
User	2 users, any role (User A and User B)
Steps	1. User A selects the ABO/Rh or TAS order for patient and stops at the patient-testing screen. (Do not complete testing. The grid may be partially filled or blank at this point.) 2. At the same time, User B selects the other ABO/Rh or TAS order for the same patient and fully saves the order creating an ABO/Rh discrepancy. 3. User A then enters ABO/Rh results matching the historic ABO/Rh and attempts to save their results and is presented with a message stating that ABO/Rh will not be saved as it was modified by another user
Expected Outcome*	2. Verify that the patient's ABO/Rh test is saved by User B and has created the ABO/Rh discrepancy entry in the Exception Report. 3. Verify that the system recognizes the modified patient's ABO/Rh, notifying User A of the modified ABO/Rh created (in the interim) and does not allow the saving of their currently entered results.

Test Group Two

Test Objective: Demonstrate that the Pending Task List (Patients→Patient Testing) updates the Task Status that has been processed by another user when a test is selected by a PTL 'watcher'.

Scenario 1: Two users process the same patient test. User B, changes their mind, selects and cancels out. User A, who had a pending task list (the PTL watcher) open prior to the other user selecting the test, selects and completes the test from that previously opened session.

Data	Select a VBECS patient and create a CPRS diagnostic test order. Accept the order in VBECS.
User	2 users, any role (User A and User B)
Steps	1. User A opens the PTL (Patients→Patient Testing) and does not select any test, keeps the window open and waits. 2. User B opens the PTL, selects the test, which is "Not Started", clicks OK and proceeds to view the testing grid associated with the test. 3. User B does not process the test and exits the test grid without saving any entries. 4. User A <u>now</u> selects the same test and enters test results for that test.
Expected Outcome*	4. Verify that User A is able to process the test to completion normally.

Scenario 2: Two users process the same patient test. User B partially completes the test while User A has had a PTL session open and waiting. The PTL watcher, User A, selects the test, a warning displays, the PTL refreshes the Task Status allowing User A to select and complete the test from that previously opened session.

Test Group Two

Data	Select a VBECS patient and create a CPRS diagnostic test order.
User	2 users, any role (User A and User B)
Steps	1. User A opens the Pending Task List (Patients→Patient Testing) and does not select any test; just waits. 2. User B opens the PTL, selects the test, which is "Not Started", clicks OK and proceeds to view the testing grid associated with the test. 3. User B processes, enters, and saves partial results for the test. 4. User A <u>now</u> selects the same test, clicks OK button. 5. User A clicks OK on the message stating the test of modified. 6. User A continues to the test grid and completes the test.
Expected Outcome*	4. Verify that a message displays saying that the test was modified and the PTL will be refreshed. 5. Verify that PTL refreshes and the test status updates to "Partially Completed by User B" 6. Verify that User A selects this test and completes it without any messaging.
Reports	This is not required for verification of the change but may be a step to include in documentation. The completed test details are available on the Testing Worklist Report. The report will include an entry for the partially saved results (User B) and the completed test (User A).
Scenario 3: Two users process the same patient test. User B completes the test while User A has had a PTL session open and waiting. The PTL watcher, User A, selects the test, a warning displays, the PTL refreshes the Task Status and no longer displays the test as User B completed it.
Data	Select a VBECS patient and create a CPRS diagnostic test order.
User	2 users, any role (User A and User B)
Steps	1. User A opens the Pending Task List (Patients→Patient Testing) and does not select any test; just waits. 2. User B opens the PTL, selects the test, which is "Not Started", clicks OK and proceeds to the testing grid associated with the test. User B processes, completes, and saves the test. 3. User A <u>now</u> selects the same test from the currently opened PTL, clicks the OK button. The message displays saying that the test was modified and the PTL will be refreshed. 4. The user clears the message. The PTL no longer displays the completed test to User A.
Expected Outcome*	3. Verify the system displays the message. 4. Verify that the test no longer displays on PTL as it is completed.

Test Group Three

Test Objective: Demonstrate that when a user attempts to save the blood product issue when pertinent data has been changed in the interim:

- data will be refreshed when the user attempts to save the blood product issue
- user will receive a message stating a patient's critical element was modified by another user
- unit issue is not allowed

Repeat these test cases for the patient's critical elements:

- Antigen Negative requirements (set by ABID entry or Antibody Specificity that creates an Antigen Negative requirement or set an Antigen Negative requirement)
- Component requirements (e.g., Irradiate cellular products only, Leuko-reduce cellular products, Washed RBC products, Washed PLT products, Sickle Cell Negative RBC products, or CMV negative cellular products)

Test Group Three

Scenario 1: Verify that data is refreshed when the user attempts to save the blood product issue and will message appropriately when pertinent data are added that may impact the suitability of the selected units for transfusion.

Note: This scenario mentions emergency issue as optional testing path and may or may not apply to the actual execution based on your unit or patient selection.
There are different warnings that appear to when a user attempts to issue a unit AFTER a change to critical elements. These continue to perform as expected and are optionally tested in Step 5.

