

Healthcare

Helping a major hospital trust provide better patient care and staff experiences in Europe's largest emergency department

Challenge

Switching to a new emergency department is a big undertaking that must run like clockwork

As the only Emergency Department (ED) within 25 miles of the local city centre, a large UK hospital faces huge pressure. In 2016, the ED handled an exceptional 240,000 people, far exceeding its design capacity of 100,000.

In 2014, a £48m project was instigated to build a bigger ED with the capability to see 160,000 patients per year. As well as improving patient care, the initiative aimed to enhance the experience of staff working in and with the department.

Sweeping changes needed to be made to clinical processes and the technology used. As the key end-user compute provider, NTT DATA was tasked to help improve productivity by introducing new ways of working within the ED.

About the client

One of the largest and busiest NHS trusts, incorporating three major hospitals and employing more than 10,000 staff to deliver services for approximately one million people across the local region. Its specialist services for cardio-respiratory diseases, cancer and renal disorders serve a further 2-3 million patients.

About NTT DATA

NTT DATA (Tokyo: 9613) is your Innovation Partner anywhere around the world. Headquartered in Tokyo, with business operations in 42 countries, we put emphasis on long-term commitment and combine global reach and local intimacy to provide premier professional services from consulting and system development to business IT outsourcing.

Solution

Bringing new infrastructure and processes online with instant support for more effective ways of metering

NTT DATA upgraded the network services, applications and data across desktops, displays and portable devices, and migrated them to the new ED. Several new capabilities promote more efficient ways of working.

Cybersecurity is strengthened with new firewalls, while upgraded physical security protects equipment against theft.

Model office provided testing in advance

Ahead of the opening, NTT DATA set up a model office for testing the new infrastructure to ensure it would support the clinical processes. To safeguard a smooth cut-over to the new ED, the NTT DATA team ran several rehearsals involving operational, IT and clinical tests in which clinical equipment was connected and tested to check it would perform perfectly.

In parallel, the IT service desk was readied to take calls from the ED as a priority. In the day running up to the opening, NTT DATA and the health trust jointly made go-no-go decisions to maintain clinical safety.

Precision planning for the big day

The cut-over itself was controlled by an hourly plan detailing tasks before and during the new ED opening on Tuesday, 26 April 2017, a time of least clinical demand. The most critical period began at 04:00, with patients and clinicians transferring to the new ED.

Collaboration with other medical resources, such as the regional ambulance service, extended the cut-over to wider services. From 04:00, the new ED was taking patient calls and receiving incoming ambulances.

Further support came from a team of quick-response IT engineers, clinicians, administrators and project managers based in the ED for 72 hours.

Results

The department opens as scheduled using new technology and processes to deliver services to more patients

Following the successful cut-over from the old facility, the new emergency department opened on schedule to become the largest of its kind in Europe.

The flow of cases and the patient experience have improved through technology not typically seen in such environments. For example, the patient queuing system is now anonymous and fully automated. Large display screens with queuing applications ensure no names are called out.

The running of the department has improved through a range of innovations that include:

- **Follow-me desktop:** staff moving around can simply “tap-on” to a nearby PC using a smart card and pick up their work wherever they are.
- **On-demand printing:** wall-mounted tablets allow patient literature to be printed as needed, reducing paper wastage.
- **Patient-facing screens:** reception can share information with patients to speed up the registration process and improve data accuracy.
- **Digital displays and mobile devices:** handovers in the main clinical areas are easier and faster to complete.

With the project’s success, NTT DATA has been contracted to plan and conduct the migration of six further high-pressure clinical wards to the refurbished original ED location.



“Our purpose is to deliver caring at its best for everyone visiting our hospitals, either as a patient, the public or our staff. Our new dedicated Children’s Emergency Department has its own entrance and is designed to meet the needs of young children and teenagers, with specially designed waiting areas.”

— Chief Executive Officer