

Clinisys WinPath Enterprise

Blood Transfusion Information Management System

A scalable, intuitive and interoperable system
that helps your team get more done in less
time

clinisys

Helping enable healthier
and safer communities



WinPath Enterprise is a comprehensive, integrated, multi-disciplinary Laboratory Information Management System (LIMS). As the UK's leading LIMS, WinPath combines proven performance with pioneering innovation, and has been specifically developed to support the challenges and opportunities facing modern pathology services today.

Extensively used in both NHS and private pathology laboratories for over 30 years, WinPath is a functionally rich and highly flexible system that enables users to adapt to change and secure the benefits afforded through the adoption of modern and Lean workflows, service optimisation and interoperability.

WinPath Enterprise is fully scalable and proven across the full spectrum of laboratory operations through to complex pathology networks and multi-site configurations.

The system is intuitive, easy to use, highly customisable and compliant with all national regulatory standards.

Key features include an integral rules base, comprehensive audit trail and user defined screens throughout.

At its core, the WinPath Blood Transfusion solution, provides "Episode" functionality for the entry and issue of crossmatch / products and allows for multiple episodes on one laboratory accession number, subject to the defined sample validity rules. This allows the user to enter details, per episode, based on products to be issued, including Product Type(s), Number of Packs required, Date Products required, Reason for Transfusion and a Reserved For period.

Stock Management

WinPath Enterprise provides extensive stock management options and has a proven interface to NHSBT to allow stock entry using EDN (Electronic Delivery Note). All current products issued by NHSBT are fully supported.

The system fully supports multi-site blood bank inventory and at stock entry, locally defined settings allow users to enter the products as a default to their location and site. Any subsequent lookups for stock, including stock breakdown and product issue, will automatically apply the local filters. However, stock from all locations, and all sites can be displayed.



- Comprehensive EDN Support
- ISBT Code 128 barcodes fully supported
- NHSBT 2D blood pack labelling supported
- Ability to enter and search on Rh and other Blood Group Antigens for packs
- Hold blood for a specific patient at Stock Entry
- Allocate as an autologous pack to a patient, release only to relevant patient
- Allocate stock as Flying Squad
- Ability to view delivery summaries, totals and individual units
- Ability to amend unit details
- Fast, easy user access to audit
- Stock label production
- Sub-numbering of batch products, individual accountability
- Instant unit history available wherever appropriate, e.g. XM screen
- Stock transaction update facilities with additional location and status movements
- Full Stock Breakdown highlighting minimum stock levels and including current / future planned activity
- Batch products fully catered for, including activity units and associated costs
- Ability to store reagent and control reactions against individual antigen typing for units



Request Entry

- Real time sample validity algorithm calculations based upon BSH Guidelines
- Ability to enter required dates and times for products; prioritises the issue queues
- Comprehensive rules base allowing auto selection of grouping profile
- Instant patient history available, with details and results at any time when in a patient screen
- Instant patient transfusion history available, showing units issued and transfused, at any time when in a patient screen
- Historical/current group, antibody screen and antibodies display, at any time when in appropriate screens. (see image to the right)
- The selection of user defined MSBOS at request entry
- Ability to select blood special requirements for cross matching, cross checked at XM stage
- Ability to search or add further 'orders' within a request for statistical purposes.

Stock Searching

- Unit based or patient-based searching
- Ability to enter and search on Rh and other blood group antigens for packs
- Fast searching, listing and printing of stock details for ANY attribute of the pack and delivery
- Searches for past reserve period and all units currently within patient transactions
- Accessibility to all units, fated or otherwise
- Multiple location searches for hub & spoke configurations.



Transfusion History showing individual units per Episode

Crossmatching / Issue

WinPath Enterprise has proven bi-directional interfaces to all the major blood transfusion analysers. Blood grouping results and interpreted groups and antibody screens within WinPath and appropriate warnings will be displayed on any disparities or history checks that fail. All manually tested or edited results, either within WinPath or on the analyser, will be marked as manually edited and therefore exclude the sample from Electronic Issue (EI).

