



GE HealthCare

# Bradford Teaching Hospitals NHS FT Command Centre

## Case study

Like many organisations across the NHS, Bradford Teaching Hospitals NHS Foundation Trust (BTHFT) has faced pressures on the emergency department, constraints on bed capacity and patient flow, and challenges with the non-elective care pathway. Without clear insights about patient and unit circumstances during the admissions and transfer processes, patients weren't always placed in the right unit when they were admitted.

Through a collaboration with GE HealthCare and the introduction of the Command Centre, BTHFT embarked on an organisational and operational transformation programme, enabling the Trust to operate at a higher performance level. By utilising digital technology, analytical insights, redeveloped workflows and processes, and dedicated staff, BTHFT has developed an optimised operating model to maximise resources and proactively manage demand.

Health Tech Newspaper (HTN) visited the Trust to learn how the Command Centre works; what it means for operational performance; the impact on the emergency department, patient flow, discharge, deterioration management, and the hospital's operations at night; and the Trust's plans for the future.

To explore the programme, we spoke with these members of the BTHFT team:

- Sajid Azeb, Chief Operating Officer and Deputy Chief Executive
- Sarah Buckley, Clinical Lead for the Command Centre and Patient Flow
- LeeAnne Elliott, Deputy Medical Director
- Clare Nandha, Lead Sepsis Nurse

## Operational transformation: From objectives to improved performance

Launched in 2019, the Command Centre program is viewed as “a step change in the way the Trust operated.” BTHFT has utilised the Command Centre programme to support its organisational transformation and improve performance. Before the implementation of the Command Centre, clinical and operational teams were heavily reliant on manual, time-consuming processes such as walking the wards with clipboards to collect information on patients and capacity and holding long meetings to collate data.

Sajid Azeb, Chief Operating Officer and Deputy Chief Executive, highlighted: “The Command Centre has been a key enabler of our overall vision to deliver outstanding care, research, and education, and to be a great place to work. It helped us transform our clinical pathways.”

BTHFT has made remarkable progress in addressing the strategic objectives they established for their Command Centre:

### Objective #1: Relieve pressure on the emergency department

- Rose to the top quartile for performance with regard to the emergency care standard. Today, BTHFT is ranked fifth out of 140 Acute Trusts, a remarkable increase over their previous ranking of 119th – and, they are maintaining their new higher ranking.

#### Objective #2: Better match bed and staff capacity to demand

- Increased compliance with accurately tracking all patients' expected discharge date (EDD), with 92% of patients having an EDD compared to 67% before. And, only 1.8% of patients have an expired EDD (EDD is in the past).
- Improved discharge processes, with 54% of discharges happening by 4pm, increased from 35% before.

#### Objective #3: Improve care and length-of-stay by getting patients to the right bed at the right time

- Large improvement in bed placement accuracy by supporting teams in getting the right patient to the right bed, the first time. Before, there were an average of 58 outliers per day, which is 10% of the bed base. Today, there are just six per day – only 1% of the bed base.

#### Objective #4: Improve situational awareness and support decision-making through reliable, visible data

- Reduced operational bed meetings from three down to just two, giving care givers 3.7 hours back to care every day.

#### Objective #5: Limit unwarranted variation and waste by standardising processes

- Giving 6.5 hours per day back to clinical teams for patient care by eliminating 200 phone calls to the ward on any given day.

The operational improvements and organization-wide transformation supported by the Command Centre deployment have also gained recognition across the NHS, including:

- BTHFT named one of the most improved digital pioneers in the NHS<sup>1</sup>, placing it in the top ten Trusts across England.
- The Command Centre's input highlighted under 'outstanding practice' by the Care Quality Commission (CQC)<sup>2</sup>.

Sajid explained the Command Centre is not just about the technology – it's about the people. "It has transformed the way we work," he said. "People are no longer walking wards and having long meetings about sharing information – now we have meetings which are focused on key decisions and actions."

## The BTHFT Command Centre

At BTHFT, the Command Centre sits under the remit of the Chief Operating Officer, serving clinical units with oversight of all inpatients throughout their episode of care.

In Bradford, "Command Centre" refers to more than the physical Command Centre department – it's the hub and heartbeat of operations for the entire organization. The technology from GE HealthCare that powers the Command Centre helps staff inside and outside the Command Centre orchestrate care by providing continuously-updating insights.

