



Blood Bank Pre-Implementation Data
Validation, Mapping, and Conversion
LR*5.2*335
Technical Manual

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Department of Veterans Affairs
Office of Enterprise Development

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Revision History

| Date | Revision | Description | Author |
|---------|----------|---|----------|
| 1/31/06 | 1.0 | Initial release | BBM team |
| 1/26/09 | 2.0 | <p>Updated guide to address comments from Clinical Product Support (CPS) review:</p> <ul style="list-style-type: none"> Added the patch name, date of release, and changed organization to Office of Enterprise Development on the cover page. Implementation and Maintenance section, revised introduction paragraph. Routines, updated the routines and checksums. Corrected references to VistA Data Conversion to LR*5.2*335. Updated first and second line routine capture. | BBM team |

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Introduction

Related Manuals and Reference Materials

- *Blood Bank Pre-Implementation Data Validation, Mapping, and Conversion ADPAC Guide*
- *Blood Bank Pre-Implementation Data Validation, Mapping, and Conversion Installation and User Guide*

Orientation

How This Technical Manual Is Organized

This guide provides information on the options, routines, and files used in the VistA database conversion.

Implementation and Maintenance

The VBEC SITE PARAMETER ENTER/EDIT option allows the user to input the name of the facility, the default directory where the system level data extract files are to reside, and the VistA Blood Establishment Computer Software (VBECS) mail group where data conversion information is to be routed. The VBEC SITE PARAMETER ENTER/EDIT option is on the Utilities used prior to the data conversion sub-menu of the VBECS Data Matching/Conversion Menu [VBEC MAIN MENU]. Refer to the Conversion Checklist section on page 3 of the Blood Bank Pre-Implementation Data Validation, Mapping, and Conversion ADPAC Guide for the installation and placement of the VBEC MAIN MENU.

To receive information, sites must assign users involved with the Database Conversion to the VBECS DATA CONVERSION MailMan mail group. This is a sample of questions and or prompts the user will be asked to answer:

Figure 1: Sample Questions and Prompts

```
Select Facility: VA HEARTLAND - WEST, VISN 15//      MO  VAMC  589
...OK? Yes//      (Yes)
DEFAULT DIRECTORY: SYS$USER:[USER.VBECS]  Replace
VBEC MAIL GROUP: VBEC DATA CONVERSION//
```

The user may select any facility record in the INSTITUTION (#4) file, although the default facility is determined from DEFAULT INSTITUTION (#217) field on the KERNEL SYSTEM PARAMETERS (#8989.3) file.

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Files

These are the data dictionaries for the VBECS files used to store data related to the conversion process. These global format listings were created using the VA FileMan LIST FILE ATTRIBUTES option. You can generate a more detailed listing with a full description of each field by selecting the Standard format in the VA FileMan LIST FILE ATTRIBUTES option.

Figure 2: Data Dictionaries

VBECS SITE PARAMETERS FILE

```
GLOBAL MAP DATA DICTIONARY #6000 -- VBECS SITE PARAMETERS FILE
NOV 3,2004@13:37:03                                     PAGE 1
STORED IN ^VBEC(6000, SITE: TEST UCI: VAH,TOU (VERSION 1.0)
```

This file tracks site specific Blood Bank information for the purpose of validating and converting data from the following files: Patient (#2) and Lab Data (#63). This file also records the number of data elements converted per record and the total number of characters for textual data elements per record.

CROSS REFERENCED BY: FACILITY NAME(B)

```
^VBEC(6000,D0,0)= (#.01) FACILITY NAME [1P:4] ^ (#.02) TOTAL LAB DATA RECORDS
==>[2N] ^ (#.03) NUM LAB DATA RECORDS CONVERTED [3N] ^ (#.04)
==>TOTAL BLOOD INVENTORY RECORDS [4N] ^ (#.05) NUM BLOOD
==>INVENTORY RECS CNVT [5N] ^ (#.06) DEFAULT DIRECTORY [6F] ^
==>(#.07) VBECS MAIL GROUP [7P:3.8] ^
```

INPUT TEMPLATE(S) :

PRINT TEMPLATE(S) :

SORT TEMPLATE(S) :

FORM(S) /BLOCK(S) :

- *Note: fields .04, .05, of file #6000 are not populated.*

VBECS DATA INTEGRITY/CONVERSION STATISTICS FILE

```
GLOBAL MAP DATA DICTIONARY #6001 -- VBECS DATA INTEGRITY/CONVERSION
STATISTICS FILE
NOV 3,2004@13:37:06                                     PAGE 1
STORED IN ^VBEC(6001, SITE: TEST UCI: VAH,TOU (VERSION 1.0)
```

This file track Blood Bank data integrity issues for the following files: Patient (#2) and Lab Data (#63).

