jembi health systems NPC

BSIS
BLOOD SAFETY INFORMATION SYSTEM

Donor Management Module

A summary Overview

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BLOOD SAFETY INFORMATION SYSTEM | Donor Management

The effective management of information related to the collection, screening, distribution and use of safe blood products is a critical element for all blood services. The Blood Safety Information System (BSIS) is an open source information system designed to manage donor and blood safety information from the point of donation, through to laboratory testing, component processing and labelling, storage, issue and transfer to hospital and clinics. The BSIS tool is primarily targeted for deployment in resource-limited countries and supports the African Society for Blood Transfusion (AfSBT) 3 step certification and accreditation process and recommended best practice.

The BSIS Donor Management Release (version 1.0) makes available the donor module functionality of the full BSIS system. It can be deployed as a working system that collects and stores data about donors and donations including blood grouping and transfusion transmissible infections (TTI) test outcomes and provides selected operational reports. It is intended as a first step to implementing a full BECS, as part of a phased roll-out, making it as easier for the blood service staff to transition from a manual or partly-computerised system to a fully computerised solution. BSIS-Donor Management is configurable to provide maximum flexibility to meet country-specific requirements. The system also provides for comprehensive role-based access and full audit logging capabilities.

BSIS-Donor Management (v 1.0) provides the ability to:

- Donor management
    - Register a new donor, generate a unique Donor Number, lookup donors, print donor barcode ID labels and view select information about the donor
    - Check the donor's eligibility to donate against defined criteria
    - Allow a user to defer the donor using a pre-defined list of deferral reasons with associated deferral periods, based on WHO and AfSBT recommendations
    - Automatically defer the donor if the donation test outcome is TTI positive
    - Print lists of donors due to donate, filtered according to donor panel, blood group and previous donation dates
    - Print lists of donors who require counselling
    - Record the post-donation counselling status
- Donation management
    - Allocate donations to a donation batch, using the pre-printed Donation Identification Number (DIN) to uniquely identify the donation. Pre-printed DIN labels are a pre-requisite for the system.
    - Link a donation to a donor
    - Record donor clinical assessment data for a donation (haemoglobin, blood pressure, pulse and weight)
    - Record the pack type used and the date and time bled
    - Record any adverse events associated with the donation
- Donation Test Outcomes
    - Capture the blood grouping test outcomes for ABO Rh. BSIS automatically flags discrepancies between current and previous donations and also ensures first time donors are tested for ABO Rh grouping twice

    - Capture the test outcomes from the Transfusion Transmissible Infections (TTI) screening process. Unsafe donations will be flagged and donor records will be updated accordingly
    - Configure laboratory testing rules i.e. which tests are mandatory, the confirmatory testing rules
- Configuration and System administration
    - Configure parameters to support local requirements. These include the ability to define deferral reasons, adverse event reasons, pack types, donor panels/venues, date formats and the minimum period between donations
    - Manage system security via access control: Set-up users and associated roles to manage access to the system, as well as account setup and recovery option for user passwords
    - Log all system activity in an audit log that is viewable by authorised users
- Reporting
    - Operational reports including:
        - Donors due to donate
        - Donors requiring post-donation counselling
        - Donations collected

BSIS: Donor Management (Version 1.0) does NOT include:

- Component processing
- Labelling of components
- Discard management
- Inventory (Blood component stock control)
- Synchronisation of data between laptops and the central database for mobile clinic use
- Integration with automated laboratory testing equipment

These features will be included in the future versions of BSIS (Blood Management, Mobile Clinic) due for release in early 2016.

BSIS: Donor Management (v 1.0) core features

- Use of barcode scanners and barcode label printers for donor and donation identification to streamline data entry and reduce data entry errors
- Use of a system-generated number to uniquely identify donors. The format of the donor number is configurable during the initial set up of the application
- Use of a pre-printed DIN number to uniquely identify donations
- A series of system control points to manage the eligibility of donors to donate
- Linkage of donor record to donations
- Recording of test outcomes from the serology and TTI testing processes
- Flagging/blocking of donor and donations as unsafe according to defined rules
- Pre-defined management reports for donors and donations available within the system
- Comprehensive role-based access
- Comprehensive audit logging
- Configurable via system-administrator defined parameters
- Supports AfSBT accreditation and recommended best practice

BSIS Set-up and Requirements

BSIS is designed to operate using a client-server architecture, making use of a dedicated high-spec server to host the BSIS application on a web server hosted in a local or wide area network. The system makes use of a MySQL database and requires MySQL to be installed on the server. The recommended setup is to use an open-source Ubuntu server to host the application. BSIS is designed to be accessed via a Windows 7 machine using the free Google Chrome browser.

The application is also designed to be used with additional hardware that requires barcode printers and scanners and Zebra pack label printers. Pre-printed Donation Identification Numbers DIN labels are also a pre-requisite.

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