

Ian Donaldson, Acting Head of Department of Nursing and Clinical Sciences, Bournemouth University, reflects on the advantages and difficulties of new digital technologies in health care and their impact on patient safety.

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Recent reports by Topol (2018) and Wachter (2016) have highlighted the need for change regarding the development and use of digital technologies in health care in the UK. The pace and range of change over the past 10 years has been breathtaking. Developments in clinical practice such as electronic patient records, video calls replacing telephone triage, clinical investigation results available online, health apps, and the use of the internet to search and find the latest evidence-based information, is transforming nursing practice. Alongside this, the place of technology enhanced learning has transformed preregistration nursing educational practice. This pattern is reflected in society as a whole, with a recent survey indicating that 89% of the public regularly use the internet (Topol, 2018). Digital technology has changed nurse-patient interactions, with patients having access to the latest evidence-based information, utilising discussion groups for patients to share and learn about their health and wellbeing and helping them to exert influence over healthcare provision by ensuring patients' voices are heard. The challenges in delivering a modern, high-quality and affordable healthcare system are set out by Wachter (2016), who argues that, central to these aims, is the adoption of digital technologies. Significantly, Wachter notes that many believe that bringing in more digital technology is a simple matter of technical change. Wachter argues that this simplistic approach misses the point that implementing a digital future in the NHS requires one of the most complex changes in healthcare and a 'reimagining of the work'. Fagerstrom et al (2017) note how often nurses have reported that they have had to adapt to compensate for poorly designed or implemented technologies in order to preserve patient safety. The Topol report argues that the end users, nurses, must be involved in the development and design of new digital technologies to create systems that work and in which nurses can have confidence. However, to achieve this requires an engaged and prepared workforce to deal with the Delivering the digital future known barriers to implementation and for the NHS to invest in the development of digital skills in the workforce. Using digital technology brings both benefits and disadvantages for nurses. Benefits such as the use of digital technology to speed communication with other colleagues, facilitating information sharing to enhance care delivery and being able to quickly access the latest evidence-based information have all transformed care. Yet there are limitations and obstacles to be overcome (Koivunen et al, 2015). Introducing new technologies also impacts on the workforce and requires training and careful management. A further challenge to consider (Fagerstrom et al, 2017) is how the human contact of communication, so central to nursing care, can be achieved while using digital technologies so that the patient, rather than the technology, remains the focus. While digital technologies are a great force for good, they can also divide. Issues of security and privacy have to be acknowledged there are regular news announcements of data breaches and it has to be recognised that patients will want assurances over security when mobile devices are used in clinical settings. The central question to be asked is 'how does this improve or add to the care of my patient?' Examples such as described by Selby and Illaiee (2018) fit with the notion of 'disruptive technologies' where development is led by frontline staff and the technology has a clear benefit for all users. The questions this raises for both preregistration education and continuing professional development is whether educators have the

necessary skills in digital technologies to teach students and develop programmes to support learning and the development of skills in this area. An interesting element here is that many students now entering university are from the 'digital native' generation, one which has grown up using digital technologies. However, while they may be comfortable with digital technologies, they are not used to using them in a professional care context. Koivunen et al (2015) noted this blurring of personal and professional where nurses referred to sharing information about leisure activities and joke messages as part of digital communication with colleagues. Thus the transfer of skills from a personal to a professional setting requires a clear understanding of professional values. The new Nursing and Midwifery Council standards published in May 2018 make clear that nurses must have digital and technological skills to deliver safe and effective nursing practice and that the programme must continuously develop their digital and technological literacy. But bringing real life digital examples into university can present challenges. Koster and van Houwelingen (2017) note that attempts to create simulated ehealth records in university can be prohibitively expensive. Therefore the only option for students is to use ehealth records in clinical practice and are not able to develop skills in a safe, simulated environment. Future collaboration between education and practice is therefore essential to explore how digital technologies used in clinical practice can be incorporated into higher education as part of technology-enhanced learning to develop the digitally capable nurse of the future. BJN

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