

## Is 'smart health tech' solving the right problems for the NHS?

**We need to focus on solving the right problems with technology, and facilitate better conditions, in order to improve smart healthcare adoption at scale in the NHS, writes Dr Paul Deffley, chief medical officer for Alcidion.**

Where would you position the NHS in relation to other countries, when it comes to the adoption of innovative technologies to support patient care?

Recent research from [Newsweek and Statista](#), which ranked the world's top 'smart hospitals', placed its first NHS trust at position 72 on the list.

This finding caught the attention of delegates at March's Digital Health Rewired 2024 conference, who were surprised by the extent of the seemingly faster pace of smart technology on the other side of the Atlantic.

Notably, led by the Mayo Clinic, the Cleveland Clinic, and Massachusetts General Hospital, more than 100 US healthcare organisations hold a heavily dominant presence on the list of 330 hospitals. So why have they been successful, and should this mean anything to the NHS?

### **An opportunity to reflect and learn? Moving beyond pockets of innovation**

Newsweek's global ranking is of course only one piece of research, unlikely to comprehensively represent technological deployments at every level of healthcare.

Although a further 21 UK sites receive mentions further into the ranking, I would suggest that there are great examples of smart healthcare in the UK, to which the league table doesn't do justice.

Yet adoption of many innovative technologies that can positively impact patient care, still tends to happen in pockets in the NHS, often in the form of pilots that struggle to scale and deliver impact more broadly.

There has been much purported around the role of smart healthcare for decades – a promise that still holds much excitement. But progress at-scale often remains hindered.

As someone who has worked in clinical leadership and CCIO roles in NHS providers, commissioning and system transformation, before working directly in the health tech industry, I remain passionate that obstacles can be removed and sizeable benefits consistently realised.

With that in mind, Newsweek's research offers a reflection point on ways to boost effective use of innovative technologies available today to the NHS, by understanding what has worked for peers around the world.

### **What are the barriers we need to overcome?**

Heart failure is one clinical priority that could be better served by smart technology. [Evidence](#), that has now existed for many years, has shown that remotely monitored heart failure patients realise better outcomes.

In many cases patients on remote monitoring pathways are less likely to be admitted to hospital, more likely to comply with medication, and can be less likely to suffer complications or death as a consequence of heart failure.

Yet, many patients in the UK still have no access to remote patient monitoring, despite an urgent push for such approaches during the Covid-19 pandemic.

The problem in creating ubiquitous access to such services is not the technology itself, or evidence of efficacy – both of which can be surfaced. So, what is needed?

Back to our smart hospital exemplars – whilst highlighting AI, robotics, digital imaging, and telemedicine as standout areas hospitals have excelled in, the ranking doesn't detail recipes for success.

Speculatively though, a panel discussion I was involved with at the Rewired conference, suggested possible answers, that might lend lessons for better adoption in the NHS.

### **Are we solving the right problems?**

Dr Lia Ali, a clinical advisor to NHS England's Transformation Directorate, told the conference that for smart health tech to be successful, it first needs to solve a problem.

This might sound obvious. However, technology vendors often still build functionality without understanding the problem they are trying to solve.

In the US, many smart hospitals are likely to have been successful because they have used technology to respond to a problem that has both a patient and commercial level benefit. These are in essence commercial organisations that need to manage profit and loss sustainably. Failure to do so can have significant impact, or worst-case scenario they might cease to exist.

That is not to say they aren't driven by patient outcomes. But this overt commercial driver means that hospitals are often willing to take organisational risk and invest to achieve new models of care that can and have unlocked benefits.

This is less inherent in NHS behaviour. However, a different version of the same driver facing NHS organisations is productivity.

Karen Kirkham, chief medical officer for Deloitte, told the conference that demand continues to outstrip capacity, and that investment in traditional models of care will not meet rising pressures. This is a global phenomena, irrespective of funding models.

A commercial message might not land well within a social institution like the NHS. But it ultimately has the same need as US counterparts: to effectively manage increasing demand within a constrained resource environment without compromising patient safety.

Smart health tech needs to deliver on productivity if we are to see increased uptake in the UK. That might mean enabling earlier intervention, either within a hospital or a healthcare system, to reduce risks of complication, and prevent patients presenting with more severe and demanding conditions downstream.

It might mean investment in patient flow – again within hospitals and across settings. A recent flow deployment in Australia saw a 13% reduction in length of stay – solving problems for busy clinicians, for patients who want to be at home, and for stretched healthcare systems that can gain new intelligence on where they need to deflect pressures and improve support.

It might mean rethinking virtual care and remote monitoring, and remodelling pathways to improve our ability to manage risk in the community.

And it might also mean addressing common causes of inefficiency and patient safety concern. For example, technology has recently been launched to address a widespread systemic problem of volumes of patient results not being acknowledged – with implications for delayed care and ineffective use of billions of pounds worth of tests.

### **Creating the environment for smart healthcare**

Creating the right conditions for success also means recognising that new approaches take time.

I've practised as a doctor for more than 20 years. I understand the tremendous value in just seeing patients: pattern recognition, observing them, witnessing behaviours from the moment they leave the waiting room.

In a new virtual care environment, we don't have face-to-face collaborative conversations with patients to guide judgement. If we ask doctors to make decisions on remote monitoring data and patient reported surveys – that is significant change.

We design these approaches for good reason, but we cannot underestimate the transformation that goes alongside it. We need to make sure that we do not over focus on the technology, and leave people behind: both staff and citizens.

### **Expansion is more like gardening than blueprinting**

Advancing from a sea of pilots to widespread mainstream adoption of smart tech is also about more than blueprinting.

Successful smart hospitals are not just a process to be transferred: a desire to cookie cut, to blueprint and scale, will fail unless we observe the true breadth of elements needed.

We need iterative approaches, and clinical leadership to articulate change and overcome bumps and challenges.

Effective technology adoption means listening to the problems of patients and of clinical teams, who might not be interested in the lofty ideals of smart healthcare.

For successful adoption, there is a need to observe, monitor and treat smart healthcare as a living programme. Just as different approaches to gardening work in one location but not another – in healthcare we are dealing with unique environments that must be understood.