Racing towards a digital paradise or a digital hell?

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The digital health field was estimated to be worth $25b globally in 2017 (Duggal, Brindle, & Bagenal, 2018; The Lancet, 2017) with one US survey finding that 58% of smartphone users had downloaded at least one health app (Pai, 2015). Although mental health service user ownership of smartphones has increased (Migo et al., 2015) there is still evidence of a digital divide (Ennis, Rose, Denis, Pandit, & Wykes, 2012; Girard, Nubukpo, & Malauzat, 2017; Robotham, Satkunanathan, Doughty, & Wykes, 2016; Tobitt & Percival, 2019). Any benefits for those experiencing mental health problems are, therefore, likely to be less than in the general public, due to lack of access and skills. But although there is a promise of benefit, do we actually know what the benefits are, and are there serious setbacks that should make us stop and think about this race to digital?

The hype around the digital health industry has led many to suppose that there is actual benefit. The Federal Trade Commission’s fine on Lumosity, a brain training app, for deceptive advertising has made digital companies withdraw past claims. This has included benefits claimed for the most popular mindfulness apps which had no basis in tests of effectiveness, and any tests that were carried out seem to show little benefit (Littlefair, 2018). Mental health apps may also cause harm by suggesting benefit. Using a mental health app thought to be or is actually beneficial produces an expectation of success. But even the most successful therapy will have some individuals who do not achieve a benefit, so when none is achieved this may produce a sense of failure. Apps or online treatment may also delay contact with services that can provide effective treatment. This may make the problems harder to treat. But there are other reasons why we need to think about how and why we use digital technology.

Following the scandals involving personal data mining, it is hardly surprising that there is now some reticence about using therapies or services on the internet. In the past, we have rarely considered pressing the button to read the Terms and Conditions agreement. Not so now. But even with the new General Data Protection Regulation in Europe, it is rare to find anyone prepared to read through the 10 or so pages of legal boilerplate that will tell us where our data are being held and how it is used. Although digital health care does offer some benefits, there is a balance to be struck and now is the time to consider how health services, particularly mental health services, should be considering and even regulating this market. We need to think what the point is of digital for mental health care and support, and what we prepared to accept from what is now known as surveillance capitalism (Zuboff, 2019).

Why is it important to consider this issue now?

In the UK, Matt Hancock MP, Secretary of State for Health launched a paper on digital health care that suggested that digital technology was the way forward to meet the needs of patients, clinicians and managers (Department of Health and Social Care, 2018). Similarly, in the USA, the potential of online healthcare management has been proposed as a way of managing the increasing needs of patients and the healthcare industry. In countries, such as Africa and Australia there is more and more reliance on telemedicine and online care to support remote communities. The recent WHO-Lancet Commission also pointed to ways that digital could transform mental health care (Bhugra et al., 2017). The recognition of the high burden of mental health problems on society (see Wykes et al., 2015) has also interested Finance ministers, particularly about resolving this issue in working age adults. Digital systems and supports were thought to improve the potential for accessible mental health treatments on the cheap. But despite this flag waving, there are clearly many blockages along the road to a digital nirvana.

Will digital therapies help solve the problem?

We know that there is a large increase in mental health needs, probably through recognition of these problems and some reductions in the stigma surrounding mental health problems (e.g. Spiker & Hammer, 2018). Mental health services have large waiting lists, despite some target contact time being introduced, e.g. for UK early intervention services. The use of digital health services is advocated to solve the dual problem of increased service user numbers and lack of skilled mental health practitioners. This is a provision gap that is unlikely to reduce over the next 10–20 years, as stigma busting campaigns increase mental health literacy. Some support through digital therapies – most often apps – either as a stop gap, maintenance or as beneficial therapy is valued by service users. But apps substitute for a clinician in different ways that affects their usefulness as an alternative. The nature of apps is that they are used frequently for short periods of time – often only 10 min – and then in places where attention and concentration may be hard. They leave little time for reflection, especially if used in the middle of a working day, and few people manage to use them consistently after the first couple of weeks. These characteristics of app treatment will certainly reduce the effectiveness of even the most scientifically credible treatment.
A way forward

