

From combined diagnostics to feedback loops: where digital ‘ologies’ might go as the NHS turns 75

Jane Rendall, UK managing director for Sectra, considers how already digitally mature diagnostic services in the NHS might build on the foundations already laid.

75 is a significant milestone. What are your personal thoughts and feelings about the NHS turning 75?

We are extremely lucky to have the NHS as it celebrates its 75th anniversary. It is sometimes too easy to underestimate the value it brings, but having started my career in the NHS as a sonographer, and having had so many interactions since as an individual, and as a technology partner, I'm proud of how the NHS is there for so many people, when they are in need.

Challenges remain that are being addressed as the NHS continues to evolve and change, but we are fortunate to have access to a health service where patients receive care from multidisciplinary teams, who can quickly mobilise from across large geographies to save lives.

Staff go above and beyond the call of duty for patients and their families, often in ways that might not happen in more commercially driven organisations.

And as a supplier, we are able to have a relationship driven focus with our customers, where we can make use of the clinical experience in our own teams to respond, listen and deliver.

How has the advancement of health technology and digital health transformed the NHS and what changes have you witnessed firsthand?

In the diagnostic space, digital technology has been widely adopted for some time. Radiology for example digitised more than 20 years ago across the NHS.

Since then, the maturity of digital systems for these teams has expanded at pace. Regional programmes covering millions of people have broken down early silos of imaging data, so that imaging from x-rays to ultrasounds, MRIs, CT scans and many others can now flow seamlessly across large numbers of NHS organisations to aid important clinical decisions.

This has expanded far beyond radiology. More recent years have seen the start the digitisation of pathology, regarded as the most significant transformation of the discipline. This has the potential to fuel strong clinical collaboration, maximise access to scarce specialists, and lay the foundations for AI.

New opportunities are also emerging for genomics – with multi-modal research platforms being brought into existence.

But perhaps most interesting is the opportunity for the future that now exists from the foundations of digital maturity in all these areas.

There is an opportunity to move towards a more diagnostics driven service. Instead of the older models, where pathology, radiology, ophthalmology, dermatology, and many other ‘ologies’, might have been separate things – there is an opportunity to break down barriers further.

Rather than a radiology report, or a histopathology report, we could move to a combined report at the disease level, that combines and enriches diagnostic insight.

This could be revolutionary for individuals working in this space, and for our understanding of patients and diseases.

What technologies do you envision as game-changers for the NHS in its next 75 years?

The transformation of combined diagnostics is just one opportunity from digital maturity now being seen.

This comes hand-in-hand with precision medicine, fuelled in part by what will be an explosion in diagnostic testing and monitoring, supported by ongoing technological advancements. This will provide new opportunities to identify disease even earlier and look at preventative measures.

An explosion in monitoring of treatments, and increased diagnostics within monitoring should also be expected. This will mean a huge increase in the amount of diagnostic testing required when treating complex disease, to understand how someone responds to a specific treatments or pathways. With workforce challenges continuing, this will require careful thinking around how technology can support greater efficiencies to make the most of diagnosticians' expertise and time, and to support their decisions.

This will also require stronger feedback loops, and a need for structured data that can be fed back through the EPR, back to diagnosticians, and back to people delivering care, so that they can monitor outcomes of their pathways and decisions, and look to improve quality in a continuous cycle. This would be a major benefit in the future of the NHS.