

## **Severn Pathology works with CliniSys to develop IT for newborn screening and tissue typing services**

### **Scientists based at Southmead Hospital in Bristol have helped to build new modules of WinPath Enterprise to handle heel prick tests and organ donor matching**

Scientists in Bristol have worked with CliniSys to develop IT to support critical newborn screening and tissue typing services.

Experts working for Severn Pathology at North Bristol NHS Trust have helped to create new modules for the WinPath Enterprise laboratory information system to support the delivery of the National Newborn Blood Spot Screening Programme and donor-recipient matching for organ donation.

David Brixey, pathology and IM&T manager at North Bristol NHS Trust, said: “There are very few systems out there to support these services, so we were delighted that CliniSys was willing to work with us to develop these new modules from scratch.

“CliniSys has really taken the time to get to understand the intricacies of how these services work and what they need from technology. Staff have found it easy to transition to the new system and it is already making a difference to services that have a huge impact on people’s lives.”

Severn Pathology is an innovative pathology network that brings together the laboratory services of four major acute trusts. It is based in Southmead Hospital in Bristol, part of North Bristol NHS Trust, but serves health services across the South West and beyond.

The network has been using WinPath Enterprise as a single LIMS since 2016 and went live with the newborn screen and tissue typing modules in September.

The newborn blood spot screening laboratory handles samples taken during the familiar ‘heel prick test’ that is offered to all babies at five days of life. The test takes four drops of blood that is tested for nine conditions including cystic fibrosis, hypothyroidism, sickle cell disease and six inherited metabolic disorders, which are rare but can have a significant impact on the baby’s life, particularly if they are not detected early.

About 40,000 babies are born across the South West every year, and Severn Pathology’s newborn screening laboratory handles 150-200 samples a day. Senior clinical scientist Emma Smith said: “The blood spot test is easy to explain but complicated to do.

“There are many sample pathways and rules that we need to follow, because there are many factors that can affect the result. For example, if the baby is born prematurely or receives a blood transfusion, both can have an impact on results.

“By working with CliniSys, we have been able to build rules into the system to support a much safer way of working than our previous, manual processes. We have also been able to integrate with other IT systems, to strengthen our failsafe systems and access more information to support the safe delivery of the screening programme, so we have more information available to us and can make really informed decisions.”

Helena Kemp, the newborn screening laboratory director, added: “The newborn screening laboratory is one of the departments that has seen the biggest benefit from the deployment of WinPath Enterprise. I would like to acknowledge the hard work of both the screening laboratory scientists and our Clinisys colleagues in delivering this excellent collaborative project. It’s been a long process, but a very rewarding one.”

Tissue typing supports organ donation and the treatment of some immune diseases. It is used to identify groups of proteins in cell membranes, known as HLA antigens, that regulate the immune system and determine whether an organ will be accepted or rejected.

Severn Pathology’s tissue typing lab is mostly used by Southmead Hospital’s kidney transplantation service, which carries out around 100 transplants per year, and has a waiting list of around 250 people. Transplants are also performed for a wide catchment area serving the South West and South Wales and including the Royal Devon and Exeter Hospital, Dorset County Hospital, Gloucestershire Royal Hospital and Bristol Royal Hospital for Children.

Everybody on the list gives a sample every three months so the service has the up to date information it needs to match them to potential donors.

Senior biomedical scientist John Ward said: “What set CliniSys apart from what was available from other suppliers was being able to link the donor and the recipient together on one screen.

“WinPath Enterprise is also much better than our previous system at holding patient information, so we can review hospital data and historic samples much more easily than we could in the past.

“Having that cross-matching capability, and having all that information easily to hand, makes it much simpler for us to do the work that we need to do. CliniSys really took the time to understand what we needed, and to make sure that we got it.”

CliniSys built WinPath Enterprise to meet the needs of the pathology networks that are now being set up across the UK. It is planning to make the newborn screening and tissue typing modules available to labs that would benefit from them. Severn Pathology has already been contacted by trusts that have heard about its pioneering work.

Richard Craven, CliniSys CEO, said: “Newborn screening and tissue typing are hugely important departments that make a massive difference to patients. The work that we have done with Severn Pathology means that people working in these labs can use the same LIMS as their colleagues for improved clinical collaboration.

“We built these modules from the ground up, so we are very grateful for the time that Severn Pathology put in to making sure that their modules would work for their clinicians; and for pathologists across the country.”

## **About CliniSys Group**

For over 30 years CliniSys Group has been at the forefront of diagnostics workflow, order communications and information management solutions supporting radiology, cardiology and all pathology disciplines including anatomical or cellular, molecular and genetics. These encompass the complete workflow from order, clinical decision support, collection, processing, analysis, results and reporting, through integration into the clinical workflow. CliniSys Group has built an unrivalled reputation for the deployment of complex diagnostics networks and academic centres – and is the only vendor repeatedly delivering across all disciplines end to end – at scale.

CliniSys Group solutions have been deployed in 10 languages in thousands of laboratories across 23 countries and are used by hundreds of thousands of healthcare professionals. Headquartered in the UK, CliniSys Group employs through CliniSys (UK) and MIPS (Europe), close to 500 dedicated diagnostics IT professionals.

CliniSys provides market leading solutions across the UK and Ireland.

- Its laboratory information management system, WinPath, is deployed in nearly 50% of all NHS trusts and now supports 34 pathology networks across the UK.
- Tests for more than 40 million patients are processed on its order communications system, ICE every year, whilst more than one third of NHS acute trusts use ICE for test ordering by hospital wards, and over 70% of the same trusts use ICE for GP order comms.

MIPS provides market leading solutions across Europe.

- Its laboratory information management systems, GLIMS, DaVinci, GestLab, and MIPS vianova Labor support thousands of laboratories, including many of the largest laboratory networks across Europe.
- Its order communications systems CyberLab, and iGestlab, are now also increasingly used by patients to access their own and their family's test results.