

Documentation capture, Healthcare AI

How cloud technology can alleviate pressures on the NHS

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Cloud technology is transforming every industry. But how can it help the UK's clinicians, nurses, and allied health professionals in these highly challenging times? And what results are being seen by adopters of cloud-based solutions such as University College London Hospitals (UCLH) NHS Foundation Trust?

Faced with long backlogs and limiting staff shortages, hospitals across the UK are striving to do more with less. In [a recent webinar](#), I spoke to leaders from Microsoft and the University College London Hospitals (UCLH) NHS Foundation Trust to explore how cloud technology can help—by unlocking new ways of working and untapped operational efficiencies.

Dr Umang Patel is a practising NHS paediatrician. He's also Chief Clinical Information Officer at Microsoft. I asked him how cloud technology is set to help NHS trusts in the coming months and years.

How cloud technology is helping: Computing the data

Dr Patel explained that since he graduated from medical school, there's been a billion-fold increase in the amount of data generated as part of medical studies.

"When we started, we were measuring blood pressures and heart rates in a thousand people, reporting on that, and putting it through peer-reviewed journals," he said. "Today, almost every study comes with a full genome profile as well as a whole host of other new data sources such as wearable devices etc."

Dr Patel explained that the volume of data now being generated represents both a huge opportunity and a huge challenge: How do you compute this amount of data to create better insights for patient care? “It can’t be done by clinicians looking at data on an Excel spreadsheet,” said Dr Patel. “It can’t even be done, necessarily, by supercomputers on-premises.”

But the power to compute that data does exist in the cloud. “Being able to do that computing in real-time, off-site, in a new way is going to mean that the medicine of the future [...] is much better for patients,” said Dr Patel.

How cloud technology is helping: With security and engagement

Dr Patel described the journey healthcare is on from pen-and-paper processes to digital, and from digital to cloud computing. Forging ahead with that journey depends on asking questions about what this next phase looks like.

“If you used to store all your data on paper, and now you store it on computers, in a dungeon or bunker under the hospital, how can we shift that somewhere safer?” he asked. Another key question is about patient communications. How do you shift from letters to a more dynamic, interactive medium that allows patients to “interact more effectively, and become more engaged, and more participative in their own care”?

Dr Patel also explained why Microsoft is ideally placed to help deliver [healthcare’s cloud transformation](#). “If we’re going to be really serious about making healthcare fit for the future and taking it on this journey, we need to utilize the things that we’ve learned in changing whole industries,” he said. “We’ve got to make sure that the data is 100% secure. We’ve got to make sure that when we start moving things around, we’re doing it in a way that is scalable and will be integrated into future systems. And Microsoft has been doing that for a long time.”

How cloud technology is helping: With immediate challenges

Dr Patel acknowledged that the advantages of a more secure, scalable cloud infrastructure don’t always feel tangible to the NHS workforce. When you prevent a cyber-attack, people working on healthcare’s frontline don’t feel the benefit to themselves and their patients—even if that benefit is real.

So, how can cloud technology alleviate the pressures being felt across the NHS? The answer, says Dr Patel, is by solving very specific challenges, and saving them time.

“We know we have amazing staff, who are hugely compassionate, who always say—whichever survey you do—we wish we had more time to treat the patients who need us,” said Dr Patel. “So how can we create more time? The only way to do that is by utilizing tools that do really simple things, really well.”

“One of those cloud-based tools is [AI-powered clinical speech recognition](#). In the words of my colleagues at Nuance, giving clinicians an advanced speech recognition solution like [Dragon Medical One](#) can be like giving them a superpower,” said Dr Patel.

With Dragon Medical One, clinicians can navigate the EPR and create clinical notes and documentation using nothing but the power of their voice. This can save them minutes of work, over, and over, and over again.

UCLH NHS Foundation Trust is just one of many hospitals that is now putting the Dragon Medical One solution to powerful use.

Cloud technology in action: Speech recognition at UCLH

Dr Ellen-Merete Hagen is a consultant neurologist at the National Hospital for Neurology and Neurosurgery, Queens Square—and the Clinical Director for Digital Health at Queens Square Division, the largest division within UCLH.

