

NHS Trusts lead the way in Automation and EPR Interoperability



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When reflecting on the current state of digital transformation in the NHS, it's easy to focus on the barriers – technical, operational, and cultural – that have historically slowed progress. For years, national funding has rightly focused on rolling out Electronic Prescribing and Medicines Administration (ePMA) systems, which has brought significant benefits to prescribing safety and medicines management. However, the next step in this evolution must be to connect ePMA to automation, unlocking the full potential of digital medicines management and freeing up clinical time for patient care.

The integration of automation with Electronic Patient Records (EPR) and ePMA is not a luxury, it's a necessity. The NHS faces unprecedented pressures: staffing shortages, recruitment and retention challenges, and global supply chain disruptions. These issues aren't going away. If we want to empower our nurses and pharmacists to focus on patient care rather than logistics, we must embrace automation that is seamlessly connected to our digital records. The days of standalone systems are over. The future belongs to those who can harness data, drive efficiency, and improve patient safety through true interoperability.



This is not just theory, it's happening on the ground. Across the NHS, Trusts are demonstrating that integration is achievable and transformative.

The process, while complex, is structured and proven. It involves workflow mapping, installation testing, user acceptance, go-live, and hyper-care. Omnicell's clinical application specialists support Trusts in understanding their current workflows and mapping them to the desired future state. Our technical integration team then makes this a reality through interfacing. This structured delivery process reassures Trusts that integration is manageable and supported by experienced teams.

Omniceil's extensive Install Base and interfaces, which integrate with major EPR/ePMA systems, such as Epic and System C, demonstrate practical expertise and market leadership. Unlike competitors who may overstate their capabilities, Omnicell can point to a demonstrable track record and the breadth of its integrations. This experience is invaluable for Trusts seeking a reliable partner in their digital transformation journey.



Concerns about data governance and standards are valid. Omnicell supports major interoperability standards, including HL7 and FHIR, which are well-known among chief information officers and digital leads. We are also actively involved in NHS England's "First of Type" program, working to ensure that its solutions meet evolving NHS digital standards.

This proactive alignment with national priorities builds trust and reassures Trusts that Omnicell is committed to delivering solutions that are secure, interoperable, and future-proof.

Fear of disruption or project delays is also common and understandable. Any new system brings some level of disruption, but joint project schedules, risk assessments, contingency planning and ensuring the right prioritisation is key in helping to mitigate these risks. Early engagement, realistic planning, and clear communication are all essential to keeping projects on track.

Planning for success goes beyond technical readiness. It's about supporting data quality, running workshops with prescribing and digital leads, and engaging nursing colleagues from the outset.

Too often, automation projects are seen as pharmacy-led, but it's the nurses who administer medicines and whose workflows are most affected. Change management, education, and training are critical. When nursing staff see how the system saves time and improves outcomes, they become champions of the project.

A truly interoperable NHS Trust doesn't just integrate systems and walk away. It measures success, builds dashboards and KPIs, and continuously optimises workflows across diverse clinical areas.

The data is key, not just for supply chain management, but for ensuring scarce resources are focused on value-added tasks and patient outcomes.

Sandwell and West Birmingham NHS Trust, for example, has shown how lean pharmacy operations can drive month-to-month improvement through relentless measurement and optimisation, while King's College Hospital NHS Trust is tracking changes in missed or delayed doses, frequency of stock-outs, and time spent on manual restocking as it pilots new predictive features, based on its interoperability with Epic. Ultimately, leveraging data is built on trust, clinical engagement and transparency and it's important to emphasise how the technology is here to help and support clinicians, not replace them.

The most exciting case studies are those that change everything. At King's, the upcoming release of an app that uses AI to forecast shortages and missed doses promises to advise the Trust on changes in usage and optimise nursing workflows in ways we've only begun to imagine. Sandwell's closed-loop automation is setting a new standard for medicines management and patient safety, and University Hospitals Coventry and Warwickshire (UHCW) NHS Trust's journey, which started back in 2018 with a Trust-wide implementation of Automated Dispensing Systems to leverage the power of EPR, will soon add another chapter to this story, offering new lessons and inspiration for the wider NHS.