*"It is the heart or the brain of the organisation, it is front and centre of everything we do. I'd describe it as air traffic control - it's the central area where you have all the information on who is coming in and who is going out."*

– Sajid Azeb, COO

The physical Command Centre is located in a designated room described to be "optimised for cross-team working and data-driven interventions." It is staffed around the clock to support patients and front-line caregivers through the use of real-time analytics that are generated through the Command Centre's advanced technologies and data integration processes. Additionally, the Trust conducts its site operation meetings, including silver (tactical) and gold (strategic) command response to major incidents, from the Command Centre. It's also used as a location where multi-disciplinary teams gather and make decisions together, as well as a place where staff can go to get answers and support.

Organisation-wide, the Command Centre platform collects and presents live data in software applications which BTHFT staff refer to as 'Tiles'. Each Tile has a different operational or clinical focus, providing real-time situational awareness and decision support related to demand, capacity, discharge, protocol compliance, emergency department flow, and care progression.

The Command Centre platform is used in conjunction with the Trust's electronic patient record system, Cerner Millennium, and helps make data and insights visible to teams across the organisation when they need it.

## How the Command Centre team works

With expert input from GE HealthCare's Command Centre consultants, BTHFT created a team that functions with the overarching aim of managing and supporting patient flow. The Command Centre team is comprised of staff members who previously worked in a variety of positions across the organization. They were strategically brought together as a collaborative force in redesigned roles with the deployment of the Command Centre.

Sarah Buckley, Clinical Lead for Centre and Patient Flow at BTHFT explains how the team works: "It operates 24 hours a day, led by a clinical site matron who takes onsite responsibility by coordinating the team and overseeing decision-making. They're supported by a clinical flow manager and clinical flow facilitator, with administration staff providing further support during normal working hours by filtering phone calls, expediting patients, and booking on-the-day transport. The on-call manager is also based in the Command Centre, along with the out-of-hours workforce matron."

Sarah added that the remit includes making decisions on where to place patients, involving oversight across the organisation. As a cross-functional team located together with access to real-time insights from each unit, the caregivers in the Command Centre can make nimble, data-driven decisions to determine which patients get which beds, assigning those with the highest clinical priority as needed.

She said: “We learned that staff respect the decisions made by the Command Centre team because they understand the value of data, which forms the basis for these decisions.”

*“Staff don’t realise everything that we do within the Command Centre, because they don’t need to - they need to know that there is a safe space that they can ring when they need help.”*

— Sarah Buckley, Clinical Lead for Command Centre

In addition to their core function, Sarah told us how the Command Centre team helps coordinate tasks ranging from portering and cleaning following discharges to prevent delays in bed availability; coordinating out-of-hours nurse staffing; collating and acting upon information around security incidents; sickness calls into the organisation and complaints. They carry the cardiac arrest beep; support the fire response team and safe restraint team; take responsibility for provision of emergency drugs out-of-hours and through to IT log-in support across the organisation.

## From data collecting to data-driven actions

BTHFT’s Chief Operating Officer and Deputy Chief Executive Sajid Azeb highlighted the difference that the Command Centre has made by providing a live stream of real-time information, reducing the need for staff to hold bed meetings where the primary purpose is to collate information.

As a result, BTHFT has been able to reduce operational meetings from three each day down to just two. Now, Sajid explained, instead of spending meetings trying to source data from across the organisation, these meetings are focused on proactive decision-making, identifying areas where actions need to be taken, and putting practical plans into place. A representative from each clinical service will attend the twice-daily meetings to ensure that the breadth of the organisation is covered, and data is already available and visible through the Command Centre’s Tiles. The meetings have transformed from staff attempting to keep their finger on the pulse of the hospital to actively driving improvements.

He added: “Another direct result of the Command Centre’s implementation has been the reduction in telephone traffic, as staff no

longer have to call up wards to gather information on beds and patients – we’ve estimated that the Trust has saved around 200 phone calls to the ward in any given day.”

Discussing her work leading the clinical and patient flow teams through the Command Centre, Sarah said that a key benefit of the Command Centre is the way it gives clinical teams time back for patient care and supports them in getting the right patient to the right bed, first time. “By doing that we reduce length-of-stay, prevent deconditioning and prevent harms, because the patient is being looked after by the right clinical team, appropriate to their condition,” she said.