These issues are checked during the pre-implementation phase of the Blood Bank data conversion. A record is kept so the Blood Bank ADPACs can resolve those issues logged, so clean data can be moved into SQL tables.

CROSS REFERENCED BY: PROCESS START TIMESTAMP(B)

```
^VBEC(6001,D0,0)= (#.01) PROCESS START TIMESTAMP [1D] ^ (#.02) PROCESS [2S] ^
=>(#.03) PROCESS COMPLETION TIMESTAMP [3D] ^ (#.04) USER
=>[4P:200] ^
^VBEC(6001,D0,ERR,0)=^6001.01PA^^ (#100) DATA INTEGRITY ISSUES
^VBEC(6001,D0,ERR,D1,0)= (#.01) FILE [1P:1] ^ (#.02) IEN OF INVALID RECORD
=>[2N] ^ (#.03) ASSOCIATED FILE [3P:1] ^ (#.04) IEN OF
=>INVALID ASSOC'D REC [4N] ^ (#.05) LRDFN ONE [5N] ^
=>(#.06) LRDFN TWO [6N] ^ (#.07) COMPONENT [7P:66] ^
=>(#.08) COMPONENT ID [8F] ^ (#.09) DATA INTEGRITY
=>ISSUE [9F] ^
^VBEC(6001,D0,TOT,0)=^6001.02A^^ (#200) DATA CONVERSION STATISTICS
^VBEC(6001,D0,TOT,D1,0)= (#.01) LRDFN [1N] ^ (#2) DFN [2N] ^ (#3) FAMILY NAME
=>[3N] ^ (#4) GIVEN NAME [4N] ^ (#5) MIDDLE NAME [5N]
=>^ (#6) SUFFIX (NAME) [6N] ^ (#7) SEX [7N] ^ (#8) DOB
=>[8N] ^ (#9) SSN [9N] ^ (#10) ICN [10N] ^ (#11) ABO
=>[11N] ^ (#12) RH [12N] ^ (#13) RBC ANTIGENS PRESENT
=>[13N] ^ (#14) RBC ANTIGENS PRESENT COMMENTS [14N] ^
=>(#15) RBC ANTIGENS PRESENT CHARS [15N] ^ (#16) RBC
=>ANTIGENS ABSENT [16N] ^ (#17) RBC ANTIGENS ABSENT
=>COMMENTS [17N] ^ (#18) RBC ANTIGENS ABSENT CHARS
=>[18N] ^ (#19) ANTIBODIES IDENTIFIED [19N] ^ (#20)
=>ANTIBODIES IDENTIFIED COMMENTS [20N] ^ (#21)
=>ANTIBODIES IDENTIFIED CHARS [21N] ^ (#22)
=>TRANSFUSION REACTION DATE [22N] ^ (#23) TRANSFUSION
=>REACTION [23N] ^ (#24) TRANSFUSION REACTION COMMENTS
=>[24N] ^ (#25) TRANS. REACTION COMMENT CHARS [25N] ^
=>(#26) BLOOD BANK COMMENTS [26N] ^ (#27) BLOOD BANK
=>COMMENT CHARS [27N] ^
```

INPUT TEMPLATE(S) :

PRINT TEMPLATE(S) :

SORT TEMPLATE(S) :

FORM(S)/BLOCK(S) :

VISTA BLOOD BANK RESTRICTED OPTIONS LIST FILE

GLOBAL MAP DATA DICTIONARY #6003 -- VISTA BLOOD BANK RESTRICTED OPTIONS LIST
FILE

NOV 3,2004@13:37:07

PAGE 1

STORED IN ^VBEC(6003, SITE: TEST UCI: VAH,TOU (VERSION 1.0)

This file exports the names of VistA Blood Bank (LRBL name spaced) options
that will be set 'Out of Order' once the data conversion has successfully
completed.

