

Technology

- ★ VBECS is installed and functional at over 130 blood bank sites with the initial phased rollout deployment since April 2011.
- ★ Users access the VBECS application with their existing VA login credentials over remote desktop sessions.
- ★ VBECS is a Microsoft Windows application developed in C#. It utilizes Microsoft's .NET technology. VBECS uses SQL Server 2016 as its database.
- ★ VBECS is installed in a Microsoft Azure cloud environment running Windows Server 2016. The database is separated from the application and additional redundancy is supported by SQL AlwaysOn.
- ★ VBECS communicates with VistA applications via a C# Listener, using a VBECS specific version of VistALink, HL7 Messaging for ADT Events, orders from CPRS and information from VistA controlled files for VBECS reference table updates (such as CPT/HCPCS, Hospital Locations).
- ★ VBECS provides configuration guides to interface with automated instruments (e.g., Echo, Erytra, ProVue and Vision).
- ★ VBECS has the ability to scan 1- and 2-dimensional barcodes for blood inventory entry.
- ★ VBECS uses a label printer to enable the printing of caution tag labels.
- ★ Microsoft Report Viewer Runtime is used to create, export, and print VBECS reports.
- ★ The VistA legacy Lab application has active reporting components that are utilized for national reporting requirements, i.e., workload.

Quality: *It's in our blood!*

The VBECS Blood Bank Maintenance team, Pathology and Laboratory Medicine Program Office, and the Office of Information Technology collaborated to develop safe and effective transfusion service software in accordance with all governing federal regulations and organizational policies.

**VBECS 1.0 obtained FDA 510(k) clearance
October 2006 (BK060043)**

**VBECS 2.0 obtained FDA 510(k) clearance
November 2014 (BK140172)**

**VBECS 2.3.0 obtained FDA 510(k) clearance
October 2018 (BK180227)**

For up-to-date information about VBECS:

REDACTED



VistA BLOOD ESTABLISHMENT COMPUTER SOFTWARE

VBECS

Product Information



Department of Veterans Affairs
Office of Information, Product Development

Revised: October 2023
Version 10.0

Benefits

Medical Center Management experiences the following benefits with the VBECS software:

- Improve the quality of patient care through evaluation of transfusion appropriateness and effectiveness.
- Compliance with accreditation requirements for nationally recognized classifications of patient adverse events.
- Improve the safety of blood component transfusion by decreasing the risk of errors through effective use of improved technology.
- Provide comprehensive reporting capabilities for quality monitoring within the transfusion services and for clinical staff.
- Improve safety by providing blood product delivery to patients.
- Help in minimizing costs and improving efficiencies by reducing labor-intensive work and enhancing control over the blood transfusion process.
- Standardized software and hardware.
- The Microsoft Azure cloud hosts VBECS with redundancy to preserve continuity of operations. A SQL Server AlwaysOn primary, high availability and disaster recovery model is also implemented.
- Enhancement of the facility's ability to deliver transfusion services that meet the needs of the user community and conform to federal regulations, and industry and accreditation standards.

VBECS does not support:

- Blood Donor Collection Activities
- Full-Face Blood Product Labels



Key Features

- Barcode scanning capability for patient safety and technologist efficiency throughout
- Electronic crossmatch capability defined by patient and unit specific testing requirements (Full Service)
- Multi-divisional capabilities to support multiple facilities from one server
- Two types of Transfusion Service types: Full Service and Transfusion Only
- Six user roles at each facility, locally managed
- National CPRS Order Dialog for Blood Bank test and component orders that may be locally configured and used with Quick Orders
- Locally configurable mapping of orders from supported clinics
- Direct data entry of observed test results and user interpretations to reduce transcription errors (Full Service)
- Automated instrument interfaced delivery of test results (ABO/Rh, ABS, Antigen, Crossmatch, DAT, T&S) to further reduce transcription errors (Full Service)
- Built-in computer safety checks to alert users to testing conflicts, potential mistakes for testing and unit selection, and deviations (overrides) from standard entries which require explanation to proceed as allowed by role
- ISBT barcode labeling requirements compliant
- Online record keeping of reagents and their QC, supplies and equipment maintenance
- Reports that record review of daily activities, including all testing performed, overrides processed and data changed for supervisory review and follow-up
- Efficient and streamlined emergency release process
- Prints user-generated Caution Tags and Blood Transfusion Record Forms
- Supports all Legacy reporting to national databases, i.e., workload, DSS
- Report data export to share drive for additional electronic record keeping, downtime backup patient information, and custom reporting