

BRADFORD TEACHING HOSPITALS NHS FOUNDATION TRUST

NAUTILUS CONSULTING SUPPORTING THE TRUST'S COMMAND CENTRE TO DELIVER BETTER, SAFER AND MORE EFFICIENT PATIENT CARE

THE CHALLENGE

Bradford Teaching Hospitals NHS Foundation Trust is responsible for providing hospital services for the people of Bradford and communities across Yorkshire. Its 6,500 staff work over several sites, including Bradford Royal Infirmary, which provides the majority of its inpatient services.

The trust went live with the Cerner Millennium electronic patient record (EPR) in September 2017 and then became the first healthcare organisation in Europe to open a Command Centre.

The project, developed with GE Healthcare, was designed to make the experience of being in hospital smoother, faster, and more efficient for patients by giving staff access to the real time information they need to make fast and informed decisions about patient flow and care co-ordination.

From the outset, Bradford Teaching Hospitals knew that it needed a trusted partner to access the information in Cerner Millennium and to make it available for other applications. Once the trust made the decision to develop the Command Centre, this included its action focused 'tiles' that show near real-time data on the emergency department and bed status across the Bradford Royal Infirmary, as well as the clinical status of patients.

THE SOLUTION

Bradford Teaching Hospitals contracted with Nautilus Consulting for the 835 solution which was originally developed in partnership with an NHS trust as an operational data source for theatre dashboards and A&E reporting. It has since expanded to cover all administrative and core clinical data sets.

The 835 solution takes direct data feeds from Cerner Millennium into an industry-standard Microsoft SQL server platform with staging areas, data marts/cubes and reports. It is updated within minutes of the live Millennium system, providing near to real-time data for analytics, dashboards and the data warehouse.

At Bradford Teaching Hospitals, the 835 solution surfaces data items from Cerner Millennium, transforms them, and makes them available to the tiles in the Command Centre, where they are displayed on screens in a 'space-age' style room with banks of desks and meetings spaces for the trust's operational teams.

Bradford Teaching Hospitals is also deploying 835 to feed a mobile app that gives staff rapid access to their patient lists, results, patient messaging and task lists. It is further looking at additional analytics uses, including a 'place' command centre that would address pressure and patient flow across its healthcare economy, which is an emerging NHS integrated care system.



THE RESULTS

GE set up a 'digital twin' of the Bradford Royal Infirmary using four years' worth of historic data to enable the trust to examine its workflows and processes and to model the impact of changing them.

This helped the trust to address winter pressures while it worked with staff on the design of the Command Centre, its tiles, and the roles needed to use them effectively. The Command Centre went live in November 2019 and rolled out the last of its eight tiles in autumn 2020.

The final tile was 'deterioration', which was co-developed by Bradford Teaching Hospitals and another GE Command Centre user, Humber River Regional Hospital in Canada, using National Early Warning Score 2 scoring. The tile tells Command Centre staff if a patient is at risk of deterioration, whether they require additional observations, and if any of these have been missed, so they can follow up.

All this work depends on the Nautilus 835 solution.

Paul Rice, Chief Digital and Information Officer, said:



"Nautilus Consulting is an excellent partner for the trust.

"They have the right expertise in transforming data and they stay close to the frontline. Many of their customers look like Bradford Teaching Hospitals: that is hospitals using Cerner and other EPR systems, that want to make good use of their data, so we can swap activities and ideas.

"We could not have built the Command Centre without Nautilus. They have been essential to getting this fast-paced project off the ground and sustaining it."



Nautilus Consulting helps healthcare providers realise the clinical and operational benefits of data-driven digital healthcare, with smart solutions and support that address healthcare's real-life technology challenges.

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