CROSS REFERENCED BY: OPTION(B)

```
^VBEC(6003,D0,0)= (#.01) OPTION [1F] ^
```

^VBEC(6003,D0,1,0)=^6003.01^^ (#100) DESCRIPTION
^VBEC(6003,D0,1,D1,0)= (#.01) DESCRIPTION [1W] ^

INPUT TEMPLATE(S):

PRINT TEMPLATE(S):
^DIPT(.01)= CAPTIONED

SORT TEMPLATE(S):

FORM(S)/BLOCK(S):

VBECs MATCHING TABLE FILE

GLOBAL MAP DATA DICTIONARY #6005 -- VBECs MATCHING TABLE FILE
NOV 3,2004@13:37:07
STORED IN ^VBEC(6005, SITE: TEST UCI: VAH,TOU (VERSION 1.0) PAGE 1

The purpose of this file is to store different VistA data elements for the purpose of linking them to standard VBEC data elements.

CROSS
REFERENCED BY: FILE-IEN(AA1), NAME ATTRIBUTE(AA2), FILE-IEN(AB1),
STANDARD VBECs DATA(AB2), FILE-IEN(B),
STANDARD VBECs DATA(D), NAME ATTRIBUTE(N),
IDENTIFIER ATTRIBUTE(VA)

^VBEC(6005,D0,0)= (#.01) FILE-IEN [1F] ^ (#.02) NAME ATTRIBUTE [2F] ^ (#.03)
==>IDENTIFIER ATTRIBUTE [3F] ^ (#.04) ANTIGEN/ANTIBODY
==>IDENTIFIER [4S] ^ (#.05) STANDARD VBECs DATA [5P:6007] ^
==>(#.06) CHECKSUM [6N] ^ (#.07) TIMESTAMP [7D] ^

INPUT TEMPLATE(S):

PRINT TEMPLATE(S):
^DIPT(.01)= CAPTIONED

SORT TEMPLATE(S):

FORM(S)/BLOCK(S):

STANDARD VBECs DATA FILE

GLOBAL MAP DATA DICTIONARY #6007 -- STANDARD VBECs DATA FILE
NOV 3,2004@13:37:07
STORED IN ^VBEC(6007, SITE: TEST UCI: VAH,TOU (VERSION 1.0) PAGE 1

This file holds VBECs data that will be mapped against the Function Field (#61.3) file for antigens/antibodies and the Blood Bank Utility (#65.4) file for transfusion reactions. VistA Antibody/antigen and transfusion reaction data for the purposes of mapping is being stored in the VBECs MATCHING TABLE (#6005) file.

CROSS REFERENCED BY: ATTRIBUTE NAME(B), VA FILEMAN FILE(FNUM), ATTRIBUTE KEY (SA), ATTRIBUTE NAME(U)

^VBEC(6007,D0,0)= (#.01) ATTRIBUTE NAME [1F] ^ (#.02) ATTRIBUTE KEY [2F] ^
=>(#.03) GUID [3F] ^ (#.04) ANTIGEN/ANTIBODY IDENTIFIER [4S] ^
^VBEC(6007,D0,1)= (#.11) VA FILEMAN FILE [1F] ^ (#.12) ADDRESS [2F] ^ (#.13)
=>CITY [3F] ^ (#.14) STATE [4P:5] ^ (#.15) ZIP CODE [5F] ^

INPUT TEMPLATE(S):

PRINT TEMPLATE(S):
^DIPT(.01)= CAPTIONED

SORT TEMPLATE(S):

FORM(S)/BLOCK(S):

VBECs FILE & FIELD LEVEL SECURITY FILE

GLOBAL MAP DATA DICTIONARY #6009 -- VBECs FILE & FIELD LEVEL SECURITY FILE
NOV 3,2004@13:37:07 PAGE 1
STORED IN ^VBEC(6009, SITE: TEST UCI: VAH,TOU (VERSION 1.0)

This file exports the file and field numbers of VistA Blood Bank (LRBL name spaced) data dictionaries that will 'write protect' these files and fields once the data conversion has successfully completed.

