Insight

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Beyond the hype: where does AI sit within the NHS digital transformation roadmap?

Paul Fountain-Edgar, Mason Advisory's Head of Health and Social Care, brings together an expert panel to collectively explore the potential benefits, risks, and rewards of AI applications in the NHS and beyond.

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Panel:

- Paul Fountain-Edgar: Head of Health and Social Care, Mason Advisory
- Charlotte Morris: AI Solution Engineer, tomoro.ai
- John Coleman: Mason Advisory Associate, Digital Transformation in Healthcare

This insight is part of a specialist thought leadership series on digital transformation in the health and social care sector. You can read other articles in the series here.

The NHS is navigating a deeply complex change landscape, with technology and digitisation at its core. AI's potential to relieve pressure, improve efficiencies, and transform the future of healthcare is already widely recognised and debated. However, in a sector grappling with ingrained systemic challenges, outdated technical legacies, and significant funding and resourcing shortfalls, how realistic is a leap to AI-supported healthcare? Are the technological foundations in place to support that leap?

And, given the rapidly evolving nature of AI, how much risk can we tolerate in an attempt to generate rewards?

This is a conversation that Mason Advisory is having daily, both within the NHS and across the wider health and social care sector. "Certainly, when I'm talking to IT Directors, CIOs, and CTOs, they sense a general mandate that they should be doing something with AI," John says. "They know that, within their organisations, clinicians are desperate for the kind of support AI can potentially offer. What's more, the NHS plan for digital health and social care, plus more specific initiatives such as the NHS AI Lab, underscore the directive that technology leaders should be harnessing emerging technologies like AI to support the future of healthcare. That's exciting, but the reality is that our clients often struggle to see how they're going to turn that ambition into a reality, especially given all of the other IT transformation challenges on their plate".

My own experience with our client base is the same – and we can add to that a keen awareness of the risks associated with adopting AI in front facing setting. Take emergency response, for example. My clients often express clear views on where they see the line between situations requiring human emotional intelligence (for example, analysing priorities in a 999 situation) and processes where AI might play a role (for example, optimising emergency response resource allocation).

Human plus machine: defining the right application for the right situation

For Charlotte, this reflects the core of the AI application debate. "In my view, AI's role should be to perform the tasks and processes that humans are less naturally good at, not to simply emulate those that we already do well," she explains. "NHS clinicians, for example, are phenomenally good at frontline diagnosis and care. We know that already … our healthcare system is the envy of the world. But, when it comes to the administrative burden – paperwork, data collation, and so on – the sheer volume of the task goes far beyond the human resources that we have. Data is a good example, which I explored in my recent article on AI use cases in the NHS. Our healthcare system holds a vast repository of data, from individual patient care to

mass trends across the population. But extracting the true potential of that data, compiled across decades and held in multiple disparate forms and locations, is an almost insurmountable task. s (Large Language Models), however, have the power to do that job very efficiently. By exploiting that capability, we could create an entirely new data service for the NHS that would enable clinicians to easily gain a deep and focused understanding, not just of individual patient histories to inform diagnoses, but also of broader health trends that could inform the preventative healthcare models of the future."

For John and me, this is a compelling point. "Imagine, for example, the scenario of a GP, constricted by a seven-minute appointment time and faced with a patient with thirty years' worth of medical history," says John. "The ability to ask AI to collate all data relating to, say, past respiratory conditions, would enable that GP to identify relevant patterns and events in the patient's history that could be crucial in reaching the right diagnosis. Not to mention the role AI can play in the necessary follow up tasks – issuing referral letters, scheduling appropriate follow-ups, and so on. All kinds of benefits could be generated, with technology enabling faster diagnoses, more accurate treatment, and all of the cost and time efficiencies that would support that GP practice to help more patients."

Risk and reward: how much tolerance can we afford?