Data	1. Select or create a patient without any <critical element>. 2. Enter CPRS TAS and appropriate Component Order. 3. Process the TAS to completion. Select blood component units that are available for routine and/or Emergency issue, at least one unit may appear on each of the tabs. More units may be added at your discretion. If the antibody specificity is entered by ABID test, it must be ordered as well.
User	2 users, any role (User A and User B)
Steps	1. User A initiates a session in Issue Blood Component, selecting a unit. **Stop and wait.** 2. User B enters a new <critical element>. Save. 3. User A resumes the blood product issue process and clicks the OK button to save. Review the popup message. 4. User A clicks OK, which exits this Issue Blood Component session. 5. Optionally, User A or User B initiates a NEW Issue Blood Component session. Select all units on the Assigned Units and Emergency Issue Units tab as allowed.
Expected Outcome*	3. Verify that a message displays stating that a patient's critical element was modified by another user and that the units are not eligible at this time. Displays instructions to review the patient's information before attempting to issue the unit again. 5. Verify the units are evaluated and appropriately restricted based on the critical element change per and the user role selected in a new session (current functionality). If all units are not eligible for the patient, the option will not allow you to proceed.

Scenario 2: Verify that data was refreshed when the user attempts to save the blood product issue and will message appropriately if pertinent data were removed that may impact the suitability of the selected units for transfusion.

Data	1. Select or create a patient with any <critical element>. 2. Enter CPRS TAS and appropriate Component Order. 3. Process the TAS to completion. Select blood component units that are available for routine and/or Emergency issue aligned with the <critical element>, at least one unit may appear on each of the tabs. More units may be added at your discretion. If the antibody specificity is entered by ABID test, it must be ordered as well.
User	2 users, any role (User A and User B)
Steps	1. User A initiates a session in Issue Blood Component, selecting at least two units; include some that do and do not qualify for emergency issue (EI). Stop and wait. 2. User B removes a <critical element>. Save. 3. User A resumes the blood product issue process and clicks the OK button to save.
Expected Outcome*	3. Verify that a message displays stating that the patient's critical element information was modified and that the units are not eligible for issue because of this change.

Test Group Four

Test Objective: Demonstrate that adding an antibody specificity "*Serologic Crossmatch Test Required*" prevents electronic crossmatch on the patient.

Scenario 1: Verify the antibody specificity "*Serologic Crossmatch Test Required*" may be selected to prevent electronic crossmatch on the patient.

Data	Go to Tools→Configure Division→Configure Testing. Enable Electronic Crossmatch and save. Select a patient with no Transfusion Requirements, Antibodies or Antigen Negative requirements. Place a CPRS order for TAS and RBC for the patient. Enter blood component unit(s) that satisfies the RBC order. Perform a second ABO/Rh test as needed to comply with electronic crossmatch rules.
User	Any user, Lead Tech or above is required to inactivate a Transfusion Requirement
Steps	1. Blood Units→Select Units. Select the patient's RBC order. Click Add Units. View the eXM Status message. The patient is eligible for electronic crossmatch. 2. Patients→Special Instructions and Transfusion Requirements, add the Antibody Identified "Serologic Crossmatch Test Required" to the patient record. Save. 3. Blood Units→Select Units. Select the patient's RBC order. Click Add Units. View the eXM Status message. The patient is not eligible for electronic crossmatch due to previous antibody history. 4. Select a blood unit. Click OK 5. Process the serologic crossmatch. Optionally, 6. Patients→Special Instructions and Transfusion Requirements. Remove the Antibody Identified "Serologic Crossmatch Test Required" from the patient record. 7. Blood Units→Select Units. Select the patient's RBC order. Click Add Units. View the eXM Status message. The patient is eligible for electronic crossmatch. 8. Select a blood unit. Click OK. 9. Click Yes on eXM message. Process the electronic crossmatch. View the Unit History Report for the Unit used in Step 8
Expected Outcome*	1. Verify that the patient is initially eligible for electronic crossmatch. 2. Verify that the Antibody Specificity "Serologic Crossmatch Test Required" is active in the selected patient record. 3. Verify the patient's eXM Status is "Patient not eligible for eXM due to previous antibody history. 4. Verify a message for required serologic crossmatch is displayed 7. Verify that the patient is again eligible for electronic crossmatch. 8. Verify a message displayed stating the patient is eligible from eXM and asking if the user wants to continue with eXM. 9. Verify the Patient Association section shows the unit was electronically crossmatched.

Test Group Five

Test Objective: Demonstrate that the Order Alert report includes the correct Lab Order Number when users have simultaneously released multiple VBECS orders in CPRS for different patients.

Scenario 1: Verify that the Order Alert reports for Patient A and Patient B include the correct Lab Order Number.

Data	Go to Tools→Configure Division. Select the Orders Alerts tab. Printer Alerts On must be checked/enabled and defined. NOTE: Orders placed must align with the Order Alert Type selected in the Printer Alerts On configuration. Select at least 2 patients, A and B.

