

Digital Data Intelligence and Insight

Digital Strategy Update 2023/24



Bradford Teaching Hospitals
NHS Foundation Trust

**Ambitious
Resilient
Diverse
Sustainable**



Reflection on 2022/23

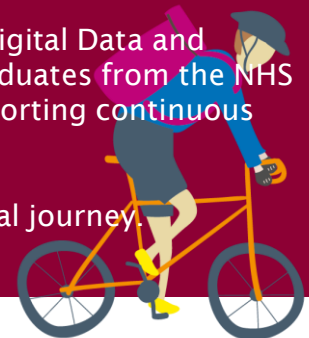


At Bradford Teaching Hospitals NHS Foundation Trust (BTHFT) we continue to put digital technology at the heart of our operational delivery and our service transformation ambition. We are in the middle of a programme of significant upgrades to our enabling infrastructure - the bedrock upon which we will introduce new models of care that take information to the bedside with mobile functionality, apps and next generation access to our core Oracle Electronic Patient Record (Cerner EPR). In tandem with the addition of new, class leading theatres at St Lukes and for Maternity we are extending the functionality of our EPR into theatres, anaesthesia and critical care. This will support higher quality care and more efficient delivery of services as we strive to reduce the elective backlog built up during the Covid-19 pandemic. In parallel we are using innovative functionality developed with our technology partner DrDoctor to improve scheduling processes for planned care, giving patients more opportunity to select appointment and procedure times that suit them, their family and their carers. Our Virtual Royal Infirmary activities have increased the provision of bespoke and tailored information and advice to patients to support their self-management. This ensures more people safely undertake guided pre-habilitation and rehabilitation either side of a procedure, improving their fitness and reducing their time to full recovery. Expanding our Virtual Wards and working in ever closer collaboration with the Digital Care Hub in Airedale has enabled us to support an ever greater number of patients in their own homes, where they feel safer and more confident, safeguarding inpatient resources for those whom the hospital is exactly the right place to be.

This year has been a turning point in our ability to drive important information and insights in to the hands of colleagues regarding operational performance, in all of its aspects (quality, safety, activity, cost etc), through the development of our Insights Centre App. Adopting the principles and practice of the Making Data Count programme from NHSE, we are able to hone in on and capture real success whilst also highlighting at an earlier point potential areas of concern where simply doing what we have always done will not appreciably change outcomes. Following the soft-launch of Insights Centre's potent set of tools earlier this year, we will see a 'Board to Bedside' step increase in promotion, communications, education and training.

Finally but importantly, we continue to exploit opportunities to promote careers within the Digital Data and Technology space through engagement with local Colleges and Universities. We support graduates from the NHS scheme on placements and add much needed resources from Project Search whilst also supporting continuous professional development of our colleagues.

We welcome your feedback and support as we embark on this crucial next phase of our digital journey.



Key Achievements since our last report...

Keeping systems up to date

Upgrades keep systems safe, operable and feature-rich. Chemocare, Auditbase and Solus Endoscopy are some of the systems the project team have upgraded.

Leading Innovation

BTHFT are one of the most advanced Trusts in the UK for knowing where equipment is. Clinical Engineering (CE) have tagged around 12,000 assets so far with RFID tags which means the location of each piece of equipment can be tracked around the hospital in real time. No more missing equipment is quite an ambition. CE will continue to label more assets in the coming years and are looking to expand availability of the location awareness of assets.

Our People:

In June 2023, Niraj Mistry, the IT Service Desk Team Leader won the Trust Employee of the month award. It shows the level of commitment to supporting our colleagues, that Niraj was nominated.



Outstanding Pharmacy

Omnicell medicine cabinets supply and dispense medication on selected wards faster and more safely; work is ongoing to provision an ePrescribing interface with Cerner EPR. We're also exploring CLEO for ePrescriptions once the interface is complete.

