

United Bristol Healthcare Trust



United Bristol Healthcare Trust Creates Collaborative Patient Care Environment based on EMC Automated Networked Storage

How do you manage rapidly growing, isolated islands of information across multiple regional hospitals? That was the challenge facing one of the UK's leading regional healthcare trusts, The United Bristol Healthcare Trust. Using an EMC Automated Networked Storage infrastructure, based on high availability EMC CLARiiON™ systems, the Trust's healthcare professionals now have real-time, simultaneous access from anywhere across the region to video, static image and other patient information. This patient-centric approach has enabled the Trust to accelerate patient throughput, increase efficiency, and improve patient care.

United Bristol Healthcare Trust is a major UK teaching trust comprising nine hospitals, including The Bristol Royal Infirmary, the Bristol Royal Hospital for Children, and the Bristol Eye Hospital. Collectively, they provide a range of A&E, in-patient, day case, day hospital and out-patient services within many specialty groupings, including Orthopaedics, Critical Care and Theatres, Cardiac Services, Gynaecology and Integrated Medicine. The Trust also houses several specialist services which are accessed from across the South West of England.

Until recently, the Trust was challenged with fragmented 'islands of information'. Each of the nine hospitals comprised multiple, overlapping patient services and systems, including electronic patient records, imaging, administration data, email, and Exchange systems—all operating in a fragmented, disconnected environment. The Trust was quick to recognise that this silo-centric approach to information management was undermining its ability to provide streamlined, efficient information management.

The solution was to implement a dual-site, consolidated infrastructure, centred around EMC Automated Networked Storage. The Trust deployed CLARiiON storage systems to pool its mission critical applications and data, increase information availability, and drive down cost. “EMC CLARiiON undoubtedly represents one of the most cost-effective, flexible and scalable storage platforms out there in the market today,” says Dave Oatway, Computer Services Manager. “It is the linchpin in our strategy to significantly reduce the cost of delivering world class patient care.”



“EMC is paving the way for redefining The United Bristol Healthcare Trust’s clinical services to patients, clinical auditing, research, clinical governance and risk management.”

—Professor Shastry, Directorate of Radiology,
The United Bristol Healthcare Trust, Bristol Royal Infirmary

Significant Growth in Imaging Data

At the time of this business transformation program, Professor Shastry—of the Directorate of Radiology at the Trust’s Bristol Royal Infirmary—was undertaking his own research into information consolidation. He and his team were experiencing significant growth in data volumes arising from MRI scans, CT scans and other imaging solutions. He approached the Trust’s IT team with a view to sharing some space on their next-generation consolidated EMC infrastructure.

“We wanted to avoid isolated ‘islands of excellence’ and integrate our legacy systems with the new one to provide a coalesced, patient-centred platform of excellence,” says Professor Shastry. “Our healthcare professionals needed seamless, simultaneous access to patient images any time of the day or night. EMC represented a best-of-breed solution which would efficiently scale in line with the growth in electronic patient imaging.”

By aligning images with other critical patient and healthcare information, the Trust is benefiting from a showcase content management strategy geared to providing an uninterrupted flow of information and the most efficient patient care, across the lifecycle of patient treatment. Static and real-time patient information is now available enterprise-wide and at remote points of presence, including theatres, wards, conference rooms, and e-learning environments. And it represents an impressive amount of information. The Professor had originally requested 240Gb of space to be allocated on a trial basis to check for any data standards, interoperability and or compatibility conflicts or problems. Today’s multislice CTs and MRIs themselves contribute to volumes of data in excess of 0.5Gb of data. The DRs, CRs and US scanners also contribute to this digital data load which are being phasing in to provide image data on an EOL, ‘everything-on-line’ basis.

To highlight the value of the system, Professor Shastry cites the ability to conduct telemedicine using video over IP—linking radiology, cardiology and similar image-based facilities. “Hospital consultants are a scarce resource, and we need to minimise the time they devote to travel which at times could have been avoided,” he explains. “Using the unified EMC Automated Networked Storage infrastructure, consultants can collaborate by video, audio and data between two points. If there is a paediatric referral in Truro, the consultant there can call on specialist opinion from Bristol. They can view a live video stream of the patient’s situation, share opinions, and make better informed judgements concerning appropriate treatment. This type of ‘teleconsulting’ is transforming the efficiency and effectiveness of patient care.”

Improved Efficiency

This seamless information sharing goes further. The Trust has also adopted remote workstations, with facilities for incorporating reports along with the medical images. This allows for peer review and more efficient medical teaching. Senior consultants, for example, can screen reports from the junior radiologists and email their comments back. And, at a later stage, the Trust will move to wireless collaboration for roaming access in wards and remote locations—including GP practices and clinician's homes.



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It's not just the consultants that are benefiting though. By improving the integration of healthcare services, this smart, patient-centred service leads to increased patient throughput and shorter waiting lists. Professor Shastry says, “It used to take weeks for a consultant to respond to a patient, as they needed to study numerous reports stored in different places and consult with their colleagues. The consolidated SAN and NAS environment has enabled the Trust to reduce this waiting time in some instances to seven days or less.”

Over time, the government's IT plan for the NHS aims to deliver a national booking system, national patient records, electronic prescriptions and a broadband infrastructure that will be procured with national contracts and run by five private sector consortia of local service providers. The Trust's model EMC Automated Networked Storage infrastructure will complement and seamlessly integrate with this strategy by providing a regional, centralised information repository. “Ultimately, EMC is paving the way for redefining The United Bristol Healthcare Trust's clinical services to patients, clinical auditing, research, clinical governance and risk management. This is not from just within the UBHT NHS Trust but also from all collaborating centres in the South West of England that refer patients to Bristol,” the Professor concludes.

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