CROSS REFERENCED BY: FILE NUMBER(B)

^VBEC(6009,D0,0)= (#.01) FILE NUMBER [1N] ^ (#.02) PRE-CONV. RESTRICTED
=>ACCESS [2S] ^ (#.03) PST-CONV. RESTRICTED ACCESS [3S] ^
^VBEC(6009,D0,DD,0)=^6009.01A^^ (#100) DATA DICTIONARY
^VBEC(6009,D0,DD,D1,0)= (#.01) DATA DICTIONARY [1N] ^ (#.02) FIELD [2N] ^
^VBEC(6009,D0,DD,D1,PREW)= (#1) PRE-CONVERSION WRITE ACCESS [E1,245F] ^
^VBEC(6009,D0,DD,D1,PSTW)= (#2) POST-CONVERSION WRITE ACCESS [E1,245F] ^

INPUT TEMPLATE(S):

PRINT TEMPLATE(S):
^DIPT(.01)= CAPTIONED

SORT TEMPLATE(S):

FORM(S)/BLOCK(S):

Routines

Optionally, a list of the VBE CDC* name spaced routines may be obtained by using the First Line Routine Print option in the Programming Options menu, Routine Tools Option.

Figure 3: FIRST Line Routine Option

Select Routine Tools Option: FIRST Line Routine Print

PRINTS FIRST LINES

All Routines? No => No

Routine: VBE CDC00
Routine: VBE CDC01
Routine: VBE CDC02
Routine: VBE CDC19
Routine: VBE CDCDC
Routine: VBE CDCCHX
Routine: VBE CDCM
Routine: VBE CDCM0
Routine: VBE CDCM1
Routine: VBE CDCM2
Routine: VBE CDCMP
Routine: VBE CDCNM
Routine: VBE CDCR
Routine: VBE CDCSP
Routine: VBE CDCST
Routine: VBE CDCU
Routine: VBE CDCU1
Routine: VBE CDCU2
Routine: VBE CDCX
Routine: VBE CDCX1
Routine:
20 routines

(A)lpha, (D)ate, (P)atched, OR (S)ize ORDER: A//
Include line (2), Include lines 2&(3), (N)one: None//2
DEVICE: HOME// 0;80;99999 UCX TELNET SESSION

BB2,BOU 10/29/2008 FIRST LINE LIST:
VBE CDC00 ;hoifo/gjc-data conversion & pre-implementation;Nov 21, 2002
;;5.2;LAB SERVICE;**335**;Sep 27, 1994
VBE CDC01 ;hoifo/gjc-data conversion & pre-implementation;Nov 21, 2002
;;5.2;LAB SERVICE;**335**;Sep 27, 1994
VBE CDC02 ;hoifo/gjc-data conversion & pre-implementation;Nov 21, 2002
;;5.2;LAB SERVICE;**335**;Sep 27, 1994
VBE CDC19 ;hoifo/gjc-utilities for VistA Blood Bank options (#19);Nov 21, 2002
;;5.2;LAB SERVICE;**335**;Sep 27, 1994
VBE CDCDC ;hoifo/gjc-display data conversion statistics;Nov 21, 2002
;;5.2;LAB SERVICE;**335**;Sep 27, 1994
VBE CDCCHX ;hoifo/gjc-data conversion & pre-implementation;Nov 21, 2002
;;5.2;LAB SERVICE;**335**;Sep 27, 1994
VBE CDCM ;hoifo/gjc-data mapping utilities.;Nov 21, 2002
;;5.2;LAB SERVICE;**335**;Sep 27, 1994
VBE CDCM0 ;hoifo/gjc-VBECS MAPPING TABLE add, edit & delete utilities.;Nov 21,
2002
;;5.2;LAB SERVICE;**335**;Sep 27, 1994