- Positive patient selection upon barcode scanning
- Separate queues for crossmatching, non-crossmatching and batch products
- Not restrictive, possible to easily issue any type of product for a patient
- Ability to order queues by priority, date and other criteria
- Work being performed by other users easily identifiable and 'locked' to prevent duplication
- Default product shelf life with automatic calculations of expiry dates
- Time set up and time read facilities
- Fast Flying Squad issue
- Stock search at crossmatch stage defaults to patient's group and special requirements
- On screen alerts and actions for all mismatch, expired units, patient group disparity, and product specific special requirements
- Short life unit warnings and alerts for unit expiry dates / reserve
- Issue of batch sub-numbers via barcode
- Appropriate selection of blood products for BMT/PBSC recipients based on donor group
- Full Electronic Issue complying with latest BSH Guidelines (see image to the right)

Rule	Automated	Auto-Edited	Manual	Status
Rule 1: Must have current group				✓
Rule 2: No previous group mismatch				✗
Rule 3: At least 2 groups found				✓
Rule 4: All previous Ab screens Negative				✗
Rule 5: Compatible Units available in Stock				✗
Rule 6: Ab Screen methodology suitable				✗
Current	✗			
Historical			✓	
Rule 7: Group methodology suitable				✗
Current/Grp 1	✗			
Historical/Grp 2			✓	
Rule 8: Within maximum sample age				✓
Rule 9: Within sample validity for transfusion				✓
Rule 10: Patient above minimum age				✓
Rule 11: Patient not excluded				✓
Rule 12: All results authorised				✓
Rule 13: Non-transplant patient OR Transplant Patient where Donor/Recipient Group exact Match				✓

Electronic Issue criteria showing pass/fail reasons as to why Electronic Issue has been prevented



Antibody Identification

- Ability to enter multi panel / techniques results
- Positive Patient Identification for antibody panels
- Ability to search for patient history / transfusion history.

Set up / Configuration

- Mismatch tables for Red Cells (Routine and EI), Platelets, Plasma, Cryoprecipitate, ABO Only and Rh D
- Rules base control.

Grouping

- Analyser interfacing to all major grouping devices with inherent system validation
- User friendly presentation of group worklist and results entry
- Group History disparity check at results entry and clinical authorisation with full audit
- Group suppression at manual results entry
- A positive antibody screen defaults a request to the antibody identification panel queue
- Full checking procedures with audit if a group changes on a patient.

Other Features

- Familial linking with comprehensive decision support
- Demographic verification
- User definable product specific issue labels, batch product stock and flying squad labels.

Blood Transfusion

Statistics

A full management reporting solution is provided which utilises best of breed business intelligence and data mining tools to provide easy access and reporting to help deliver management information detailed in the most recent BSH Guidelines for Documentation and Procedures and BSH Guidelines for Hospital Blood Banking Computing. The solution is delivered with a variety of pre-defined operational, statistical and management reports including:

- Product turnaround times
- Unit usage (broken down by clinician / source)
- Crossmatches performed
- General extraction for unit or episode; NHSBT extract.

Compliance

WinPath Enterprise is compliant with all national regulatory standards including:

- The specification and use of information technology systems in blood transfusion practice, Transfusion, 17, 1-21.
- Blood Grouping and Antibody Testing in Pregnancy, approved 08/06/2006
- EU Directive 2002/98/EC conformation provided by interfacing to third party blood tracking systems
- EU directives for Safety and Quality to blood products (Storage, transport, usage documentation)
- The Specification and Use of Information Technology IT systems in Blood Transfusion Practice 28/4/2006
- BCSH Guidelines for Documentation and Procedures 1990
- HC(84)7 Blood transfusion record Keeping and Stock Control Arrangements (DHSS) & Guidelines for Blood Bank Computing, Transfusion Medicine 2000, 10, 307-314
- The Blood Safety and Quality (Amendment) Regulations 2006
- Specification for Machine Readable Labels for use in the UK
- Consumer Protection Act (1987) - product liability, long term data storage, traceability of products)
- UK SHOT report 1997-8 recommendations with respect to positive patient identification.
- BCSH (2000) Guidelines for Blood Bank Computing
- Guidelines for Compatibility Procedures in Blood Transfusion Laboratories, Transfusion Medicine, 2004, 14, 59-73
- BS ISO/IEC 27001:2005 (Complete 2008)
- BS ISO/IEC 17799:2005
- BS ISO 9001:2000



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