Revolutionising Healthcare: The Digital Era

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Digital transformation in healthcare opens up a whole new language and itself can lead to differences in understanding and outcome. We could simply assume that this is the fault of managers, decision makers and digital leaders. Equally, the ground swell in the ecosystem of start-ups, small to mid- size enterprise (SME) and technology suppliers badging themselves under the umbrella of digital transformation can be equally confusing. Digital transformation has always been about significant transformation of activities and processes that capitalise on opportunities from digital technology. The impact of this change is intended to span society, it should be strategic and co-ordinated.

Making the case for digital transformation in health is itself complex, there will be uncertainty and unknown outcomes. It's a sector that is moving at such pace that making predictions about the type of technology and type of benefit relies on insights, evidence and global trends. Digital transformation will inevitably mean different things in different settings, the ability to transform will be depending on culture, technology, legacy and funding as well as competing interests and priorities.

The use of technology in the NHS has made great strides in recent years; the NHS App is being rolled out over England this year, allowing patients to access their medical records, book appointments and order repeat prescriptions all from one place. Almost all GP practices and pharmacies are now live with the new Electronic Prescribing Service (EPS), and 111 online is helping to empower patients in choosing appropriate services for their care. These represent but a few of the many developments that have taken place in the last couple of years.

The NHS is in the early stages of utilising artificial intelligence and block chain technology. Decision support systems can aid clinicians in optimising prescribing practices. Personalised medicine incorporating genetic testing is beginning to make its way towards more mainstream usage. However, data will need to flow more freely between healthcare providers, planners and patients, this is where technology such as blockchain could be used to help aide data security.

These developments in the digital health ecosystem are rapidly advancing, and for the NHS to make good on its commitment to provide world-leading care, it needs to keep up. There is

recognition that this cannot be done alone, and the technology sector will need to help health policy makers to solve some fundamental problems. The NHS wants to encourage innovation and foster a system that allows cutting edge companies to enhance the standard of digital health and care tools and services.

Clinicians are experiencing an ever- increasing demand for front line medical services. In addition to delivering hands on clinical care, the amount of associated administrative work has also increased. Clinicians of all disciplines and grades now spend a significant part of their time working through this tidal wave of paperwork. Often this involves having to sacrifice time directly with patients and, for more junior staff sacrifice training opportunities.

The knock-on consequences of overwhelming our clinicians like this includes burn out, staff exodus and ultimately sub-standard patient care. The problem of administrative work will not go away but there is hope. The 'gift of time' is a major theme in the recently published Topol Review[1], emphasising the potential of technology to disrupt existing working practices and to hand back time to staff. In some parts of the world, advances have been made in the use of technology to assist clinicians in transcribing consultations. A number of global technology providers specialising in natural language processing have initiated projects using voice recognition technology in healthcare.

Clinical decisions support systems which are integrated into electronic medical records may in the future become optimised through the use of real- world evidence. These are all exciting developments and require a constructive dialogue between the profession, industry and policy makers so that the outcomes are of benefit to patients.

The NHS is changing rapidly and initiatives such as the NHS Digital Academy, the NHS Digital Pioneer Fellowships and the NHS Clinical Entrepreneurs Fellowships; and now the Topol Fellowships demonstrate there is no shortage of ambition. The growth in digital health, transformation initiatives and development of workforce signals an important moment in the role of the professions supporting the digital development of the health system.

Bibliography

The Topol Review: Preparing the healthcare workforce to deliver the digital future. An independent report on behalf of the Secretary of State for Health and Social Care.