

CASE STUDY

Royal Berkshire Hospital

15.08.18



Extending Drug Compliance to the Wards Pharmacy Temperature Monitoring

End-to-End Medicine Cold Chain Protection at Royal Berkshire Hospital

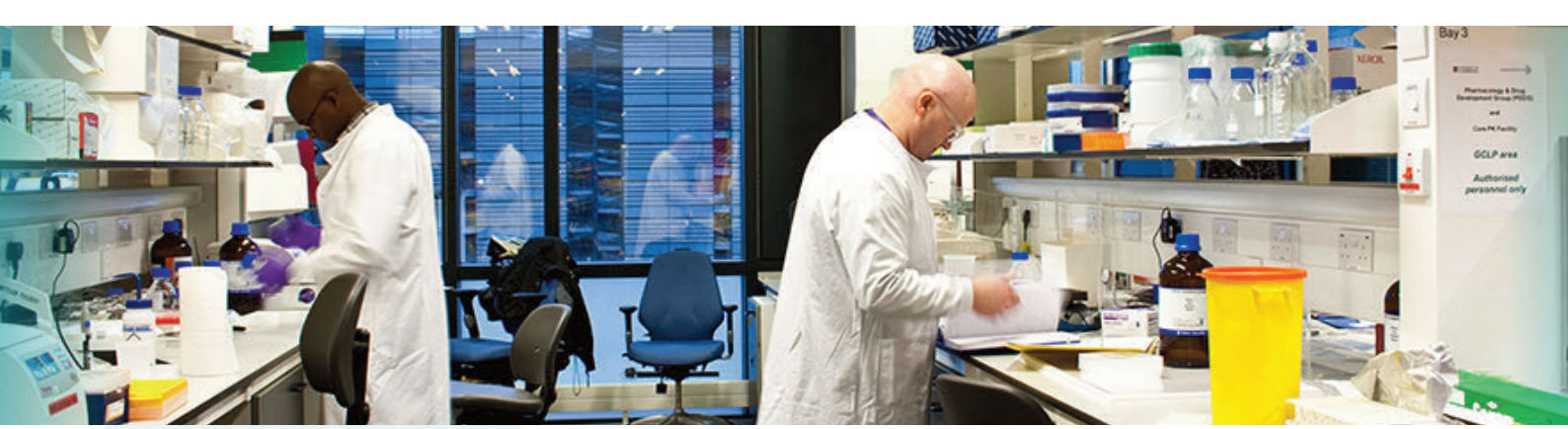
Royal Berkshire NHS Foundation Trust is one of the largest general hospital foundation trusts in the country providing a full range of services. It also the region's specialist centre for cancer, eye and renal (kidney) care serving over one million people across Berkshire and south Oxfordshire.

The Trust provides acute medical and surgical services to Reading, Wokingham and West Berkshire and specialist services such as cancer, dialysis and eye surgery to a wider population across Berkshire and its borders.

The main site is the Royal Berkshire Hospital in Reading, but services are also provided at West Berkshire Community Hospital near Newbury, the Prince Charles Eye Unit in Windsor and at our Renal Unit based between Slough and Windsor. The Trust also provides outpatient services at Townlands Hospital in Henley. In 2011 the Trust opened a major new cancer and renal centre at the Royal Berkshire Bracknell Clinic in Bracknell.

Patient safety delivered through compliance drives the monitoring need at the Royal Berkshire Hospital pharmacy department and rigorous temperature monitoring to ISO15189 standards was mandated in this project. This was to be implemented across multiple sites throughout the Trusts' locations at Reading, Newbury, Thatcham, Windsor and Bracknell where drugs need to meet the regulatory guidelines of the **MHRA**.





Targeting Enhanced Compliance

With Royal Berks' commitment to quality and efficiency, they sought to acquire a pharmacy temperature monitoring system that was capable of providing integrated monitoring of medicines from central Pharmacy through to patients on the ward.

