# Accelerating NHS digital maturity: paper to digital is only the beginning for South Tees Hospitals

**Digitised clinical noting at South Tees Hospitals NHS Foundation Trust is creating efficiencies for busy doctors and nurses. The trust's CCIO Dr Andrew Adair, deputy CCIO Dr John Greenaway, and digital business change manager Niki Idle explain the impact so far and why this crucial component of digital transformation, delivered in partnership with Alcidion, lays the foundations for AI and smart technology.**

Individual doctors saving an hour each day on admin. Nurses halving the time spent on handover preparation. And informed staff leveraging key information, whilst eliminating paper. This describes just some of the immediate impact witnessed on the shift from paper records to digital noting at South Tees Hospitals NHS Foundation Trust: results that are enduring as digitisation continues to progress.

"The general ward state is undoubtedly more efficient and safer because we now have availability of standardised, legible, and complete notes," says Dr Andrew Adair, an emergency department consultant and the chief clinical information officer for the trust. "We have links into regional systems, all accessible through one window. Our healthcare teams are not having to leave the electronic patient record to look at x-rays, radiology reports, endoscopy, outpatient letters, or to look at other hospital attendances on the Great North Care Record."

His comments reflect benefits being realised following a South Tees Hospitals decision to deploy Alcidion's Miya Precision platform as a trust-wide electronic patient record.

Patient flow, e-observations and assessments, electronic prescribing and medicines administration, and clinical messaging were some of the first priority areas to be digitised in the EPR programme, with significant positive implications for patient care.

But the digitisation of clinical noting that Adair describes has become one of the most significant achievements in the programme to date.

"It's that visibility right across the system of information for the people who need it, when they need it," says Niki Idle, digital business change manager.

The trust has so far prevented the creation of 1.8 million paper documents as a result of digitised clinical noting. "That's 1.8 million documents through the system so far, including 102,000 discharge letters that can automatically be sent to GPs electronically," says Idle. "We are not building up notes that require physical storage. And other than for business continuity purposes, specialist notebooks that were used to capture notes are not being printed."

**'I can't believe we have never had this before'**

South Tees Hospitals has worked with Alcidion to effectively reinvent noting at the trust. Intuitive technology has helped with clinical buy-in

"Compared to other digital systems I've used, it just looks nice. It has been laid out with clinical teams in mind. It seems like a little thing, but this is important as your first impression of the system as a clinician," says Adair. He describes Miya Noting, a component of the EPR platform.

Deeper under the hood, nurses and clinicians at the trust have fed back positively on a system built, configured, and deployed around their needs.

“All grades of medical staff, the nursing body, and allied healthcare professionals have all been really receptive of it,” says Dr John Greenaway, a consultant gastroenterologist and the trust’s deputy CCIO.

He recalls that in other trusts clinicians had left their positions at the thought of an EPR deployment. At South Tees Hospitals one clinician who was approaching retirement had voiced similar reservations.

“As we went live, she realised that there wasn't much she was going to have to do, she saw the advantages of it, and there were big smiles over the next few days,” says Greenaway. “‘I'm not going to retire”, she told us.”

Another nurse, initially fearful about being able to cope with new technology, changed her mind by the end of her first shift. “I can't believe how we've not had this before,” she said.

Now deployed across nearly all of the trust, and with plans to soon deploy to a remaining four areas out of 38 wards, clinical noting has had widespread engagement – with further configuration ongoing to respond to the evolving needs and requests of specialty noting. In the early stages of deployment, Idle recalls how clinical educators who were there to support staff, were told they could leave early because wards intuitively understood the system.

“We've been fairly swept away by how people have taken to this”, adds Greenaway. “We’ve not really had the ‘hard time’ often faced in large healthcare IT deployments. That’s partly a testament to the system and partly because clinicians do not find it too painful to input the electronic information that will be so beneficial further down the line.”

**Collaboration to reinvent noting**

A collaborative approach between the trust and specialists at Alcidion in designing how data is captured, has helped.

The design process delivered alongside frontline clinicians has meant that the noting has been configured around user needs from day one. Comments from staff that the system “lightens the workload”, that it has “made life a lot easier” and has released “far more time to care”, have resulted.

“It feels like you are in it with your mates,” says Greenaway. “We have a common goal, working through things together.”

The intention is that around 70% of the data required on many forms could eventually be auto-populated, either from existing parts of the patient record such as demographics, or pulled through from notes captured at earlier points of the patient’s hospital encounter.

For example, ‘pull through’ of comorbidities data is not only expected to save time, but aide in clinical decisions, and in accurate coding for financial purposes, says Idle: “Every time the patient is admitted, the system will present the clinician with a list of comorbidities, asking ‘are these still all valid and present?’ It’s prompting the clinician with information that already exists.”

“We are taking the brain power out of remembering what to do and where. We get to concentrate on important patient care decisions,” adds Greenaway.

The system has been configured to create efficiencies beyond the point of care too, for example supporting data requirements for national clinical audits. This is expected to prevent the need for clinicians to manually search for information for mandatory audits, so that they can then spend more time on quality improvement.

“We can just pull that data out of the system,” says Idle. “We’ve designed forms to ensure we collect as much pertinent information as possible, rather than somebody sifting through notes to then type into another computer system. This is freeing up time to ensure audits are complete and to address concerns raised in audit data.”

The availability of data for reporting is also supporting patient safety. “Within 14 hours of an emergency admission patients should have a senior clinical review,” Idle explains. “We've never been able to quantify that before without searching manually through paper notes. Now we can, just as we can examine where VTE assessments have been completed. We can now pull that data, see where it's happening, where it isn't, and then follow up with education.”

**AI: The near future**

Despite positive results, Greenaway insists more is to come and soon. “I don’t think we are anywhere near realising the benefits of the Alcidion system,” he says.

AI and other smart technologies are expected in the “near future”. “I don’t think this will be long,” says Greenaway. He refers to demonstrations already made to the trust, where a clinician can dictate a summary into a microphone for AI to then populate a form, or a plan, for clinicians to approve. And he describes “ambient listening”, where AI tools can listen to consultations in the background to generate notes.

Initially the trust intends to structure options to allow staff to ask AI to generate a handover document, or a discharge letter, or to pull through certain information from multiple encounters.

Adair concludes: “What we have now is already undoubtedly so much better. Now we are planning to introduce robotic process automation to be able to bring in additional data from our comorbidities system. And we are working to integrate more data from pathology. Not having to go into a separate system for that information – for our clinicians, that’s massive.”