

A photograph of a woman in a white lab coat looking down at a laptop in a laboratory setting. Another person in a lab coat is partially visible in the background. The scene is brightly lit with large windows in the background.

## Case study

# Rationalising three different LIMS into a single WinPath Enterprise solution for Barts Health NHS Trust

## Customer profile

- 26 million tests per year
- 27 labs over 5 sites
- 600 Staff
- One of the largest NHS Trusts

### Challenge

To enable pathology across four hospitals to work together collaboratively and provide an enhanced service for clinicians, offering patients access to a centre of excellence incorporating all aspects of a quality pathology service.

### Outcomes

Unified methodologies across all hospitals and laboratories in the network, delivering improved patient care through better turnaround times, standard reference ranges and optimised workflows, in line with the Carter Report.



**Barts Health Pathology service is a comprehensive UKAS accredited pathology provider, occupying a purpose built facility located at the Royal London Hospital.**

They currently operate from four major hospital sites (Royal London, St Bartholomew's, Whipps Cross and Newham) and at satellite locations (Mile End hospital).

The service has been configured as a hub and spoke model and offers a wide repertoire of specialist services, including the main pathology disciplines, Clinical Transplantation, Molecular Haematology, Retinoblastoma, Flow Cytometry and Genomics.

CliniSys' WinPath LIMS has been an enduring part of the pathology service at each of the hospitals since Newham first went live in 1996. The service is now supported by a single WinPath Enterprise system after merging three separate CliniSys LIMS.

**The challenge:**

Barts Health NHS Trust had a mixed estate of LIMS across its sites, with separate WinPath v5.32 installations at The Royal London Hospital (all disciplines) and Newham University Hospital (Blood Sciences and Blood Transfusion) and another separate system using WinPath Enterprise at Whipps Cross University Hospital (Blood Sciences and Blood Transfusion). Two of the three systems were connected using the WinPath Lab2Lab module to exchange data for work not processed at the local site.

Barts Health identified that management of multiple systems and hardware platforms was far from optimal, and the migration to a single platform across all sites would improve efficiency and workflow for the Trust, and would enable all sites to benefit from enhanced WinPath Enterprise functionality.

Professor Finbarr Cotter, Clinical Director for Pathology said "Our processes were heavily reliant on paper, obviously not an ideal arrangement for a joined up approach for patient care and certainly not conducive to delivering NHS England's Sustainability and Transformation Plans which require a paper free environment. A single LIMS system will expedite open access to data for all physicians and is supportive of "shared care". Having one system covering the whole east end of London has got to lead to an enhanced patient experience and improve service quality".

The aim of the new system was to enhance collaborative working across the four hospitals, resulting in an enhanced service for the clinicians and their patients.

## The approach:

CliniSys worked with the team at Barts Health NHS Trust to design a phased deployment approach that was ideally suited to the project and one that would have minimal impact on the day-to-day operation of the pathology service. The project was split into the following phases:

- **Phase 1a:** WinPath Enterprise Blood Sciences and Blood Transfusion was upgraded at Whipps Cross University Hospital to the latest version
- **Phase 1b:** WinPath Enterprise's relational database, Oracle, was upgraded to the latest version
- **Phase 2:** WinPath Enterprise was deployed for Blood Sciences, Blood Transfusion and Microbiology departments across the Royal London hub site. This included the necessary data migration
- **Phase 3:** WinPath Enterprise was deployed at the Blood Sciences, Blood Transfusion and Microbiology departments at Newham University Hospital, along with the Cerner Millennium Upgrade
- **Phase 4:** WinPath Enterprise was deployed in the Cellular Pathology department at the Royal London hub site
- **Phase 5:** A sunset system was included for the current Royal London and Newham systems, to hold an archive of all legacy data, thus meeting data retention requirements.

