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Clinical
Case Study

Gain efficiency with advanced blood gas connectivity.

RAPIDLab and RAPIDComm solutions transform point-of-care testing at Warrington Hospital

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Warrington and Halton Hospitals NHS Foundation Trust provides high-quality healthcare services for more than 500,000 patients across Warrington, Runcorn, Widnes, and the surrounding area in North West England.

Warrington Hospital is a 500-bed general hospital focusing on emergency and specialist care. It is home to the Trust's Accident and Emergency Department (A&E) that sees more than 95,000 patients a year and also houses maternity, specialist critical care, stroke, cardiac, and surgical units.

The hospital is well placed in the local community to treat patients with a range of complex medical and surgical conditions. It has seen a number of new departments and facilities opening over the last few years including a multi-million

pound intensive care unit, new renal dialysis unit, and numerous ward upgrades to provide a comprehensive range of expert inpatient and outpatient services.

Warrington Hospital was one of the first hospitals in the UK to install Siemens RAPIDLab® 1200 Blood Gas Analyzers and the RAPIDComm® v3.0 Data Management System to increase efficiencies at the point of care (POC). Most recently, it has installed CLINITEK Status® Connect systems to further enhance its operations.



Warrington, England



“The vision for POC at Warrington Hospital is to provide patients in our local community with the best possible care. The new blood gas analyzers and connectivity solution give us more control and allow an ongoing high quality of care to be maintained.”

Steve John
Laboratory Manager

Meeting the Challenges of Modern Day Point-of-Care Testing



“Siemens offered us a viable solution to help deliver the best quality care now and into the future. As with any change of supplier, there is always a fear of the unknown but Siemens has been on hand at every step to alleviate any fears and deal with any queries we may have.”

Celia Critchley
POC Coordinator

Aging Equipment – a Catalyst for Change

The decision to upgrade the blood gas analyzers was taken due to incumbent equipment not meeting the demands of today's POC requirements. The previous analyzers were frequently experiencing problems and letting down staff that needed quick results for patient diagnosis.

Usually, only one person is on duty in the laboratory overnight or on weekends and he or she cannot leave the post. In the past, the POC representative would have to talk clinical staff through troubleshooting processes over the phone. If the issues could not be corrected in this way, the equipment could be down for two days over a weekend period.

Now with Siemens RAPIDComm Data Management System, analyzers on the ward can be viewed and issues resolved remotely. This helps the team manage its workflow pressures, especially out of hours, and ensures clinical staff members have the diagnostic tools they need to deliver a high standard of patient care.

Innovative Instruments Connected to Software that Gives Full Visibility

The POC team is responsible for ensuring the smooth running of RAPIDLab blood gas analyzers at seven locations throughout the hospital. All of these analyzers are connected to RAPIDComm to enable remote management. From the laboratory, the POC team can monitor analyzer status and manage user operations. This enables the team to pre-empt problems before they impact clinical users. In addition, the team is able to remotely monitor Quality Control performance over all devices to ensure accurate test results.

Looking to the future, progress will continue at Warrington Hospital with the expansion of connected urinalysis. CLINITEK Status Connect systems will be installed into the planned Urgent Care Center and these will be connected to the RAPIDComm Data Management System. This level of connectivity will allow hospital staff to see all patient details easily via the Hospital Information System (HIS), which will assist with compliance through improved patient and operator audit trails.

Warrington Hospital runs approximately 51,000 POC tests each year

Department	Samples per month
A&E Department	500
Operating Theater	100
Hematology and Transplant Unit (HTU)	1,100
Intensive Therapy Unit (ITU)	1,200
Neonatal Ward	400
Maternity Delivery Unit	250
Respiratory Unit	200
Biochemistry Department	500



From the laboratory, all Siemens Blood Gas analyzers can be monitored and problems dealt with in real-time.

“Being able to remotely view instruments on the ward, especially out of hours is a plus. It helps our team manage its workflow pressures as we usually only have one person on duty in the laboratory overnight or on weekends and he or she cannot leave the post.”

Steve John
Laboratory Manager

“The first major benefit of IT-powered integration is less manual maintenance and less walking around the hospital. For example, with the RAPIDLab analyzers in locations such as A&E and ITU linked by RAPIDComm, we can see how they are operating at any time, simply by logging onto the user interface screen on the workstation inside the lab. This has saved time on maintenance as the software monitors that all is well and undertakes problem-solving processes if required.”

Celia Critchley
POC Coordinator

The Benefits of Modernized Point-of-Care Systems and Processes



“The RAPIDLab system is not only easy to use but it also provides us with results almost instantly. Since the implementation, we have seen an increase in productivity as less time is spent waiting for sample results and this has freed up valuable staff time allowing members to concentrate on other activities within the Neonatal Ward.”

Alison Johnson
Neonatal Unit Ward Manager

By upgrading the blood gas analyzers and integrating them via the RAPIDComm system, the POC team and clinicians at the hospital have seen an improvement in service. This in turn impacts positively on the patients waiting for results to enable an accurate diagnosis. Benefits that have been realized include:

- **Preempting Instrumentation Problems and Rapidly Solving Queries**

By having 360-degree visibility of the analyzers via the RAPIDComm system from a single workstation inside the Pathology Department, problems can be pre-empted, maintenance run routinely and queries resolved remotely. Out-of-hours questions can also be handled quickly to improve equipment uptimes and reduce pressure on POC staff.

- **Remote Management for Reduced Manual Intervention**

Remote monitoring and management of the analyzers has reduced the physical time for the POC team to visit the instruments in-situ on wards, freeing up time to focus on other tasks.

- **Compliance and Governance Needs Met**

Compliance is an increasingly important element within the POC arena and Siemens solutions allow more control to assist with this. All interactions with the analyzers are fully auditable via the RAPIDComm system and can be stored, as can patient data, for compliance review or reporting in the future.



- **User Controls to Standardize Testing**

The RAPIDLab analyzers can be password protected to limit use to only trained and authorized staff. At Warrington Hospital, there are currently 500 operators using the RAPIDLab analyzers; each is given training before routine use and is allocated a unique password. The RAPIDComm system enables user records to be kept and identifies staff members that may need to be retrained. Having this overall clarity with an audit trail that links into the HIS saves time and reduces errors inherent in manual documentation.

- **Reduced Levels of Consumables Required**

The previous analyzers needed a number of individual reagent bottles. Following the installation of RAPIDLab analyzers, consumable requirements have been reduced as they do not require reagent bottles, making stock control and storage much easier.

- **Improved Control of QC**

The analyzers now have fully automatic quality control with no operator intervention. This means that the department now runs QC as frequently as is necessary giving better control of the assays.

- **Ease of Use, Delivering Rapid Results**

The analyzers are compact in design for placement on wards or specialist units and are easy to use with minimal training. Results are delivered promptly on screen and are recorded on-board to give clinical operators confidence and the necessary information needed to assist in the patient diagnosis.

Looking to the Future of Point-of-Care Connectivity

The growing number of instruments that can be connected and managed via the RAPIDComm system has Warrington Hospital looking forward to the future. POC connectivity holds the key to optimizing workflow, helping manage risks, supporting regulatory requirements, and driving productivity.



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