VBECDCM1 ;hoifo/gjc-VBECS MAPPING TABLE delete utilities.;Nov 21, 2002
 ;;5.2;LAB SERVICE;**335**;Sep 27, 1994
 VBECDCM2 ;hoifo/gjc-VBECS MAPPING TABLE add, edit & delete utilities;Nov 21,
 2002
 ;;5.2;LAB SERVICE;**335**;Sep 27, 1994
 VBECDCMP ;hoifo/gjc-print mapped data from VBECS MAPPING TABLE (#6005);Nov 21
 , 2002
 ;;5.2;LAB SERVICE;**335**;Sep 27, 1994
 VBECDCNM ;hoifo/gjc-print unmapped data from 61.3 or 65.4;Nov 21, 2002
 ;;5.2;LAB SERVICE;**335**;Sep 27, 1994
 VBECDCR ;hoifo/gjc-data conversion & pre-implementation reporting mechanism;
 Nov 21, 2002
 ;;5.2;LAB SERVICE;**335**;Sep 27, 1994
 VBECDCSP ;hoifo/gjc-site parameter enter/edit (#6000);Nov 21, 2002
 ;;5.2;LAB SERVICE;**335**;Sep 27, 1994
 VBECDCST ;hoifo/gjc-print data from VBECS STANDARD TABLE DATA (#6007);Nov 21,
 2002
 ;;5.2;LAB SERVICE;**335**;Sep 27, 1994
 VBECDCU ;hoifo/gjc-data conversion & pre-implementation utilities;Nov 21, 20
 02
 ;;5.2;LAB SERVICE;**335**;Sep 27, 1994
 VBECDCU1 ;hoifo/gjc-data conversion & pre-implementation utilities;Nov 21, 20
 02
 ;;5.2;LAB SERVICE;**335**;Sep 27, 1994
 VBECDCU2 ;hoifo/gjc-data conversion & pre-implementation utilities;Nov 21, 20
 02
 ;;5.2;LAB SERVICE;**335**;Sep 27, 1994
 VBECDCX ;hoifo/gjc-data conversion & pre-implementation data extract;Nov 21,
 2002
 ;;5.2;LAB SERVICE;**335**;Sep 27, 1994
 VBECDCX1 ;hoifo/gjc-data conversion & pre-implementation data extract;Nov 21,
 2002
 ;;5.2;LAB SERVICE;**335**;Sep 27, 1994

20 ROUTINES

Optionally, a list of the VBECDC* name spaced routines may be obtained by using the Calculate and Show Checksum Values [XTSUMBLD-CHECK] option on the Programmer Options Menu

Select Programmer Options Option: CALCulate and Show Checksum Values

This option determines the current Old (CHECK^XTSUMBLD) or New (CHECK1^XTSUMBLD) logic checksum of selected routine(s).

Select one of the following:

- | | |
|---|-----|
| 1 | Old |
| 2 | New |

New or Old Checksums: New//
 New CheckSum CHECK1^XTSUMBLD:

This option determines the current checksum of selected routine(s).
 The Checksum of the routine is determined as follows:

1. Any comment line with a single semi-colon is presumed to be followed by comments and only the line tag will be included.
2. Line 2 will be excluded from the count.
3. The total value of the routine is determined (excluding

exceptions noted above) by multiplying the ASCII value of each character by its position on the line and position of the line in the routine being checked.

Select one of the following:

| | |
|---|---------|
| P | Package |
| B | Build |

Build from: Build

This will check the routines from a BUILD file.

Select BUILD NAME: LR*5.2*335 LAB SERVICE

| | |
|----------|------------------|
| VBECDC00 | value = 29108441 |
| VBECDC01 | value = 38136752 |
| VBECDC02 | value = 4904086 |
| VBECDC19 | value = 52486759 |
| VBECDCDC | value = 30473665 |
| VBECDCDX | value = 13671377 |
| VBECDCM | value = 20099895 |
| VBECDCM0 | value = 11064686 |
| VBECDCM1 | value = 24209996 |
| VBECDCM2 | value = 22225177 |
| VBECDCMP | value = 16912213 |
| VBECDCNM | value = 13224428 |
| VBECDCR | value = 30083905 |
| VBECDCSP | value = 1068327 |
| VBECDCST | value = 10953715 |
| VBECDCU | value = 32610200 |
| VBECDCU1 | value = 14426272 |
| VBECDCU2 | value = 36794365 |
| VBECDCX | value = 45221687 |
| VBECDCX1 | value = 10155625 |

done

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Exported Options

These are the options exported with the patch LR*5.2*335. Both the internal and the external name formats are listed with a brief description of the option function.

Utilities That Manipulate Antibody/Antigen Data [VBEC ANTIBODY/ANTIGEN UTIL]

This menu contains options to manipulate antibody and antigen data.

VistA antibody and antigen data must be matched to a standard list of antigens and antibodies prior to data conversion. This menu contains options that facilitate matching. Antibody and antigen records must first be moved to a temporary file which can be synchronized with the VistA data through the updating feature. Matches can be assigned and undone and a list of matches can be printed. The temporary table can be deleted.