Blood Transfusion at Barts Health is a significant and important part of their services. The Royal London site is the largest major trauma centre in the country, supported by two air ambulances. With such a large site, much of the Trust relies on remote issuance so

blood products are readily available at the point of care such as A&E, theatres and ICU. To achieve this Barts Health introduced the Haemonetics Blood Trak system to track and issue blood products safely. A vital aspect of the project was to ensure that this was fully interfaced to WinPath Enterprise to allow both electronic and remote issue.

The Cerner Millennium integrated electronic health record (EHR) has been used by Barts Health NHS Trust for pathology order communications since 2008. Incorporating Newham University Hospital and Whipps Cross Hospital required a major reconfiguration which included a patient renumbering exercise, and integration challenges for pathology and CliniSys as a result of the complexity of merging historical patient records. This was successfully completed, paving the way for the single EHR across all sites in 2017; now the largest in the UK.



### Interoperability enabling collaboration

Maintaining interoperability with this solution was an essential part of the project.

Barts Health pathology has always had a history of collaboration with neighbouring Trusts to deliver services. Consequently, the ability of CliniSys to support the service with Lab-to-Lab communications solutions such as Electronic Referrals and GUM clinic interfacing was vital. Without the means to support electronic end-to-end solutions the Trust would have been unable to compete in an active pathology market place.

**Nicole Gresham, Associate Director of Pathology:**  
"It is comforting to know we have a partner we can rely on for our pathology systems."



### Outcomes:

Barts Health NHS Trust has successfully rationalised three LIMS into a single WinPath Enterprise system, improving collaborative working and patient care. This has given the Trust a solid foundation to improve and expand their pathology services. Key benefits include:

- Improved patient care through better turnaround times, standard reference ranges and optimised workflows, in line with the Carter Report
- Reduced clinical risk with better, standardised patient identification and more complete patient history across primary and secondary care
- Unified methodologies across all hospitals and laboratories in the network, improving the standardisation of data flows
- Reduced IT administrative overhead, IT infrastructure costs, and laboratory staff costs thanks to streamlined systems and processes
- Simplified integration of the many clinical systems, allowing standardisation across all pathology disciplines
- Ability to leverage big data from all integrated systems
- Reduced variation across sites, eliminating the need to train different staff on different systems.
- Improved links with Millennium EPR and departmental systems for clinical information sharing across multiple providers

Barts Health Pathology has been selected as one of just five national pathfinder laboratories to lead the way in determining the best way to improve pathology services.

Pathology is one of the areas the national Carter review has identified as being able to improve services by reducing variation and standardising processes. With the new single WinPath Enterprise LIMS and the standardisation of equipment, Barts Health are able to review their processes to find out what they do well and what they might be able to improve as they move forward.

National experts will visit to speak to the pathology teams about what they do. This will help shape the future development of pathology nationally and provide advice to the rest of the country, while simultaneously identifying if there is anything that would make the service better.

Professor Finbarr Cotter – Clinical Director for Pathology and Consultant Haemato-Oncologist comments: “It is a real accolade for pathology at Barts Health to be selected as one of only five NHS pathway pathology units in the country to look at innovative ways to deliver pathology to the NHS. This recognises that there have been major improvements with our infrastructure.

**“We have the opportunity to fine tune our delivery and help create evidence for the rest of the health service.”**

Barts Health have recently agreed a new partnership with Homerton University NHS Foundation Trust and Lewisham and Greenwich NHS Trust to form a new London Pathology Network: The East & South East London NHS Pathology Partnership.

Nicole Gresham, Associate Director of Pathology for Barts Health “The With the successful introduction of WinPath Enterprise, a single LIMS across all our networked laboratory sites and the Managed Service contract, it is exciting to see Barts Health Pathology putting in all the enablers to build a bright future.”

Due to the inherent scalability and flexibility, the existing WinPath Enterprise system at Barts will be extended across the new organisations through 2021.

**“Working with our partner CliniSys, will enable us to provide better patient care with a pathology service we can be proud of.”**

**Nicole Gresham – Associate Director of Pathology for Barts Health**