Leading Innovation

BTHFT are one of the most advanced Trusts in the UK for stock/inventory management capability. 'SupplyX' in Radiology, Central Stores and Nucleus Theatres **has halved** the stock held on shelves and **reduced the ad-hoc Purchase Orders raised by 800%**. The system knows the Lot, Serial and Expiry of stock and records its usage to each patient. This gives an unprecedented traceability, reporting capability, waste reduction and efficiency. The system will continue to be rolled out across theatres and other selected areas over the coming year.

Our People

A series of key appointments have been made to the informatics team. Adam Griffin has joined as Deputy Chief Digital Information Officer / Chief Technical Officer. A priority for Adam will be to establish purposive relationships with colleagues across the Trust and in partner organisations to develop and deliver our strategic objectives enabled by data, digital transformation and information technology.

Key Achievements since our last report...cont.

Omnicell Medicine Cabinets replaced the drug cupboards in AED and AMU. These smart cabinets extend Pharmacy stock management into the ward for automated re-ordering, stock rotation and balancing as well as a future capability to check that only what is being dispensed to a patient matches what has been dispensed.

Implemented centralised storage of Cardiology results ensuring that echo images, completed outside of Cardiology, are now stored centrally. Purchased and implemented fit-for-purpose kit which can be integrated with Cardiology systems. Improved patient demographics data quality within Cardiology report storage making it easier to find studies. Recruited a Cardiology system IT support team to support the upgrades and service going forwards.

Blood Transfusion and Histopathology – BTHFT is the first Trust in the West Yorkshire and Harrogate Pathology Network (WYHPN) to go live with the new Laboratory Information Management System (LIMS).



Maternity went live on Oracle (Cerner) EPR – The introduction of EPR within Maternity kick-started an exciting new era for the service, and it forms an important part of our Outstanding Maternity Services (OMS) programme.

Pennine Breast Screening – replaced an aged and poorly supported system, including the provision of new reporting workstations.

Providing Radiology reports, Outpatient Clinic Letters, Inpatient Discharge Documents and ED discharges to the Yorkshire and Humber Care Record (YHCR) as the first Acute Trust to prove this to the YHCR.

ICE – Upgraded the Trust's results reporting system (ICE) to provide a resilient system that provides the basis for further developments.

Our approach to our strategy

Ambitious

We want to be at the forefront of exploiting the opportunities that digital healthcare provides, ensuring our patients access best quality care underpinned by cutting edge technology.

Diverse

We will create a team of many talents, a workforce of mixed experience and heritage working together with our vibrant and engaged communities to develop and thrive.

Resilient

We know that to deliver the best care needs strong digital infrastructure. Enjoying the confidence of our communities in the role of digital technology in their care and how we use their data is essential. We must respond to an ever- changing threat environment; Cyber Security remains paramount.

Sustainable

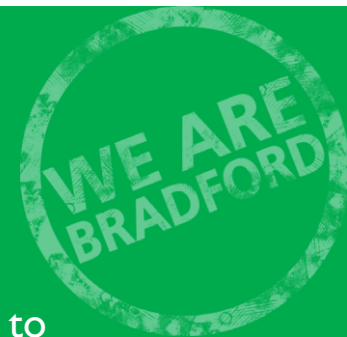
Increasingly we will grow the skills and build capacity with local partners to deliver our digital ambitions. We will address the digital divide, prioritise digital and data literacy and help secure access to technology to ensure that the benefits of new models of care can be appreciated by everyone.



Gearing ourselves for strategic success



Our Patients, Our People, Our Place and Our Partners



Informatics plays a critical transformational role in providing outstanding services to our patients, people, place and partners, which is a core component of BTHFT's Corporate Strategy which explains how we will work towards our vision to be an “outstanding provider of healthcare, research and education and a great place to work”.

