



From bottlenecks to breakthroughs

How data is helping Nottingham University Hospitals accelerate supported discharges

At midnight on 29th September 2022, there were 285 medically safe (discharge-ready) patients stuck in beds at Nottingham University Hospitals (NUH). Two years later there were 109.

This is the story of how NUH is transforming discharge processes, and how data is playing a crucial role.

Nottingham University Hospitals (NUH) has developed a breakthrough model to combat one of the NHS's most impactful problems: delayed discharges.

The trust, one of the busiest in England, has significantly improved the timeliness of acute discharges through the smart use of data captured and shared via its EPR. In collaboration with Nottingham and Nottinghamshire ICS – and its EPR partner, Nervecentre – NUH has developed a live data set that tracks patients' progress through complex discharge pathways. That data set is accessible in real time to integrated discharge teams across the whole care system, guiding actions and informing decision-making.

The approach is helping to free up hospital beds, increase capacity for elective care, and ease the pressure on emergency pathways. It's an exemplar for other trusts facing similar issues.



The challenge

Delayed hospital discharges are one of the most enduring and costly challenges in the NHS. When medically safe patients remain in hospital beds, the downstream impact is far-reaching; resources are wasted, operational flow is restricted, and patients requiring acute care are forced to wait in line behind those that don't. Moreover, patients who stay in hospital longer than necessary are at greater risk of deconditioning, including hospital-acquired infections or the loss of mobility or cognitive function. From every angle, delayed discharges are a huge problem. Solving it has become one of the NHS' top priorities, but recent figures indicate there's a long way to go.

According to [NHS England data](#), in September 2024 there were between 11,800 and 14,300 discharge-ready patients in hospitals in England, every night, who no longer needed to be there. These accounted for around 12% – one in eight – of [all general and acute beds in England](#). In the final week of September alone, trusts in England recorded 112,462 additional bed days for patients that were still in hospital 21 days or more past their discharge-ready date. The inherent costs, and ripple effect on the system, are substantial.

At NUH, delayed discharges have been a long-standing issue. In recent years, the trust has consistently operated at 98% bed occupancy and above, increasing the need for more efficient discharge pathways. In December 2018, the number of medically safe patients still in NUH beds at midnight peaked at 276, but routinely hovered around 200+ in the months either side of it. In 2019, internal research revealed that bed day losses caused by avoidable discharge delays were costing NUH an estimated £20 million every year. The numbers provided renewed impetus for the trust's long-term strategy to improve discharge performance. That strategy – disrupted by the pandemic – has driven significant improvements since 2023.



The strategy

The foundations for the approach were laid in October 2017 when NUH established an Integrated Discharge Team (IDT) that would share its caseload – and, crucially, the same office space – with its partners in community health and social care. Adopting, wherever possible, a Discharge to Assess (D2A) model, the IDT has a clear mission: to identify patients likely to require supported discharge as early as possible in their hospital stay, and proactively plan for their departure.

With around 80% of patients considered ‘simple’ discharges, the team focuses on the three pathways most associated with discharge delays:

Pathway 1

Home, with new/additional care needs

Pathway 2

Care in an interim facility, often community bed-based settings, with dedicated recovery support

Pathway 3

Long-term care in a nursing home or specialised facility

Across the NHS, the challenge of optimising discharge performance predominantly revolves around Pathways 1-3, where delays in setting up care packages or finding suitable placements can result in extended hospital stays. However, data to support and accelerate that journey has always been a rate-limiting step.

NUH decided to address this data gap in 2017, setting up a timing point on Nervecentre where multidisciplinary teams could document when a patient was considered medically safe (discharge-ready). It also introduced an ambitious goal for all patients to be discharged within 24 hours of their medically safe date.

Historically, like many trusts, NUH’s relationships with its system partners were fraught with tension. System-wide reviews of discharge bottlenecks were often challenging, with parties routinely questioning each other’s data. The mutual mistrust was often rooted in conflicting KPIs; whereas NUH measured the timeliness of discharges, social care adopted other metrics, like the speed of allocating social workers. Without shared goals or common data, conversations between organisations were sometimes adversarial. The shift to a more robust data set, though still in its infancy in 2017/18, played a big part in kickstarting change.



