AI and digital: how physicians are impacted

Earlier this year, the RCP published a new landmark report – *The RCP view on digital and AI* – which looked at what would be needed to fix the digital foundations of the NHS and ensure that digital solutions, including artificial intelligence (AI), solve real-world clinical problems. The report made 10 recommendations to government and the NHS in England.

Dr Anne Kinderlerer, the RCP's digital health clinical lead and the report's main author, speaks to *Commentary* about the NHS analogue to digital shift, and how digital and AI tools can be implemented in a way that is safe and effective for patients and clinicians.

Can you tell me a bit more about the ambitious vision of the analogue to digital shift in the 10 Year Health Plan for England?

Essentially, the analogue to digital shift is a key enabler of being able to deliver the healthcare envisioned in the 10 Year Health Plan; healthcare that will focus on patients, target risk, tackle health inequalities and deliver healthcare closer to patients. The shift is essential for the plan's vision of being able to deliver care to patients at neighbourhood level, allowing collaboration between doctors in primary, secondary and tertiary care and therefore to deliver better health outcomes, without massively increasing the costs of the health service. It has the potential to democratise healthcare, allowing patients to be more involved in decisions about their health, allowing clinicians to respond to risk and supporting shared decision making.

Despite all the hype about the analogue to digital shift, the tangible changes have been slow and have not delivered the transformation that many of us have hoped for. There's a lot of optimism in government that introducing technology will reduce workload, allowing the workforce to be more productive. But much of the evidence, particularly around hospital electronic patient records (EPRs), is that the technology currently available in the NHS reduces productivity and makes it harder for physicians to do their jobs.

Digital infrastructure is something that is very important to physicians; we heard clearly in our 2025 consultant census that poorly functioning IT is one of the top three things that make physicians' jobs more difficult – and that fixing it would make things better.

> 'Digital systems vary widely between hospitals, and it really affects how we work … These inconsistencies make processes much less efficient than they could be.' – RCP fellow, 2025 census

There is more of a government focus on interoperability across systems. In part to tackle this problem, the government has proposed a single patient record. The detail of this is starting to emerge – but the hope is that, if implemented well, it will allow clinical data from multiple EPRs to be visible to patients and clinicians to support care.

Improving communication and the ability to share data should improve referral pathways for outpatients, making it possible to determine which patients need to be seen and which would be better supported by advice. There is good practice in some places that allows patients to be referred directly to diagnostic tests. Work on messaging systems, already widely used in primary care, is beginning to allow three-way conversations between referrer, specialist and patient to support better pathways.

This kind of work supports the vision that the RCP described in our *Prescription for outpatients*, allowing patients to be part of conversations around referral and appointments, deciding whether time or place is more important to them, and whether they would travel further to be seen faster.

What are the potential benefits of the shift for physicians? What will it take to get it right?

Healthcare is already digitally delivered in most places, with only four acute trusts still relying on paper-based records and lacking an EPR system. Primary care has had universal coverage by EPR suppliers for much longer, but community and mental health trusts lag behind acute providers. This means that complete datasets that would support new models of healthcare don't yet exist and will require focused attention to develop. To add to the complexity, the electronic records that we do have are poorly usable, which causes risk to patients and contributes to burnout of clinical staff.

If we can build digital tools – which are easy to use and which support decision making by providing all the information that physicians need, in an easy way that doesn't require a lot of effort or multiple systems – then we will be able to deliver better, more evidence-based care, with less effort.

The fact that datasets are incomplete, potentially

biased and lack clear definition for individual datapoints will make the development of AI systems that will improve diagnosis outside image analysis more difficult. It seems likely that if we concentrate on building the fundamentals, better AI will deliver on its promise. If it is possible to predict the likelihood of ovarian cancer from a patient's shopping data, surely, we should be able to start to use predictive tools to better direct pathways of care.

The analogue to digital shift is dependent on having an implementation plan; being clear about how systems are going to be procured at the right scale. For instance, some regions have demonstrated successful innovation by bringing acute hospitals' EPRs together onto a single domain, allowing investment in more usable systems and allowing better data coordination, leading to improved knowledge and better care. We should be building an innovation pipeline that allows 'test and learn' approaches, then finding ways to spread the adoption of successful applications.

What are some of the risks highlighted by the RCP that the government and the NHS must address?

We are worried about optimism bias in government and the view that digital and AI will somehow fix all issues in healthcare. The RCP is clear on the importance of guidelines for good implementation, which would include better standardisation in many systems – particularly around introducing AI.

There also needs to be standardisation in how systems work to reduce cognitive load on clinicians. You shouldn't have to think about whether results are on the left or right of a timeline – it's often different within the same EPR at the moment, let alone standardised across different systems.

I have championed focusing on usability of the EPR to improve patient safety. It is easy in digital systems to add 'safety clutter' in response to patient safety incidents, such as alerts that interrupt workflow. We know that distracting people from the task at hand reduces both their ability to complete that task and focus on what the alert was about.