Sarah also described how a key element of the Command Centre’s implementation involved working on the “ambience and culture” within the room. She emphasised the importance of a controlled environment that lends itself to considered decision-making. Visiting the Command Centre, the HTN team was struck by the calm, quiet atmosphere, with the team observing a ‘Wall of Analytics™’, tracking data, conducting calls, fielding escalations, and collaborating.

“You can’t make informed decisions about where to place a patient when it’s noisy and chaotic,” said Sarah. “Having a calm, collected, quiet atmosphere makes a difference, because there’s a person at the other end of your decision.”

She added bringing people together within the Command Centre creates “a unique situation of decision-makers” which has proved to be very good for inter-professional relationship building.

## Spotlight on the emergency department

*“At the point we were implementing the Command Centre for our emergency care standard performance, we were approximately 80th or 90th in the country; currently we are sat within the top quartile of performers.”*

— Sajid Azeb, COO

One of the ‘Tiles’ in BTHFT’s Command Centre focuses specifically on the emergency department. Mainly used by emergency department operational and clinical teams, the ED Status Tile provides situational awareness of the live position, providing a census of patients across the emergency department and urgent care centre. It allows teams to keep track of capacity and the onward patient flow impact on the organisation, as well as wait times and status of bed requests.

Sarah emphasised the “strong working relationship” between the Command Centre team and the ED team. The Command Centre team can see everything that is happening in the emergency department electronically, with access to their electronic patient records as well as

situational awareness from the Tile, so decisions can be proactively made around patients.

"Bed requests come through and they're not a surprise, because we've seen it happening ahead of that decision," Sarah explained.

On the ED Status Tile, clinical teams can identify trends in demand, helping to recognise when challenges are caused by a high acuity patient population, identify backlogs in diagnostics or spot surges of incoming patient demand. From the clinical perspective, "staff can see a number of flags surfacing data contained in the electronic patient record (EPR), such as alerts for patients with mental health conditions, safeguarding concerns, potential infection status, or recent ED attendances. Easy access to that information helps them to deliver the appropriate care."

Sajid told us that historically, to improve an organisation's performance on the emergency care standard, teams might have concentrated efforts on the emergency department itself. Through the Command Centre, BTHFT teams can identify when the focus needs to be downstream instead, in wards or discharge processes. Sajid explained that a particular area of focus for BTHFT is on patients who no longer need to be in hospital.

## Spotlight on discharges

"If we can identify the patients who no longer need to be in hospital through our Command Centre, we can put actions into play," Sajid said. "If we get that right, it means that patients are getting home to their family sooner, And, new patients coming into A&E flow through the ED in a more timely, more efficient manner."

Ongoing prioritisation of discharge activities is one of the key purposes of the Command Centre – both for the patient demand that the Trust is experiencing that day, and for the predicted demand in the coming days.

The Command Centre team has visibility into patient discharge information so they can focus on patients who are expected to discharge today and tomorrow across the whole organisation, including its satellite intermediate care facilities. Where discharges are critical to release capacity for incoming demand, the Command Centre team works with clinical teams to coordinate activities and provide support where needed.

The Tiles support the management of care progression and discharge activities by providing real-time patient-level alerts, pending tasks and discharge statuses to give a holistic view of the patient.

For example, teams can track outstanding tasks that may impact discharge and whether onward care and services could support them: "If a patient has an incomplete imaging order, the ward can quickly check the status alongside other discharge information to see whether the X-ray has been requested, whether the scan is complete, and if it

has been read. This information allows the ward to take action to follow up, but it also enables the Virtual Royal Infirmary model of care to step in and determine if the scan is a necessary condition of discharge, or whether they can book the patient into the virtual clinic instead to enable the patient to be discharged in a timely manner."

Sarah added how her team can see when a patient has arrived and their estimated date of discharge (EDD), which she called "a massive driver for demand and capacity and a massive driver for discharge planning". If, for example, a frail patient has an EDD for the coming Thursday, her prescriptions should be on the ward by Wednesday at the latest. Her transport should be booked and ready; her family should be fully aware so that there is food in the house and everything is prepared for her.

Discharge visibility is driven by the EDD, making it a critical data point that was often missing or inaccurate in the past. Entered by the clinical teams in the EPR, accuracy of EDD has improved significantly at BTHFT since the implementation of the Command Centre. EDD compliance has improved from 67% to 92%, and only 1.8% of patients have an EDD that is in the past.

Compliance has improved too with visibility and accountability brought about by the Command Centre. Teams can now see their data being used and recognise the value of it, encouraging compliance across the Trust.