Of course, these scenarios are no longer a purely futuristic ambition. The NHS is already deploying AI in both clinical and administrative settings – albeit to a relatively limited extent right now. But that, in itself, raises pressing questions around risk versus reward. After all, from the core NHS to wider health and social care, every point of delivery ultimately impacts on people's lives. We know that AI – especially generative AI – is constantly learning and evolving. So, how do we guard against the risk of serious error? What happens if AI gets it wrong? And, importantly, if that happens, who's accountable?

"It's certainly a valid question," Charlotte says, "and you're entirely right that, at this point, the technology is far from bulletproof. But it is improving very quickly. Hallucinations, for example, where AI pulls out something completely random for no reason, are becoming far less frequent. But of course, when you're dealing with human well-being, we can't afford such scenarios at all. I think part of the answer lies in careful management, in exactly the same way you would expect to manage, for example, an intern during their first few weeks of work. They will learn as their role develops, but nobody would expect that intern to have an immediate and intimate knowledge of specialist subject matter, the finer nuances of the job, and the decisions that go with it.

There's also a lot of capacity to reduce risk through intelligent use of the constraints and prompts you apply to the technology, and to the task you are asking it to complete. But that does take expertise in itself, which will most likely need to come from

external specialists complementing the NHS's core capacity, at least in the short term. Accountability is a particularly interesting debate, and it's one that is really prominent in my industry right now. Clearly, a machine cannot be accountable for its mistakes. So, if something does go wrong, there is at least the possibility of an audit trail to pinpoint where and how the error occurred, and improve the human management, prompts, and constraints accordingly. I think, as a society, we may need to become more comfortable with the idea that, in the same way that humans make mistakes, technology can make mistakes. That doesn't mean the technology isn't useful. But it does mean that we cannot, as humans, defer all responsibility to the machine. I also think that this isn't a scenario where a rapid, fail-fast approach is advisable.

Clearly, if we are too aggressive with AI deployment in frontline areas of healthcare, the risk associated with major error is too great. In summary, AI has almost unlimited potential to relieve pressure, drive efficiency, and support clinical care. But we, as humans, carry the responsibility for making wise decisions as to where and how to introduce it without creating more risk than is necessary."

The road ahead: where, when, and how do we bring AI into the mix?

This brings us right back to the core challenge that NHS technology leaders face. The most pressing headline on their worry list is how to travel the transformation roadmap from today's silos and legacies to tomorrow's integrated, digitised healthcare systems.

Typically, our core role is to support them in understanding, planning, and delivering that roadmap in a pragmatic and manageable way. And, actually, that creates the ideal backdrop for a conversation about how and where AI fits into that journey. In my view, Charlotte is entirely right that the risk of jumping straight into frontline clinical care is a risk too far. But there are many opportunities to explore the potential for back-end administrative functions, for example. I speak to NHS technology leaders who know, instinctively, that the right AI applications could potentially reduce their operating costs by anything up to 75%. What they don't know is how and where those applications could realistically dovetail into their overall change roadmap. For me, this is where the real strength of Mason Advisory's approach lies. We facilitate the conversations, introductions and cross-industry networks that support those technology leaders to shape the right answers for their organisations. It's a view that John and I share. "Clearly, it is not our role to advise on patient outcomes, or clinical treatments," he says. "It's our job to bring the healthcare decision makers together with the technology innovators and our own IT change experts, so that we can collectively explore what's possible and what we can do today to enable healthcare to be delivered more efficiently tomorrow."

If you would like to speak to one of our Health & Social Care experts, email us at health@masonadvisory.com to arrange a call.

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About Mason Advisory

Mason Advisory has offices in Manchester and London and employs over 100 staff, with plans to continue its expansion. We enable organisations to deliver value through digital & technology transformation, solving complex business challenges, and helping clients set strategy through the intelligent use of IT resources including architecture, cyber, data, digital, operating model and organisational design, service management, and sourcing. We operate in sectors such as financial services and insurance, legal and law, government, health and social care, emergency services, retail, FMCG, transport, and not-for-profit.

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