We are committed to making a difference to everyone who needs our care in partnership with **West Yorkshire Health and Care Partnership, Bradford District and Craven and West Yorkshire Association of Acute Trusts.**

We recognise that we will best do this by developing high quality, innovative services and by continuing to develop strong partnerships, and collaborations.





Our Priority Programmes

Digital technology is central to delivering our priority programmes and activities.



Electronic Patient Record

Our EPR (Electronic Patient Record) is the digital backbone of the care delivered by every member of staff at the Trust. This 'single source of truth' was introduced at BTHFT in 2017 as part of a joint programme with Calderdale and Huddersfield NHS Trust (CHT). The system now supports the management of most patient care and interfaces with other specialist systems such as Radiology and Pathology.

The system 'Oracle Millennium' (Cerner) is recognised as one of the leading EPRs in the world and is used by over 144,000 health and care professionals across 24 NHS Trusts to manage 1.5 million patients every month.

Every interaction with our patients uses the EPR to record what is discussed, any treatments or advice given or any procedures that take place. This information is crucial because it provides a continuous record of care making it safer and more efficient.

EPR is much more than a digital version of written notes. It also helps us to run our hospital and our services, allows clinicians to order tests or medications electronically, review results remotely and aid be management. It can prompt appropriate medicines administration, support multi-disciplinary care planning and flag up potential risks or allergies. By pulling together different pieces of information predictively, it can suggest emerging illness or decline in a patient that might otherwise go unheralded.

BTHFT and CHT continue to work side-by-side to develop the system, sharing a core team who manage it day to day as well as supporting optimisation activities, planning and executing developments.

We are currently mid-programme to enable Airedale NHS Foundation Trust (our near neighbour) to join our single EPR domain, increasing the opportunities to collaborate effectively together and provide consistent joined up care for our communities.



Digital Cardiology

For some disciplines e.g. Cardiology, dedicated systems supplement our core EPR to support specialist clinical work. We are currently upgrading or replacing the existing systems to improve resilience and performance whilst also integrating those systems with our EPR to ensure that patient information can be shared readily and consistently across the Trust.

Clinical Informatics

Highlights of the many EPR optimisations and enhancements include enhanced content to record ReSPECT, Red flagging Sepsis moving away from the existing SIRS (Systemic Inflammatory Response Syndrome) solution and new and improved nursing assessment documentation.

The EPR footprint across the Trust continues to expand, having recently gone live in Maternity and now looking at HIV and renal services with additional significant efforts in Theatres, Anaesthesia and Critical Care. In areas where this is not possible such as Neonates, alternatives are being investigated.

The Trust will be aligning its EPR with Airedale NHS Foundation Trust with a planned go-live of Oracle (Cerner) EPR in September 2024. This large-scale programme will provide better communications and a unified patient record, including care-at-the-bedside capability.

Further work continues to position the Trust as a Class Leader, such as digitising the patient pathway with the DrDoctor patient portal which now gives access to care plans for remote completion and patient access through NHS App.

Our CNIO has patient safety and clinical risk at the heart of all EPR and wider Informatics projects, holding services and suppliers to account for maintaining the highest standards.

LIMS

Working to migrate Blood Sciences, Haematology, Immunology and Cellular Pathology into the new WYHPN LIMS system, removing resilience on an aged system and enabling improved collaboration across the network.

A glance at future work:

- Health Inequalities dashboard development
- Embedding NHSE Making Data Count Statistical Process Control (SPC) principles for greater clarity in understanding data and variation
- Quality Team collaboration dashboards/ CQUIN
- Finance Activity Data Quality in outpatients/procedure recording
- Tobacco Dependence Service support
- Eccleshill Community Diagnostic Centre
- DrDoctor and NHS App integration supporting appointment booking plus DrDoctor 'see me sooner' functionality
- Onboarding theatres, anaesthesia and critical care EPR modules. Go live Sept 24
- EMIS/Cerner ePrescribing Interface
- Robotic Process Automation (RPA)
- Tender replacement for Evolve
- IT Network Upgrade
- O365 full migration



Ensuring dependable, safe, and resilient foundations

Digital Transformation relies on stable, secure and well managed digital and change foundations.