*"We've got visibility of what every patient is waiting for."*

— Sarah Buckley, Clinical Lead for Command Centre

BTHFT's multi-agency integrated discharge team (MAIDT) use the Command Centre to identify candidates for intervention by automatically cross-referencing patients who are medically optimised for discharge with no immediate date of discharge. Stranded patients (patients with a length of stay greater than seven days) can then be identified in real-time. The Trust shared how this supports BTHFT staff as they focus their efforts on working with cross-agency partners to put the required care in place to enable patients to be safely discharged.

Alongside the focus on complex discharges and reducing long lengths of stay, there is significant value in improving the time of discharge for non-complex discharges. Reducing avoidable length of stay even by a few hours releases flow and has significant benefits for incoming patients waiting for a bed.

# 80%

of discharges to take place by 4pm

*“That’s a real focus point for us. If we can meet that target by 4pm, that means we have enough beds to be able to run through the night into the following morning. The patient journey is much improved as a result, and we know from previous research that mortality and morbidity improvements happen if you can get the patient into the right bed at the right time.”*

— Sajid Azeb, COO

## Supporting better processes to manage patient deterioration

In addition to the focus on operational patient flow, staff also told us how the Command Centre team is supporting improvements in clinical quality and safety. The addition of the Deterioration Tile initiated positive changes regarding how staff can access information regarding National Early Warning Scores (NEWS2) pulled through from the Trust’s EPR. Now they have a clearer picture of the hospital at any given moment, which helps ensure staff have access to the information they need when they need it.

LeeAnne Elliott, Patient Safety Specialist at BTHFT, described how she saw the implementation of the Command Centre as a “great opportunity” to improve data visibility, allowing them to improve their escalation process within the Trust.

The new Tile is a key component of a holistic effort to improve deterioration management processes, supporting the adoption of best practices by making otherwise hard-to-find data visible and actionable.

A multidisciplinary team including a variety of medical and nursing staff became involved in the project, considering what elements were important in helping BTHFT to recognise and respond swiftly to the needs of their patient population. This was “integral”, she said, because it meant that the way the Tile worked reflected priorities for staff accessibility and supported the processes that they put in place. “It was key to us to make sure we were talking to the people who were going to use the application,” LeeAnne said, “so that whatever we put into the Tile was going to be useful to them in terms of how they worked.”

Whilst this data is available in the Command Centre for oversight, we heard how the standard operating procedures relating to this data are owned and championed by the wards themselves, who can refer to the Deterioration Tile when they need.

Clare Nandha, Lead Sepsis Nurse at BTHFT, explained that the Deterioration Tile is used on the frontline by a variety of caregivers; including the Critical Care outreach team, doctors, nurses and healthcare assistants. The Tile supports decision-making by providing a quick, clear view of the data the team needs.

The focus on people, processes, and tools related to patient deterioration has helped make day-to-day duties more focused. With these improvements in place, patient deterioration can be adequately managed with staff responding swiftly and effectively.

Nursing staff also use the Tile as a backstop to identify when assessments are overdue based on BTHFT protocols. This has helped the Trust move away from viewing observations as simply a task to be ticked off a list, Clare explained; instead, the analytics available through the Command Centre have helped to embed observations as part of an ongoing system-wide process through which the clinical team can maintain situational awareness for their sicker patients.

*“We have seen a massive improvement in completion of NEWS2 in line with the national guidelines; a fantastic improvement in our documented evidence of escalation.”*

— Clare Nandha, Lead Sepsis Nurse

Clare told us that the Tile has led to improved teamwork on the wards, as well as supporting teams to make efficient use of their time where possible. If there are outstanding observations due in one team, she explained, then the Tile can help other teams to recognise that this team might be particularly busy and would appreciate some help where capacity is available. She also emphasised how the new processes and improved access to relevant data have helped staff feel more confident about their care delivery, providing reassurance that the organisation has its finger on the pulse of patient wellbeing and deterioration.

LeeAnne shared that staff have deemed the visibility of information to be “amazing”, adding that from her perspective, it was “really pleasing to see that all the work we’d been doing had made a difference for the staff on the ward.”

Taking a wider view, the Deterioration Tile also supports BTHFT with staffing, particularly around understanding acuity versus dependency. If staff are asking for more help, the Command Centre provides a visualisation of the type and level of help that they need, along with when it is needed.