Mark Simmonds,
Deputy Medical
Director, NUH

“These foundational steps were incredibly important,” says Mark Simmonds, Deputy Medical Director, NUH. “By establishing a meaningful metric that everyone understood – i.e. that a patient is medically safe when they no longer need an acute hospital setting for their ongoing care – and empowering teams to document it using a digital system, we started to develop accurate data that helped conversations with our system partners. When you’re able to identify a cohort of patients that no longer need an acute bed, you build a shared understanding that paves the way for collaborative problem-solving.”

However, progress wasn't won overnight. In 2022, following a post-pandemic hiatus where the number of discharge-ready patients returned to 2018 levels, the Nottinghamshire health and social care system looked to strengthen processes. The trust sought to build on its ability to identify discharge-ready patients by enhancing its data set to provide answers to the question: why are these patients still here? The rationale was simple: by having complete visibility of blocks in the system – and granular understanding of why people are stuck – it becomes easier to identify the root of the problem and align resources accordingly.

Through whole system engagement, Integrated Discharge Leads focused on understanding each organisation's data needs – social care, NUH, community health – creating a list of common data requirements that could be captured through Nervecentre. "Our goal was to create one version of the truth, so everyone could see it, trust it, understand and use it," says Lisa Marshall, System Integrated Discharge Lead, Nottingham and Nottinghamshire Healthcare. "Armed with the right information, teams can understand where and why discharge delays are happening, and what can be done to mitigate them. These data requirements have now been plugged into Nervecentre, giving us live, reliable data that helps us identify issues and work collaboratively to drive improvements. This has allowed us to shape community services to support the flow of patients out of hospital."

Today, teams across the ICS access the data and work together to discharge patients back into the community. Powered by Nervecentre, live dashboards group discharge-ready patients according to their pathway (i.e. Pathway 1, 2 or 3), creating smaller, more manageable cohorts. Previously, the IDT could only see the total number of discharge-ready patients – a figure that could sometimes feel daunting and difficult to address. Now, on the live patient flow dashboard, each box represents smaller numbers of patients on a particular pathway, with responsibility for their progress assigned to an individual in the team. With a single click, staff can identify blocks in the pathway, prompting relevant action to resolve issues.

"This has prevented so many headaches and ended the blame culture," says Kay Parker, Integrated Discharge Lead, NUH. "All our system partners triage live from Nervecentre. We trust it; we're all part of the data collection, and all accountable for everything that's put into the system. And because we all have access, everyone – from the executive board down to teams on the ground – has a real-time picture of what's happening on the ground at NUH and why. Previously that wasn't possible. We might know that we'd got 250 people in delay, but we'd have no real understanding of what they were waiting for. Now, at the click of a button, we can see what the hold-ups are, who's accountable, and what we need to do to move things forward. Having one version of the truth has transformed our culture and our work."



Outcomes

Discharge delays at NUH are trending downwards. On 29th September 2022, the trust reported 285 discharge-ready patients in acute beds overnight. Two years later, that number had shrunk by more than 60% to 109. Today, the trust has fewer discharge-ready patients in its hospitals compared to 12 months ago, while the average post-medically safe length of stay has reduced by more than 3 days since 2017. These gains mean that more beds are available to those who need them most.

“Our experiences at NUH show that the issue of discharge delays – a seemingly intractable problem that the NHS has struggled with for years – is solvable,” says Mark Simmonds. “The solution comes from having a high quality, shared data set, and tools that help teams action meaningful change. If you don’t have accurate data that’s visible to everyone in real time, you’ll fall short. But if you’ve got data you can trust, great things are possible. Five years ago, bed day losses were costing NUH around £20 million a year. Now, thanks to trusted, real-time data – and incredible collaboration across our ICS – we’ve halved those costs and have the latitude to go further. It shows that by being scrupulous around data – and having a fantastic system to record it on – you can get to a better place.”