Disable VistA Blood Bank Components [VBEC BB COMPONENTS DISABLE]

This option allows the user to disable VistA Blood Bank options, files, and fields. The program automatically disables options, files, and fields so that users cannot enter or edit data in the VistA Blood Bank application.

Enable VistA Blood Bank Components [VBEC BB COMPONENTS ENABLE]

This option allows the user to re-enable specific VistA Blood Bank options, files, and fields that were disabled by running the option to Disable VistA Blood Bank components. It must *not* be run on a production system after the data conversion is started. The VistA Blood Bank options must remain disabled after the data conversion.

This option can be run when operating in test mode after testing the database conversion on a test system. It will make the VistA Blood Bank menus and options accessible again to anyone testing the data conversion.

Utilities Used for the Data Conversion [VBEC CONVERSION UTILITIES]

This menu contains options used during data conversion. All data matching must be accounted for prior to running the data conversion. The data conversion moves VistA Blood Bank data to temporary host system files, using match data stored in other temporary files to determine values for transfusion reactions, blood suppliers, antibodies and antigens.

The VistA Blood Bank options and menus must be placed “Out of Order” before running the data conversion. This prevents blood bank users from entering and editing data during the data conversion.

The data conversion functionality does not move data to the VBECS tables. Moving data to the VBECS tables is outside of the scope of the VistA side of the data conversion.

Convert VistA Blood Bank Data to Host Files [VBEC DATA CONV. TO HOST FILES]

This option collects legacy VistA Blood Bank data and moves them to host system files. A separate process outside of the scope of the VistA side of the data conversion will transfer those host files to VBECS tables.

The data matching work must be complete before running this option. This option uses the VistA Blood Bank data and the matching files to determine data values to write to host system files.

Display Data Conversion Statistics [VBEC DATA CONVERSION STATS]

This option displays the number of data elements converted per Lab Data (#63) file record and/or the total number of data elements converted for Lab Data file records.

Some of the data elements converted: SEX, DOB, ABO, RBC ANTIGENS PRESENT, RBC ANTIGENS PRESENT COMMENTS, RBC ANTIGENS PRESENT CHARS, BLOOD BANK COMMENTS, and BLOOD BANK COMMENT CHARS.

The entire set of converted data elements can be identified when the VA FileMan LIST FILE ATTRIBUTES option is run on the VBECS DATA INTEGRITY/CONVERSION STATISTICS (#6001) file. The converted data elements are the fields that reside in the DATA CONVERSION STATISTICS multiple (field: 200, sub-file: 6001.02).

The values passed reflect the number of times the data element exists for a qualifying Lab Data record. For example if a Lab Data file record has an instance of BLOOD BANK COMMENTS (a word processing field), then one instance of that data element is attributed to our Lab Data file record.

Run Legacy VistA Blood Bank Data Validation [VBEC DATA VALIDATION]

This option performs a data validation check on legacy VistA Blood Bank data. Issues with invalid data must be resolved before data can be converted to VBECS table attributes.

Delete Antibody/Antigen Temporary Matching Files [VBEC DELETE ANTIBODY/ANTIGEN]

This option deletes antibody and antigen data from the VBECS MATCHING TABLE (#6005) file. File 6005 is a temporary file, designed for population and used for matching VistA data to standard data prior to database conversion.

Delete Data Conversion and Anomaly Check Histories [VBEC DELETE CONV. STATS]

This option deletes data conversion and anomaly check histories from the VBECS DATA INTEGRITY/CONVERSION STATISTICS (#6001) file.

Delete All Blood Bank Data in Temporary Globals [VBEC DELETE EXTRACTED DATA]

This option deletes the site's production account of the ^TMP("VBEC"*,\$J) name spaced global. This deletes at the namespace level without regard to the job number (\$J). The data deleted are temporarily staged data extracted from VistA Blood Bank prior to writing the data to system host files. The temporary staging global is used to accumulate data and prepare it for relational tables.

When running the database conversion features in a test mode, run this option prior to running the data conversion option. It cleans out the previously extracted data so that test results will be accurate.

Delete Blood Bank Data in System Level Files [VBEC DELETE SYSTEM LEVEL FILES]

Use this option while testing the database conversion to delete the host system files to which the VistA Blood Bank conversion data were written. This makes it possible to retest and rewrite these files through the data conversion option to ensure accurate test results.