We want to see the Department of Health and Social Care and the NHS establish central repositories of NHS-approved algorithms, AI tools and patient-facing apps that meet national standards, and clear NHS guidance on what AI tools are approved and safe to use.

The analogue to digital shift can't be allowed to be a complete 'wild west' where individual trusts buy any app or system. This would create an infrastructure where systems don't talk to each other well – and when trusts have multiple legacy systems, they are often not well maintained.

There needs to be a focus on interoperability; products sold to the NHS need to be able to communicate with other electronic records in a defined, structured way. As each trust buys an EPR, it must ensure that the system provides the minimum core datasets required and that it meets NHS standards. We need to share good practice; when one trust has built an EPR and workflow that functions well, it should be easy to move it across into another trust.

We also must recognise that patient data belong to patients; they have the right to consent to how their data are used and understand what that might mean. We need to ask if they give permission for clinicians to see data to look after you better – and if it can be used to improve care. Can we use anonymised data for audits or for medical research, which might be done by pharmaceutical companies for profit?

The report includes findings from a snapshot survey of RCP members; what did that survey tell us about how AI and digital technology are being used in the NHS?

Around 70% of physicians are either somewhat or very supportive of AI tools being widely implemented. But they're very sceptical about whether the basic infrastructure foundations are in place to allow it to work well.

37% of physicians are already using AI in clinical practice at least monthly and 16% use it daily. AI is being widely used in many tasks, particularly for image interpretation in radiology and pathology.

Many clinicians are using personal ambient voice technology (AVT) to generate notes and clinic letters. Just under 30% of the physician respondents who were using AI for clinical tasks said that they were using AVT for letters or notes in outpatient settings.

There are a few uses for generative AI within the EPR – to be able to search or summarise information for discharge summaries. Almost seven in 10 of 305 UK physicians said that they were using personal access to general AI tools like ChatGPT and Microsoft Copilot to answer clinical questions, in the way that we've previously used Google. We think that particular finding suggests that the NHS is not moving quickly enough to provide clinicians with AI tools that are useful, efficient and safe. It is a risk, because those tools were not designed for use in healthcare, and we have to recognise it as such.

Most physicians think that AI will improve care and improve their ability to look after patients. But only about a third of respondents were somewhat confident in using AI tools – just 8% were very confident. About 80% thought that they needed training in using AI – but most clinicians do not have access to that.

What are the RCP's recommendations about AI use in the NHS? Which recommendations will apply to physicians reading this?

Our recommendations are that AI tools should – like any digital introduction – be part of a process of transformation that focuses on real problems. Often, people are encouraged to buy the 'shiny machine', then look for a use case. That is not a good way to deliver transformation of any kind. We should identify problems and then the design of an AI or digital tool should be done with physicians and patients.

We need clear routes to allow innovation and partnership with companies that are building safe tools. Then, we need clear ways of evaluating tools and gathering evidence that that is – and remains – safe.

Organisations will need a way to monitor their AI tools, as those tools can learn, evolve and drift away from their original function, becoming less effective over time. At the moment, our hospital digital teams are poorly equipped to monitor data and see changes. Our ability to monitor digital systems is a significant risk. We can see that patients are getting lost on pathways and not followed up; we don't have a monitoring system which flags that.

Physicians will need to think more about how they input data. You can enter free text in an EPR, but we will get more out of electronic systems if we pay attention to structured data entry – AI tools may support us to do this better without adding to the documentation burden. Physicians should be involved in the design of new systems and thinking about the problems that AI might solve.

How can physicians assist in this evolution? What is your advice to RCP fellows and members who want to keep up to date?

Get involved with your own trust's digital teams. Work with them to design the workflows that you need. Speak to your business intelligence people and work to design the data that you want out of systems. Be involved in the conversations around the single patient record and what should be in it.

There's a recommendation in the report for specialist societies to start thinking about condition-specific patient dashboards; for example, what sets of information might you need for rheumatoid arthritis? Do you include patient-reported outcome measures, blood results, drug history laid out over time? Ask yourself, if you could build a perfect longitudinal patient record for a clinic, what would it include and how would it look?

What work is the RCP continuing to do in this area following the report's launch?

The RCP is having a lot of conversations with the NHS, to try to influence what the government's promised roadmap for AI and health looks like. We actively engaged with the Medicines and Healthcare products Regulatory Agency regulation consultation and brought a focus group together.

Developing this report and engaging with clinicians has enabled us to use their voices to influence policy. The RCP is meeting with leaders in the NHS, with MPs, the Select Committee for Health and the Office for Life Sciences.

We are starting to discuss what specific digital education we should be providing as a college, and we're working with the Federation of the Royal Colleges of Physicians of the UK to influence the curriculum for undergraduates and postgraduates, following the government's commitment to reform curricula to 'provide comprehensive training in the use of AI and digital tools'.

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