In March 2019, the trust replaced many legacy IT systems and traditional paper patient records with the Epic electronic patient record (EPR) solution. It rolled the EPR out to 13 sites and more than 10,000 members of staff—updating 15,000 devices, transferring millions of records from multiple legacy systems, and training 13,000 staff.

I asked Dr Hagen how cloud-based speech recognition has supported this digital transformation journey.

"Introducing a single EPR like Epic is a huge change management process, and there was a lot of anxiety about the impact of this implementation on the workforce," she said. "So to assist with it, we decided to use speech recognition from go-live, within Epic."

The trust created a taskforce of physicians, allied health professionals, nurses, and radiologists to evaluate different solutions. They chose Dragon Medical One because of its high level of accuracy and its strong Epic integration.

"We launched it at the same time as Epic, and we observed a rapid growth in the number of people using Dragon, as well as the number of minutes dictated," said Dr Hagen. "Dragon became quickly popular with staff, and we received very positive feedback."

Cloud technology in action: Saving money and time at UCLH

Dr Hagen explained that moving to Dragon Medical One, away from outsourced transcription services, contributed to the cost savings of the Epic implementation.

She also spoke about speech recognition's impact on the timeliness of clinical notes and documentation, and observed how the [PowerMic Mobile](#) app—which lets clinicians use their smartphone with Dragon Medical One instead of a tethered mic—had enabled flexible working in challenging conditions.

"Many of my colleagues, including myself, have been working from home during the pandemic due to lack of space in the hospital," Dr Hagen said. "Having the mobile version helps us work everywhere."

Dr Hagen also highlighted the power of voice commands to navigate through Epic records, and how it had been embraced by many users. "That has really simplified repetitive tasks," she said.

Another time-saving feature of Dragon Medical One is AutoText: predefined templates users can insert with a quick spoken command. As Dr Hagen explained, the trust has identified an opportunity to make much greater use of AutoText in the future.

"Only 13% of active Dragon users are taking advantage of AutoText," said Dr Hagen. "But during the last nine months, that small cohort has collectively saved 234 hours, or 31 working days, through this feature alone. So, that's something we need to scale up."

Cloud technology in action: What's next for UCLH

What else is on Dr Hagen's speech recognition to-do list? Stepping up training to drive further adoption among clinicians, making greater use of Dragon Medical One's advanced features, and tailoring the solution for allied health professionals.

She's also exploring the opportunity to create AutoText templates that can be used across large departments, or even the entire trust.

Listen to the full conversations—and see speech recognition in action

You can hear my conversations with Dr Patel and Dr Hagen in full in [this on-demand webinar](#). You'll also see a live demonstration of Dragon Medical One that really shows why using it is like having a superpower!

I'll finish with one final thought from Dr Hagen: "I do wish we had gone live with Dragon Medical One before launching Epic." It's important to remember you can rollout cloud-based speech recognition and start seeing its benefits today, even if your new EPR is still a year or two away from implementation. That way, your clinical community will be accustomed to using their voices when you do eventually make the move.

Tags: [Digitisation of the NHS](#)

More Information

Watch the webinar

Hear Dr Patel and Dr Hagen share their expert insights on transforming healthcare with cloud technology, and see what it's like to create clinical documentation with Dragon Medical One.

[Learn more](#)



About Dr. Simon Wallace

Dr. Simon Wallace is the Chief Clinical Information Officer (CCIO) of Nuance's Healthcare division in the UK and Ireland. Simon has worked as a GP, hospital and public health doctor in Brighton and London. His interest in health informatics began in the 90s when he spent a year at the King's Fund investigating the impact of the internet on shared decision making between patients and their healthcare professional. For the past 15 years, he has worked for a range of organisations including Bupa, Dr Foster, Cerner Corporation and GSK across a range of technologies which include electronic patient records, telemedicine, mobile health and lifestyle devices. Simon has a keen interest in the voluntary sector, recently completing a 7 year term as a Trustee for Fitzrovia Youth in Action, a children and young people's charity based in London.

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