Key objectives were meeting the compliance requirements of MHRA, free up resources and reduce cost.

The search began for a system to integrate with existing central pharmacy temperature monitoring hardware and could cope with the project specifications particular to monitoring temperature-controlled medicines on the wards. Tutela was chosen on the balance of cost and system function; Tutela's 24-hour call centre facility was also major factor in determining the winning solution.

The benefits of 24/7 alarm coverage, with real-time alarms to specific named RPs to resolve excursions to pre-set time limits for each monitored unit, are a significant benefit of the Tutela temperature monitoring system. A new system would need to have the capability to manage, locally and centrally, a number of geographically separated sites.

The Trusts' Quality Control department is centralised, so it was important that the system offered scalability and future proofing, but importantly the ability to display all hospital site data onto a single web user interface centrally.

Additionally, in terms of alarming functionality, QC required notification calls, SMS and email notifications be delivered to the correct personal responsible at each individual monitored location, so that action to resolve any temperature or system breaches could be taken accordingly.

The Tutela Monitoring Solution Selected

Royal Berkshire NHS Foundation Trust took the decision to deploy the Tutela Genesis 3 hardware technology across all sites in the trust, covering Reading, Newbury, Thatcham, Windsor and Bracknell.

Full alarm monitoring services, including provision of voice, text and email notifications, are an integral part of the system along with secure data retrieval, storage and archive, web interface hosting and remote system support.

The decision to use the Tutela system largely came down to good experience with the Tutela system already in place. This experience validated the selection of Tutela for the extension of pharmacy temperature monitoring into the wards.

In addition, the new remote monitoring hardware on ward was easy to integrate with central pharmacy monitoring, and provides a consolidated picture across multiple sites through the web-based interface.

Multi-Site Project Delivery and Roll-out

Once selected, Tutela then rolled out supply, installation, ISO17025 calibration maintenance, and training across 5 Berkshire locations including Reading, Newbury, Thatcham, Windsor and Bracknell.

130 drug fridges in wards across the estate are now monitored, alarmed, and serviced by Tutela Systems. The website users interface is the standard platform allowing multi-user, multi-tasking and simultaneous access to users assigned to the system. A total of 13 WARPs with Ethernet Repeaters were installed across all the sites.

Calibration, Validation and Training

During each installation phase, ISO17025 calibration, commissioning and QQ validation was carried out by the Tutela Projects team. Comprehensive training was provided onsite to administrator level access. Training videos are also available on line for other users and to support infrequent users of the monitoring system.

Highest Levels of Accreditation and N3 Cloud Compatibility

Because Tutela are licenced to use the NHS N3 network for VPN connectivity, The Trust saved a large unnecessary cost by using Genesis 3 Ethernet repeaters rather than adding more WARP units.

Tutela are accredited to the following relevant standards:

- ISO17025 Laboratory Calibration accreditation
- ISO9001:2008 Quality Management System
- ISO27001 Data management and Storage

Highly Secure Data Transmission and Storage

The sites are connected via dedicated IPSEC to IPSEC VPN for two-way data and alarm traffic. Because Tutela are licenced to VPN tunnel via the NHS network (BT-N3) Cat 5 cable is hardwired direct into the facilities ethernet ports. All data to and from the site travels directly through the secure VPN and is encrypted on both ends for ultimate lockdown.

The system is connected via the various trust networks back to the Tutela off site server centre based in Fleet UK. From the Tutela server centre, all aspects of alarming, data gathering, audit trails and system data backup is managed.

Summary

- **Ward drug-fridge monitoring is needed to ensure compliance throughout the entire cold chain.**
- **Remote alarming by real people is crucial for maximum inventory protection.**
- **Web-based operation over secure IP allows remote activation and assessment.**
- **Secure web access to the user interface allows isolated units to be addressed.**
- **Specialist providers offer more focussed solutions.**
- **The importance of a calibrated system to meet MHRA and UKAS compliance.**

