Digital health must be better integrated into medical education

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The covid-19 pandemic has accelerated the adoption of digital health technologies, requiring doctors to master a new set of competencies, yet medical schools have been slow to adapt their curricula. Medical schools must update their teaching to include digital health education so that future doctors can provide safe and equitable patient care.

What is digital health and what do we know about how it’s taught?

Digital health encompasses the use of technologies such as telemedicine, smartphone apps, wearables, and artificial intelligence to deliver healthcare. These digital solutions are rapidly evolving and have the potential to improve patient outcomes and efficiency of care. The importance of digital health has been further demonstrated by the rapid digitalisation of healthcare seen during the covid-19 pandemic. With more healthcare consultations and doctor-patient interactions now happening remotely, it’s become even more pressing for medical schools to consider how they equip students with digital health competencies. Medical students need to be able to engage critically with these technologies so that they can better evaluate their potential to help or harm and so they’re prepared for future practice as clinicians.

NHS England published the Topol Review in 2019, outlining a roadmap for the introduction of digital health into UK healthcare. The report highlighted the need for medical schools to incorporate more digital health competencies into their curricula. Currently, many medical schools have yet to define digital health as a key theme, and globally there is no consensus on how best to deliver digital health curricula. Many students, however, are aware of the pressing need to develop our digital health skills, with a 2020 survey of European medical schools finding that around 85% of students wanted more digital health training.

How would we as medical students tackle this?

As medical students, we use apps and wearables on a daily basis. However, we are less exposed to the use of these technologies in the context of clinical care and find ourselves ill equipped to face clinical questions about these digital tools. For example, as newly qualified doctors, how should we use genetic sequencing data from companies that claim it can predict people’s disease risks? How should we respond to patients whose smartwatches indicate that they may have an arrhythmia? Furthermore, how reliable are these technologies?

Reflecting on our experiences as medical students, we highlight three areas that medical curricula should cover to prepare students for the digital future.

First, we must be equipped with a framework to navigate the ethical and legal dilemmas that are unique to digital health. In our clinical placements over the past year, we’ve observed an increase in patients sending photos to clinicians’ NHS email addresses to aid diagnosis. This poses questions about the safe and legal storage of the images for the doctor, the equity of using such technology across all patient groups, and whether putting the onus on untrained patients to accurately photograph the areas of concern could lead to diagnostic uncertainty. These common scenarios and their complexity highlight the need for focused teaching on data protection and patient education in the digital era.

Second, we should be exposed to digital health early on in the curriculum, with the teaching of practical skills integrated throughout later years. Key topics include diagnostic and monitoring technology, screening and prevention tools, and digital therapeutics. Learning about traditional pathophysiology can be combined with teaching about the technologies that are currently used to aid in the management of these diseases. For example, being taught how to appraise blood sugar monitoring apps that are recommended by patient groups, and which are certified as clinically safe and secure, will prepare doctors to understand the data generated by such apps and to answer related patient queries.

Third, medical schools should adapt how patient communication skills are taught to reflect the greater use of remote healthcare delivery since the start of the covid-19 pandemic. As the move towards virtual consultations is likely to persist beyond the pandemic, it is vital that we are taught core communication skills that reflect this shift—for example, by learning about remote consultations and the use of email and text messaging.

Looking to the future

Digital health must be better integrated into our medical education and developed throughout the curriculum. As digital natives, medical students should be consulted on the design of digital health education, and we should push for better training within our medical schools. We must be equipped with the technological, legal, and ethical skills to prepare for a digital future and to ultimately provide the best care for our patients.

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