In a production environment, do *not* delete these files immediately after the data conversion is complete. The files must be kept until the site confirms that there are no data conversion problems on the VBECS side. Programmers can use these files in debugging to determine whether there are problems due to converted data.

Delete Transfusion Reaction Temporary Match Files [VBEC DELETE TRANS. REACTION]

This option deletes transfusion reaction data from the VBECs MATCHING TABLE (#6005) file. File 6005 is a temporary file designed for population and used for matching VistA data to standard data prior to database conversion.

Invalid Blood Bank Data Report [VBEC INVALID DATA REPORT]

This option displays or prints the results of the VistA Blood Bank data pre-conversion integrity check. Use it as necessary while performing data matching work prior to data conversion. Address problems listed on the report before continuing with the data conversion.

Unmatched data will not be converted.

Run this report immediately before data conversion to verify that all desired matches were made and data issues addressed.

VBECs Data Matching/Conversion Menu [VBEC MAIN MENU]

This is the top-level menu to facilitate data matching and data conversion from VistA Blood Bank v5.2 files to VBECs tables. It is the top of a menu tree to which all other menus are attached. Refer to the Conversion Checklist section on page 3 of the Blood Bank Pre-Implementation Data Validation, Mapping, and Conversion ADPAC Guide for the installation and placement of the VBEC MAIN MENU.

Match VistA Antibody/Antigen Data [VBEC MATCH ANTIBODY/ANTIGEN]

Use this option to match VistA antibody and antigen data to standardized entries. The matches will be used during the data conversion to determine which data values to write to host system files. The standardized entries will be used in VBECs. Each VistA entry must be matched to a standard entry. If not matched, the VistA data will not be converted.

Match VistA Transfusion Reaction Data [VBEC MATCH TRANSFUS REACTION]

Use this option to match VistA transfusion reaction types to standardized entries. The matches will be used during the data conversion to determine which data values to write to host system files. The standardized entries will be used in VBECs. Each VistA entry must be matched to a standard entry. If not matched, the VistA data will not be converted.

Utilities Used after the Data Conversion Runs [VBEC POST-CONVERSION UTILITIES]

This menu contains options that will be run after the data conversion is complete. They can also be used to test the data conversion repeatedly prior to running it in a production account. These options perform clean-up functions (e.g., deleting data in temporary files used to stage the conversion data prior to writing them to host system files, and deleting the host system files). If running in test mode, the option to enable VistA Blood Bank options can be run to make the options accessible to users again after the data conversion is run.

If running on a production system, do *not* run the option to enable VistA Blood Bank options after the data conversion; users must not enter data on the VistA Blood Bank system after the production data conversion is run.

Utilities Used Prior to the Data Conversion [VBEC PRE-CONVERSION UTILITIES]

This menu contains options that must be used prior to data conversion. Work prior to data conversion consists of matching VistA Blood Bank data to standard data, entering data conversion site parameters, and validating data matches. Data to be matched include antibodies and antigens, blood products, blood

suppliers, and transfusion reaction types. The options in this menu automatically set up temporary files containing the VistA Blood Bank data that must be manually matched.

Matched Blood Bank Data Report [VBEC PRINT SQL/VISTA MATCHES]

This option displays the VistA data elements matched to their equivalent VBECS entries.

Enter/Edit Site Parameter Data [VBEC SITE PARAMETER ENTER/EDIT]

This option allows the user to input the name of the facility, the default directory where the system level data extract files are to reside, and the VBECS mail group where data conversion information is to be routed. Sites must assign users to the mail group to receive information.

Standard Antigens and Antibodies Print [VBEC STANDARD ANTIBODIES]

This option displays the list of standard antigens and antibodies.

Standard Transfusion Reactions Print [VBEC STANDARD TRANS. REACTIONS]

This option displays the list of standard transfusion reactions.

Utilities That Manipulate Trans. Reaction Data [VBEC TRANS. REACTION UTILITIES]

This menu contains options that manipulate transfusion reaction data. VistA transfusion reactions must be matched to a standard table prior to data conversion. This menu facilitates creating a temporary file with existing VistA transfusion reaction types, matching them to a standard table, undoing the matches, printing a list of the matches, updating the temporary file with VistA changes, and deleting the temporary file.

Undo All Antibody/Antigen Matches [VBEC UNDO ANTIBODY/ANTIGEN]

Use this option with caution. It deletes the matches between the VistA antibody and antigen records and the matched antibody and antigen records.