Test Group Five

User	2 users, any role (User A and User B)
Steps	1. User A enters CPRS and creates an order for Patient A. Do not release this order. User B enters CPRS and creates an order for Patient B. Do not release this order. 2. **User A and User B click to release the order at the same time.** (Sign, release with MD, etc.) 3. Record the LB number assigned to each order as displayed in the CPRS order. Patient A_____ Patient B_____ 4. View the Order Alert printouts for Patient A and Patient B.
Expected Outcome*	4. Verify that the Lab order recorded in Step 3 for each patient appears correctly on the printed Order Alert.

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Appendix B: Additional Crossmatch Patterns

These tables are limited to new, additional patterns for the serologic crossmatch test that are configured with the associated responses, in the different grid patterns. The system continues to respond to other patterns as in current functionality.

Table 1: AHG Only IS Save with AHG Only Crossmatch

Table 1: Patient Crossmatch Testing patterns								
Grid Configuration: AHG only								
IS	37	AHG	CC	System Interp	Tech Interp	System Response	Error Message	Print Tag
X	DISABLED	N	DISABLED	Compatible	Compatible	Allowed	None	Yes
N	DISABLED	N	DISABLED	Compatible	Compatible	Allowed	None	Yes
X	DISABLED	P	DISABLED	Incompatible	Incompatible give with MD approval	Audible alert, and comment required	Crossmatch Incompatible: Give Only with Medical Director Override	Yes
N	DISABLED	P	DISABLED	Incompatible	Incompatible give with MD approval	Audible alert, and comment required	Crossmatch Incompatible: Give Only with Medical Director Override	Yes
P	DISABLED	P	DISABLED	Incompatible	Incompatible give with MD approval	Audible alert, and comment required	Crossmatch Incompatible: Give Only with Medical Director Override	Yes
P	DISABLED	N	DISABLED	Incompatible	Incompatible give with MD approval	Audible alert, and comment required	Crossmatch Incompatible: Give Only with Medical Director Override	Yes

Table 2: Additional "Incompatible, Give with Medical Director" Crossmatch Patterns

Table 2: Patient Crossmatch Testing patterns								
Grid Configuration: All phases								
IS	37	AHG	CC	System Interp	Tech Interp	System Response	Error Message	Print Tag
N	N	P	X	Incompatible	Incompatible give with MD approval	Audible alert, and comment required	Crossmatch Incompatible: Give Only with Medical Director Override	Yes
N	X	P	X	Incompatible	Incompatible give with MD approval	Audible alert, and comment required	Crossmatch Incompatible: Give Only with Medical Director Override	Yes
N	N	P	P	Incompatible	Incompatible give with MD approval	Audible alert, and comment required	Crossmatch Incompatible: Give Only with Medical Director Override	Yes
N	P	N	P	Incompatible	Incompatible give with MD approval	Audible alert, and comment required	Crossmatch Incompatible: Give Only with Medical Director Override	Yes

				Table 2: Patient Crossmatch Testing patterns				
Grid Configuration: All phases								
IS	37	AHG	CC	System Interp	Tech Interp	System Response	Error Message	Print Tag
N	X	P	P	Incompatible	Incompatible give with MD approval	Audible alert, and comment required	Crossmatch Incompatible: Give Only with Medical Director Override	Yes
P	X	N	P	Incompatible	Incompatible give with MD approval	Audible alert, and comment required	Crossmatch Incompatible: Give Only with Medical Director Override	Yes

Appendix C: National Installation Process

Each site will receive direct communications from AITC staff regarding dates and downtime.
Test installation will occur for all VBECS sites ASAP after the National Release permission is obtained.
The expected downtime is approximately one hour for the installation of the patch in Test or Production.
The patch installation will be scheduled from 8am to 11am and 1pm to 3pm, Central time zone, at
approximately 30-minute intervals for both the test and production patching on the dates below, avoiding
Mondays, Fridays, and known VBECS patching dates.

The TEST installation appointments start the week after national release of the VBECS 2.1.0.

Production patching should be scheduled within the compliance date.

**►Each site must file a national CA SDM ticket to coordinate the installation of patch by AITC
within the compliance period and available appointments.**
The CA SDM ticket for Production installation should be filed as soon as possible after your validation
plan is determined, when you are confident the date will not need to change, or you have completed your
validation to secure your preferred date and time.

Please use the following to complete your ticket:
- File a **Request** to apply the patch to your VBECS Production account. (Do not file an
  Incident)
- **Incident area:** NTL.APP.HealtheVet VistA.VBECS 2_0
- **Summary:** VBECS 2.1.0 Production Patch request
- **Description:**
  - Enter contact information for the main blood bank and the name of the responsible
    individual(s) for all communications.
  - Enter preferred date and time.
- **Property Questions:** Respond NO to the required questions.
- **Group:** automatically fills in correctly do not change it from. *NTL Alert Blood Bank &
  VBECS*
- **Add additional information as required.**

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This is the last page of *VistA Blood Establishment Computer Software (VBECS) 2.1.0 Release Notes*.