



How Nottingham University Hospitals is transforming the admission pathway from its Emergency Department

Accelerating patient flow through smarter inter-specialty working and operational visibility.

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For clinicians at Nottingham University Hospitals NHS Trust (NUH), managing patient flow through one of the busiest Emergency Departments in Europe sometimes feels like navigating heavy traffic in poor visibility. Every day, in a department that never closes, patients arrive with increasingly complex needs, beds remain under relentless pressure, and responsibility for care passes between multiple clinical specialties. When transitions through the admissions pathway aren't visible, patients can wait unnecessarily, decisions can stall, and risk can escalate.

The impact is measurable. Recent GIRFT SEDIT data suggests delay-related harm at NUH is around three times the national average. As such, improving flow out of ED isn't just an operational challenge, it's a patient safety priority.

To address it, the trust developed the NeT model for admission referrals: a clinically-led approach to inter-specialty working that combines agreed clinical standards with a digitally managed referral pathway. Enabled through the trust's Nervecentre EPR platform, the model gives clinicians and operational teams greater visibility of the admission journey, helping them identify where patients are, where delays are occurring and where intervention is needed.

One year after its introduction, NUH isn't claiming to have solved the challenge of flow out of ED. But it has established the foundations for safer, faster and more consistent admission referral.



The challenge

A problem hidden in plain sight

The challenges of managing admission referrals out of ED are familiar across the NHS. Once a clinician decides that a patient requires admission, the patient's journey becomes significantly more complex. Referrals are made, specialties become involved, decisions are reviewed and responsibility begins to transfer across the hospital. In a large acute trust, that process is repeated hundreds of times every day, with every handover creating another opportunity for delay and risk.

At NUH – a digitally mature organisation – Nervecentre already supported a range of capabilities across the ED, including bed management, departmental visibility and paperless clinical working. What was missing, however, was the same level of visibility across the admission referral pathway.

Over time, each specialty at NUH had evolved its own referral processes, documentation methods and ways of communicating. Some referrals were electronic, others relied on telephone conversations, while different teams recorded decisions in different parts of the patient record. Teams could see patients waiting in the ED, but they didn't always know why they were waiting. Were they still there due to a genuine bed wait, or was the wait being caused by something clinicians could still influence?

With the cause of delays often invisible, the risks were real: elderly patients remained in ED for many hours because a specialty referral had been declined without anyone recognising that the admission pathway had stalled. The decision had been documented electronically, but in a different part of the record from where other teams were looking. The problem wasn't clinical judgement. It was visibility. And it was a symptom of a wider problem.

Improving flow out of ED therefore began with a simple question: how do you make the risk of delay visible?

As Dr Joanna Varcoe, ED Consultant, NUH and clinical lead for the trust-wide Inter-Specialty Working project, puts it:

“Overseeing admissions from our overcrowded Emergency Department at times felt like driving at speed on the motorway without windscreen wipers... and without the option to pull over. I didn't have adequate visibility of the bottlenecks, which meant I couldn't intervene effectively to reduce the risk of delay-related harm for our patients.”

Dr Joanna Varcoe,
ED Consultant,
NUH



The strategy

Agreeing the ground rules

Technology was never the starting point. The first challenge was to bring specialties together to agree a shared way of working. Led by Dr Varcoe, the inter-specialty working team set about building the clinical consensus needed to make that shared approach work.

More than 200 clinicians and operational colleagues contributed through questionnaires, multidisciplinary workshops, executive-supported away days and PDSA cycles to define how admission referrals should work across the trust. Together they developed a new set of Internal Professional Standards for inter-specialty working, including specialty-specific 'Pull' criteria that defined which patients would normally be accepted by each receiving specialty. These were supported by a trust-wide Inter-Specialty Working Guideline.

Together, these established a shared understanding and a consistent approach to admission referrals across the organisation. "There was a real need to get all specialties to collaboratively co-design and agree 'The Way We Do Things Here,'" says Dr Varcoe. "The standards that emerged gave us a framework to move forward."

Making the referral journey visible

Consensus alone, however, would never improve flow. Unless clinicians could see referrals progressing through the system in real time, monitor whether agreed standards were being met and intervene when delays occurred, the standards would remain little more than guidance. The next step was to embed those standards into everyday clinical workflow, using technology to make them visible, measurable and actionable.

Working alongside NUH's digital team, Dr Varcoe set out to configure the trust's existing Nervecentre platform to support the NeT model.

"Each phase of the project was collaboratively designed for clinicians, by clinicians, ensuring that 'The Way We Do Things Here' was co-produced and reflective of our clinical teams," says Donna Emuss, UEC Improvement Lead. "The model evolved through clinician feedback and close integration with our digital team. As clinicians kept telling us what worked and what didn't, we were able to refine the workflow continuously. Having that relationship, and being able to link clinicians and digital, was critical to making the model work."