## Hospital-at-night safety huddle

In November 2023, BTHFT went live with a pilot of their new hospital-at-night safety huddle, which is attended by the out-of-hours clinical site matron along with registrars from specialties across the Trust and representatives from the critical care outreach team. The safety huddle uses the Deterioration Tile to support their review of patients in the ward,



and confirm with the clinical team that there is suitable care in place. If the team cannot reassure themselves through this process that suitable care is in place, then staff are delegated immediately to take action.

Sarah described how the safety huddle will also use the Tiles to examine BTHFT's capacity in critical care areas. "They will look at the data and ask whether we have a bed in cardiology, stroke, respiratory, high dependency and intensive care," she shared. "If the answer is 'no' to one or all those questions, then the next question is: what plan are we making from this point for the next patient?"

## What the future holds

Sajid highlighted that implementing a Command Centre is a cultural shift, not just a case of bringing in a piece of technology. He reiterated the importance of having clarity on exactly why the Command Centre is being implemented, and what the organisation implementing it wants to achieve. Clinical buy-in is key, he said, along with involving the multidisciplinary team in the design of their Command Centre operations and ensuring that they are specifically tailored to the needs of the organisation.

Sajid also noted the opportunity for BTHFT to extend the Command Centre out into a wider system at place level. He told HTN that the Trust currently offers a Virtual Royal Infirmary (VRI) service – a hospital without walls, where a patient's treatment and care begins and ends in their own home. The Command Centre provides an opportunity to envision how the Trust might enable the visualisation of care for patients across multiple communities. "We could go one step further and integrate the whole system," Sajid told us, "so that other organisations within our place are on one Command Centre. That would be powerful because you could sit back and look at what's happening not just across the acute hospital but across the whole of Bradford District and Craven."

Looking to the future, BTHFT plans to further develop their Command Centre, ensuring they use it to its full capacity. Bringing the conversation back to how the Command Centre has changed ways of working for her team, Sarah commented that staff have learned a lot since its implementation – but they still tend to learn something new every month.

Sarah concluded: "We are on a journey to ensure that we are maximising, per role, what the Command Centre can offer us; the art of the possible."

## Meeting the strategic objectives

In the most recent inspection of BTHFT by the Care Quality Commission (CQC)<sup>3</sup>, the Command Centre's input was highlighted under 'outstanding practice'. The CQC praised how the Command Centre collates data feeds from across the Trust's EPR and other data sources to provide staff with real-time information over 24 hours, seven days a week, enabling staff to "make informed decisions on managing patient flow".

The reduction of operational meetings down to just two a day demonstrates how BTHFT's processes have become more streamlined and efficient, reducing pressure on staff as well as on the system; and the increased accuracy and compliance of EDDs underlines the Command Centre's impact in practice. Estimated savings of 200 phone calls to wards per day illustrates tighter processes across the Trust, whilst BTHFT's rise to the top quartile for performance with regards to the emergency care standard demonstrates a data-driven benefit that can be recognised across the NHS.

The Command Centre has also helped to drive BTHFT's digital maturity. Following its launch in 2019, the Trust was named one of the most improved digital pioneers in the NHS<sup>4</sup>, placing it in the top ten Trusts across England – one of only two not included in the Global Digital Exemplar (GDE) programme. It's impressive that BTHFT has been able to deploy its Command Centre without requiring funding and support from the GDE programme.

As the clinical lead of the Command Centre, what is the main takeaway from Sarah's perspective? She told us: "It has made BTHFT really nimble as an organisation, and very predictive in terms of supporting decisions about what actions we need to take to keep the hospital efficient."

With plans to keep learning, new initiatives like the safety huddle are being implemented to gain more benefits from the Command Centre. With hopes to extend their new ways of working out into the community, BTHFT provides a practical example for other Trusts to follow; a blueprint for how to use data for the benefit of patients and staff alike.

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<sup>1</sup><https://www.bradfordhospitals.nhs.uk/digital-healthcare-journey/>

<sup>2</sup><https://api.cqc.org.uk/public/v1/reports/221cdbbe-08ec-4d21-9621-6572fdcca817?20210113203211>

<sup>3</sup><https://api.cqc.org.uk/public/v1/reports/221cdbbe-08ec-4d21-9621-6572fdcca817?20210113203211>

<sup>4</sup><https://www.bradfordhospitals.nhs.uk/digital-healthcare-journey/>