Cyber Security

The IT team was re-accredited with the ISO27001 international certification, which provides assurance we have the correct people and processes in terms of information security. This year, there will be a full-time Cyber Security Manager appointed, who will be responsible for keeping the Trust safe. The Trust has upgraded the protection against potential attacks from the outside world.

Modern Ways of Working

The implementation of Microsoft365 (formerly Office365) offers an invaluable opportunity to reimagine and redefine how we 'do business' within the trust; through Artificial Intelligence, automation of processes and collaboration. We are at the start of this exciting journey to bring true digital transformation to the Trust.

Network Upgrade

A £5m network refresh is underway which includes all the wired and wireless network systems. This will improve clinical access to systems and benefit all members of staff with faster and more reliable network connections.

Change Management

The change team has a significant change portfolio of predominantly clinical change to manage and execute. To make this process easier, more transparent and collaborative, we are establishing new technologies and disciplines to deliver clinical, and patient outcomes at pace.



Information Governance

Keeping patient information safe and secure is central to our role as a healthcare provider. With more information being held digitally, coupled with enhanced digital technologies being used more frequently, ensuring that we have the right safeguards in place has never been more important. BTHFT retains an unwavering focus on Information Governance.

We embrace the principles of data sharing for joined up care, across organisations for direct care, a position reinforced in the joint statement published by the National Data Guardian (NDG), Information Commissioner (ICO) and Chief Medical Officer (CMO). This reflects the existing embedded principles of the Caldicott Guardian, NHS and Health and Social Care and of this Trust which have been integral to the activities the organisation and its IG Service undertake in relation to patient and service user information for many years. And which complement and support the UK Data Protection Act and GDPR legislation and other Information Governance standards.

We met all the standards required by the Data Security and Protection Toolkit Annual assessment. Data Protection Impact Assessments (DPIAs) and other assurance documentation such as Data Sharing and processing agreements are core to ensuring that this is maintained, and these are carried out regularly across the Trust. They provide assurance that information risk has been considered and factored in as required by all parties but also give clarity to sharing arrangements between us and our partner organisations.





Data, Insight & Intelligence

Quality data, to ensure quality decisions



The Insights Centre

The Business and Intelligence service has introduced a one-stop web portal for the delivery of information and intelligence across all areas of the organisation.

Key features:

- Quickly find the organisation's operational performance. We consider this our 5-minute briefing where colleagues can understand pressures within operational areas.
- Gain oversight of trends using robust statistical analysis so that appropriate interventions can be planned.
- Explore (Power Bi) Apps, reporting links and useful resources in a single easy to access Directory.

The heart of our portal is:

- A library of measures covering operational performance with plans to extend across the domains of quality, workforce, and finance.
- Customisable dashboards where colleagues can 'pin' measures and view together to provide greater oversight of related areas e.g., Productivity, Quality, Sickness etc.
- Variation identifier which provides the functionality to view sets of related measures which are showing improvement or concern variation, helping to see the wood for the trees.



Submissions:

Business Intelligence continues to respond to changing national priorities with regard to data submissions and returns. This includes being an early adopter of the Faster Data Flows initiative which makes subsets of commissioning datasets available every day. Related to this is the close-to-realtime Situation Reporting (SITREP) which allows NHSE to understand demands and pressures of the organisation.

Patient Management and Tracking

In response to the organisational requirement to manage patient pathways in a more structured way, the BI service has developed an online pathway tracking application which will allow validations, plans and escalation to be recorded. No more managing patients in Excel!

Clinical Engagement

The Business Intelligence team now has dedicated engagement roles in order to better develop clinical teams skills in accurate and timely documentation. Impressive impact in workflow compliance and documentation improvement in Maternity.