The NeT model

Those agreed standards became the foundation of the NeT model for admission referral.

NeT describes the three stages of every admission referral.



Navigation

The point at which an Emergency Department clinician decides that a patient requires admission and identifies the most appropriate specialty using the agreed Pull criteria.



E-referral

Either through a Nervecentre electronic referral or, where patients have more complex needs, through an early clinical discussion between senior clinicians.



Transfer

Begins once the receiving specialty has accepted responsibility for the patient and the patient is ready to move to the appropriate ward.

The model defines not only what should happen, but expected response timeframes for each stage and the agreed escalation process if those timeframes aren't met.



Outcomes

A shared operational picture

Specially designed NeT fields now display each stage of the referral journey, showing when a navigation decision has been made, whether an e-referral has been sent, who has accepted responsibility for the patient and when that acceptance occurred. Automated digital time-outs monitor agreed response times, while colour changes prompt teams to enact the agreed escalation process whenever those standards are breached.

Rather than relying on repeated telephone calls or fragmented documentation, clinicians, operational teams and bed managers now work from a shared operational picture. The referral journey becomes visible.

That visibility extends beyond the referral itself. New ED Visiting Clinician notes have been developed, encouraging more consistent, easily visible specialty documentation. In a department that can be caring for around 400 patients at a time, including as many as 90 who have been accepted for admission and are awaiting a bed, that visibility is critical.

It allows teams to differentiate between patients who are genuinely waiting for a bed and those whose admission pathway requires intervention.

The same digital infrastructure also supports live operational data dashboards, giving clinicians and managers visibility of referral response times, bed waits, transfer times, admissions by specialty, use of Pull criteria and variation across the admission pathway. Rather than simply reporting activity, the dashboards establish a baseline for continuous improvement.

Continuous refinement through collaboration

Development of the NeT model continues to draw on input from clinicians across the trust. However, the project could not have been realised without the flexibility of the Nervecentre platform.

Existing Nervecentre capabilities – including use of task functionality to make the referrals, integration of digital timeouts and escalations into those referrals, development of an ED live flow and new visiting clinician case notes – provided the building blocks from which clinicians could configure and refine a new operational workflow. As frontline teams tested the model in practice, workflows were continually adapted through clinician feedback, allowing the digital pathway to evolve alongside the clinical model.

That iterative approach continues today. The experience gained during the first year is now informing further collaboration with Nervecentre, helping streamline the workflow, reduce unnecessary clicks and make the model increasingly intuitive for clinicians, while preserving the operational principles on which it was built.





The Future

Building the foundations for improvement

NUH is careful not to overstate what has been achieved. Patient flow is influenced by countless factors beyond the admission referral process, from ED demand and inpatient capacity to delayed discharge and wider system pressures. The NeT model will never solve those challenges on its own. Instead, its value lies in creating visibility.

Since implementation, referral response times have shown a positive trajectory, while clinicians report greater confidence in understanding where patients are within their referral journey and why they are waiting. Standardised referral processes have simplified induction, reduced unnecessary communication between teams and improved operational oversight. Bed management teams now have greater visibility of which specialty has accepted responsibility for each patient and where they should be admitted, reducing the need for repeated phone calls that interrupt clinical care.

Importantly, the digital workflow now creates a reliable data trail, enabling the trust to identify bottlenecks, understand variation and target future improvements. It's also giving clinicians greater assurance that patients are progressing through the admission pathway as intended.

“I now have greater confidence that if a patient is waiting in ED for a bed, they are truly waiting for a bed to become available, not for specialty agreement on where they should best be placed,” says Dr Varcoe. “I can clearly see when bottlenecks occur and intervene in a timely way to unblock them.”

Dr Joanna Varcoe,
ED Consultant,
NUH

A turning point, not the destination

For NUH, the NeT model represents neither the end of the journey nor a claim to have solved patient flow. But it does mark a turning point.

The trust now has a shared set of professional standards, a consistent admission referral model, digital visibility across the referral journey and the data needed to drive improvement. The next stage will focus on increasing adoption, tackling variation in practice, refining the user experience with Nervecentre, and extending the same principles into wider inter-specialty working.

The challenges facing NUH are not unique. Every acute trust is seeking safer, more effective ways to improve flow in increasingly pressured environments. The NeT model doesn't provide all the answers. It does, however, demonstrate how clinician-led design, enabled by flexible digital technology, can improve operational visibility, support better inter-specialty working and create the foundations for safer patient care.

As Dr Varcoe puts it: “This is just the beginning...”