Unmatch a Single Matched VistA Record [VBEC UNDO SINGLE MATCHING]

This option allows the user to delete a single VistA record that is matched.

Undo All Transfusion Reaction Matches [VBEC UNDO TRANS. REACTIONS]

Use this option with caution. It deletes the mappings between the VistA transfusion reaction records and the matched transfusion reaction records.

Unmatched VistA Blood Bank Data Report [VBEC UNMATCHED VISTA DATA RPT]

This option displays the VistA data elements not yet matched to VBECS entries. Use this option during the manual data matching work prior to data conversion to determine which entries still need to be matched. If not matched, the entry will not be converted to VBECS.

Update Antibody/Antigen Records in Matching Files [VBEC UPDATE ANTIBODY/ANTIGEN]

Update VistA antibody and antigen data in our VBECS MATCHING TABLE (#6005) file. The data on the VistA side may have changed due to the addition, deletion, or editing of data. This option nondestructively adds anything added to VistA since the last creation or update. Run the report of unmatched items and the report of matched items after running this option to get a list of new matching work created as a result of the update.

Update Trans. Reaction Records in Matching Files [VBEC UPDATE TRANS. REACT. REC]

Update VistA transfusion reaction data in VBECS MATCHING TABLE (#6005) file. The data on the VistA side may have changed due to the addition, deletion, or editing of data. This option nondestructively adds anything added to VistA since the last creation or update. Run the report of unmatched items and the report of matched items after running this option to get a list of new matching work created as a result of the update.

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Archiving and Purging

Patch LR*5.2*335 does not provide archiving capabilities. These options purge data from VistA Data Conversion files:

- Delete Antibody/Antigen temporary matching files [VBEC DELETE ANTIBODY/ANTIGEN]
- Delete Transfusion Reaction temporary match files [VBEC DELETE TRANS. REACTION]
- Delete data conversion and anomaly check histories [VBEC DELETE CONV. STATS]
- Delete all Blood Bank Data in Temporary Globals [VBEC DELETE EXTRACTED DATA]
- Delete Blood Bank Data in System Level Files [VBEC DELETE SYSTEM LEVEL FILES]

Callable Routines, Entry Points, and Application Program Interfaces

Patch LR*5.2*335 is a standalone application; no external VistA application will interface with patch LR*5.2*335.

External Interfaces

None

External Relations

These software applications are required and must be fully patched to date to install the VBECS Pre-Implementation Data Validation, Mapping, and Conversion application:

- VA FileMan v22.0
- VA Kernel v8.0
- VA MailMan v8.0
- VA Lab Service v5.2
- VA Registration v5.3

Internal Relations

The VBECS Pre-Implementation Data Validation, Mapping, and Conversion application exports options that are independently evocable. Routines will call other name spaced routines to properly execute an option. VBEC name spaced routines will call other non-VBEC name spaced routines. In these cases, the appropriate Integration Agreements (IAs) are identified at the top of the routine.

Name spaced files are also linked to each other through the use of the pointer data type.

Package-Wide Variables

None

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Glossary

| Acronym, Term | Definition |
|----------------------|---|
| ADPAC | Automated Data Processing Application Coordinator. |
| Antibody | A protein in the serum of some people that will react to a specific antigen on the blood cells. <i>In the case of a red blood cell transfusion, a patient with a clinically significant (leading to a transfusion reaction and possible patient harm) identified antibody must receive only red cells that are typed and found negative for the associated antigen. Once a clinically significant antibody is identified, antigen-negative cells must always be transfused even if a current specimen no longer shows the presence of the antibody.</i> |
| Antigen | A substance on the surface of a red cell that stimulates an immune response (formation of an antibody). |
| Checksum | A numerical representation of a routine as calculated by the CHECK^XTSUMBLD utility in VistA. |
| Database | A collection of data arranged for ease and speed of retrieval. |
| File | Source code, data, and documentation. |
| IA | Integration Agreement. |
| Rh | Rhesus factor. |
| Rhesus factor | Any of one or more genetically determined antigens usually present in the red blood cells of humans and higher animals and capable of inducing intense immunogenic reactions. |
| VA | Department of Veterans Affairs. |
| VA FileMan | The VistA database management system. |
| VBECS | VistA Blood Establishment Computer Software. |

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