Perhaps we should see digital therapies as support for clinician-based treatment. This would be a process of blending face-to-face therapy with app-based support between sessions, such as that developed by Slow Mo for people with a diagnosis of schizophrenia (http://slowmotherapy.co.uk/). This sort of approach takes into account the expressed service user view – even of our younger most highly skilled internet users – they want a person who shows empathy to help them and not to solely use a smartphone (Castell & Ashford, 2018). There is evidence on how sharing clinical notes online can help address this issue (Dennenson, Williams, Woods, Tuepker, & Dobscha, 2019). Self-help treatment may be attractive to many health care providers, as it allows users to “be responsible for their own health” but when it comes to mental health, service users do not want to lose human contact.

The effects on clinicians and health systems

This journal has not ignored e-health. We have been commenting on it and publishing papers and reviews for many years (Guha, 2017; Lipczynska, 2012, 2016; Moessner & Bauer, 2012; Moessner, Minarik, Ozer, & Bauer, 2016; Schmidt & Wykes, 2012). Some have suggested problems; some papers think digital or e-health is a panacea for resource limits. But what about the effects on the healthcare system overall? We have already highlighted the stress experienced by clinicians which differs between cultures (Clough, Ireland, & March, 2019; Labrague et al., 2017; Labrague et al., 2018). Will the introduction of a disruptive technology help them to carry out their jobs, or will it increase their perceived level of stress and potentially increase burnout? Clearly, access to information is likely to make work a little easier, but we know that disruption to the daily work routine and lack of skill will affect efficiency if there is no resource investment. This was highlighted in the recent report by the Academy of Medical Sciences on data-driven technologies and data sharing (The Academy of Medical Sciences, 2018). We have healthcare staff with limited internet skills but highly tuned people skills. The potential for this disruptive technology to be detrimental is high so those who promote digital services should also set aside adequate resources to fund this exchange.

What data are we prepared to share?

A report by Ipsos MORI published in November 2018 (Castell & Ashford, 2018) demonstrated that, for the benefit of all those using the UK National Health Service, all patients would be happy to share data. But this is a national service that is highly valued and trusted. What about what we are sharing in mental health apps? The recently published Transparency for Trust principles (T4T) (Wykes & Schueller, In Press) suggests four features we need to know before downloading an app or signing up to online treatment. (1) Privacy and security – e.g. where are personal data stored and who will be able to see it? (2) Development characteristics – e.g. have service users been involved from the beginning? (3) Feasibility – e.g. how many people use the app after two weeks and have there been any adverse events noted? (4) Benefits – what were the benefits and how many people did not experience benefit? These simple T4T principles should be provided by app stores at the point of download so service users know what choices they are making. They could also be added to all online therapies. But T4T require the involvement of service users in co-design and evaluation and we know sometimes that this is difficult (see Brophy, Pennell, & Simmons, 2019; Cotney et al., 2017; Gordon et al., 2019).

We are becoming more aware of the potential for harm caused by the internet – through fake news, manipulation of our spending power and to drive our behaviour. There has also been concern over screen use and the propensity to drive poor mental health. Although the main concern is in the young, there is some evidence that mental health problems are associated with overuse of smartphones and may even drive that behaviour (Min, Kim, & Min, 2019). Those with mental health problems are also more concerned with the privacy and security of their data. We should all remember that “there is no such thing as a free app” (or any Google search). Business models are designed to ensure that personal data is harvested to personalise adverts or change behaviour. But it is not all doom and gloom. There are ethical designers of online therapy who test and evaluate their treatments. Unfortunately, that takes at least 10 years before their therapy reaches those who need to access it. In the meantime, my only consolation is that the harvesting of my data has produced odd consequences. These include multiple adverts for slippers in my search engine after I bought a pair for a friend four years ago, and very odd suggestions on Netflix after my daughter used the account. Although machine learning can be useful in identifying mental health problems (e.g. post-traumatic stress, Williamson, Darby, & Fear, 2019), it does not seem to work with me and I am hoping it never will.

Disclosure statement

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