Looking ahead, the biggest shifts will come from AI and data analytics. The NHS has a vast reservoir of data, and the challenge is to tap into it for real-world impact. The opportunity is enormous, and the time to act is now.

Integration and interoperability are happening now. The art of the possible is being demonstrated by visionary Trusts like Sandwell and West Birmingham, King's College Hospital, and University Hospitals Coventry and Warwickshire, committed suppliers, and collaborative teams. By embracing structured processes, aligning with national standards, and focusing on stakeholder engagement and change management, NHS Trusts can unlock the full potential of digital medicines management. Let's use the experience of these leaders as a guide and move forward together.

Pitfalls Checklist

Common Pitfalls in Automation and Interoperability Projects:



Waiting too long to bring clinical stakeholders together

Early engagement with nurses, pharmacists, and digital leads is essential for buy-in and effective workflow redesign.



Misunderstanding testing and validation timelines

Integration projects require structured delivery, including workflow mapping, installation testing, user acceptance, and hyper-care. Build realistic timelines and communicate them clearly.



Choosing technology before defining integration goals and requirements

Define your desired outcomes and requirements before selecting technology. Avoid letting the tech drive the process.



Trying to replicate manual processes instead of redesigning them

Automation is an opportunity to rethink workflows, not just digitise existing steps. Engage clinical and IT experts to redesign processes for efficiency and safety.

Case Studies

Sandwell and West Birmingham NHS Trust

Sandwell and West Birmingham NHS Trust stands out as a national leader in medicines management. At the newly opened Midland Metropolitan University Hospital in Smethwick, Sandwell has installed the largest 'one time' portfolio of automation in any NHS Trust to date. The hospital is equipped with 45 Omnicell XT Automated Dispensing Cabinets, 80 AMiS-PRO Smart Cart medication dispensing trolleys, and integrated MedXpert inventory management software. This state-of-the-art technology provides a 'closed-loop' workflow, ensuring the highest levels of patient safety and redefining medicines management at scale. The impact is significant: streamlined workflows, reduced manual processes, minimised drug errors, and significant cost savings. The efficiencies provided by automation enable staff to focus on patient care rather than managing stock and manual tasks, setting a new benchmark for the NHS.

University Hospitals Coventry and Warwickshire (UHCW) NHS Trust

UHCW NHS Trust is preparing for a major go-live with Oracle Health Cerner, integrating automation with EPR and ePMA to create a seamless, interoperable medicines management system. This will mean that its patient record system will provide a live/real-time view of what's stocked in cabinets, as well as streamlining workflow and retrieving medications. All with enhanced security and removing process waste to support closed-loop administration. This project aims to transform workflows, improving patient safety and empowering clinical teams. UHCW's approach, bringing together technical, clinical, and governance expertise, demonstrates how collaboration and shared learning can drive successful digital transformation. As UHCW moves forward, its experience will provide valuable insights for other Trusts considering similar journeys, reinforcing the NHS's collective progress toward interoperability.

King's College Hospital

King's College Hospital is realising the benefits of interoperability through integration with Epic, enabling pharmacy teams to forecast medicine usage and identify potential missed doses before they happen. In partnership with Omnicell, King's is piloting a Forecasted Medicines Usage Feature (FMUF) that uses real-time data and AI to predict and prevent issues such as missed doses, unexpected spikes in demand, and shortages of stock. The feature delivers tailored dashboards, charts, and alerts to support faster, smarter decision-making, and was co-designed with clinical users to ensure it meets the real-world needs of hospital pharmacy teams. Over the coming months, the team at King's will be closely monitoring the impact of FMUF, tracking changes in the number of missed or delayed doses, frequency of stock running out, time spent on manual restocking, and end-user adoption and satisfaction. This is enabling better, safer patient care through smarter processes.

Let's talk! If you'd like more information, or want to arrange a follow up meeting, don't hesitate to get in touch with your Omnicell Regional Sales Manager, or email us at Sales-AA@omnicell.com

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