

Digital literacy in contemporary mental healthcare: online assessments and mobile health apps

Derek K. Tracy , Romyne Gadelrab, Ayesha Rahim, Gabrielle Pendlebury , Hashim Reza, Rahul Bhattacharya , Asif Bachlani, Katherine Worlley, David Rigby, Maria Heath & Subodh Dave

ARTICLE

SUMMARY

'Digital' is an omnipresent yet often vague, misunderstood or feared topic in health services. There are many current and potential gains for individual patients and local populations, clinicians and organisations through optimisation of digital technologies. We argue that understanding the various aspects of digital psychiatry is an essential contemporary need. This is the first of two articles on the subject, exploring the gains and challenges of virtual/online assessments, including ethical considerations and the use of virtual reality and electronic prescribing.

LEARNING OBJECTIVES

After reading this article you will be able to:

- identify the practical challenges and gains of virtual assessments
- identify the ethical and legal issues involved in virtual assessments
- discuss the digital landscape of health apps and the emerging mental health technologies of virtual reality and electronic prescribing.

KEYWORDS

Digital; virtual assessments; online working; virtual reality; electronic prescribing.

The COVID-19 pandemic translated years of information technology advances into clinical practice in a period of months. The need for this had long been evident and the technology present – in perhaps imperfect forms – for some time, but a crisis enabled what routine processes potentially hindered. As we enter a post-pandemic world, we will retain these gains. Positively, mental health work and the patient's pathway are well suited to a digital 'project management' approach. Clinical progress often requires a number of professionals offering input at varying stages, with a clear desired outcome and progress by set points prior to discharge or transfer to another setting.

However, the evidence on efficacy, safety and tolerability of remotely delivered care has not all been positive, and often we still struggle with many issues regarding digital literacy, including what this can and should mean for psychiatry and clinical practice. The technology has often moved faster than medical guidelines and education and has introduced new complexities in areas such as consent, confidentiality and safeguarding. Communication between clinical teams has expanded to include virtual meetings, including virtual clinical team meetings (CTMs) and Care Programme Approach (CPA) meetings, but even relatively IT-literate colleagues can struggle to take advantage of the full potential of software solutions, including the ability to organise work streams, allocate tasks and store information in a much more sophisticated and accessible way than the familiar but crude shared filing system on National Health Service (NHS) computers. Even on a personal level despite the now ubiquitous use of the mobile phone and apps (applications, simple software programs), modern electronic diary options that offer a large amount of interconnectivity, widgets, alerts and memos, such aids are often completely overlooked.

This is the first of two articles in *BJPsych Advances*, together intended as a primer covering the major current opportunities and challenges to practising psychiatry in a contemporary digital world. It covers virtual/online assessments and mobile health apps. The second will cover electronic records, outcome data, social media and prospects in education and learning. These articles will also address gaps in our evidence base and understanding that require future work and research.

Virtual/online assessments and the digital mental state examination

The practical: gains and challenges

There has been a rapid increase in virtual/online healthcare assessments across a range of platforms

Derek K. Tracy is Medical Director of West London NHS Trust and a senior lecturer at King's College London and University College London, UK. **Romyne Gadelrab** is a Clinical Research Fellow at King's College London, an honorary consultant psychiatrist at South London and Maudsley NHS Foundation Trust and co-chair of the Royal College of Psychiatrists' (RCPsych's) Digital Special Interest Group, London, UK. **Ayesha Rahim** is a perinatal psychiatrist, Chief Clinical Information Officer and Deputy Chief Medical Officer at Lancashire and South Cumbria NHS Foundation Trust, Preston, UK. **Gabrielle Pendlebury** is Clinical Director of Psychiatric Services, Onebright, York, UK. **Hashim Reza** is a consultant psychiatrist at Oxleas NHS Foundation Trust, London, UK. **Rahul Bhattacharya** is Associate Clinical Director at East London NHS Foundation Trust, Clinical Lead for New Models of Care at London Clinical Networks (NHS England) and an honorary senior clinical lecturer at Barts and the London School of Medicine and Dentistry, London, UK. **Asif Bachlani** is a consultant psychiatrist and Clinical Director for the Priory's Acute and PICU Service Networks, the Hospital Medical Director for the Priory Hospital Woking, the RCPsych's General Adult Faculty Finance Officer, and a committee member of the RCPsych Digital Special Interest Group, UK. **Katherine Worlley** is a consultant psychiatrist and local college tutor at Broadmoor Hospital, Crowthorne, and electronic prescribing and medicines administration (ePMA) lead at West London NHS Trust, London, UK. **David Rigby** is a Specialty Trainee Year 7 (ST7) in East Surrey Early Intervention in Psychosis Team, Surrey and Borders NHS Trust, Leatherhead, and co-chair of the RCPsych's Digital Special Interest Group, London, UK. **Maria Heath** is a patient representative on the RCPsych's Digital Special Interest Group, London, UK. **Subodh Dave** is a consultant psychiatrist and Deputy Director of Undergraduate Medical Education at Derbyshire Healthcare Foundation Trust, Professor of Psychiatry at the University of Bolton, and Dean of the Royal College of Psychiatrists, London, UK. **Correspondence** Derek Tracy. Email: derek.tracy@nhs.net

First received 9 Apr 2022

Final revision 9 Jul 2022

Accepted 25 Jul 2022

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since the COVID-19 pandemic (Car 2020). They offer flexibility to patients and clinicians, including reducing travel and transport requirements and greater potential for ‘out of hours’ appointments, and have been shown to lead to reduced cancellations and non-attended appointments (Greenhalgh 2016). In mental health services they can also prove very useful for individuals with specific difficulties, such as social anxiety (Ramkisson 2020). Data from the NHS Benchmarking network show clear differences between specialties in how they have adopted and embraced the use of digital technologies (Fig. 1). This is particularly evident for

(IAPT) services, which in December 2021 reported that 26% of clinical contacts were delivered using digital technologies; the next highest rates of digital utilisation were reported by services for children with intellectual disabilities (also known as learning disability in UK healthcare) (21%) and children and young people’s mental health services (CYPMHS) (15%).

Digital appointments should be seen as part of the standard offerings and choice given to patients, but there are potential challenges that may exclude some patients. Clinicians must take into consideration whether the individual has appropriate technology and internet connection – which cost

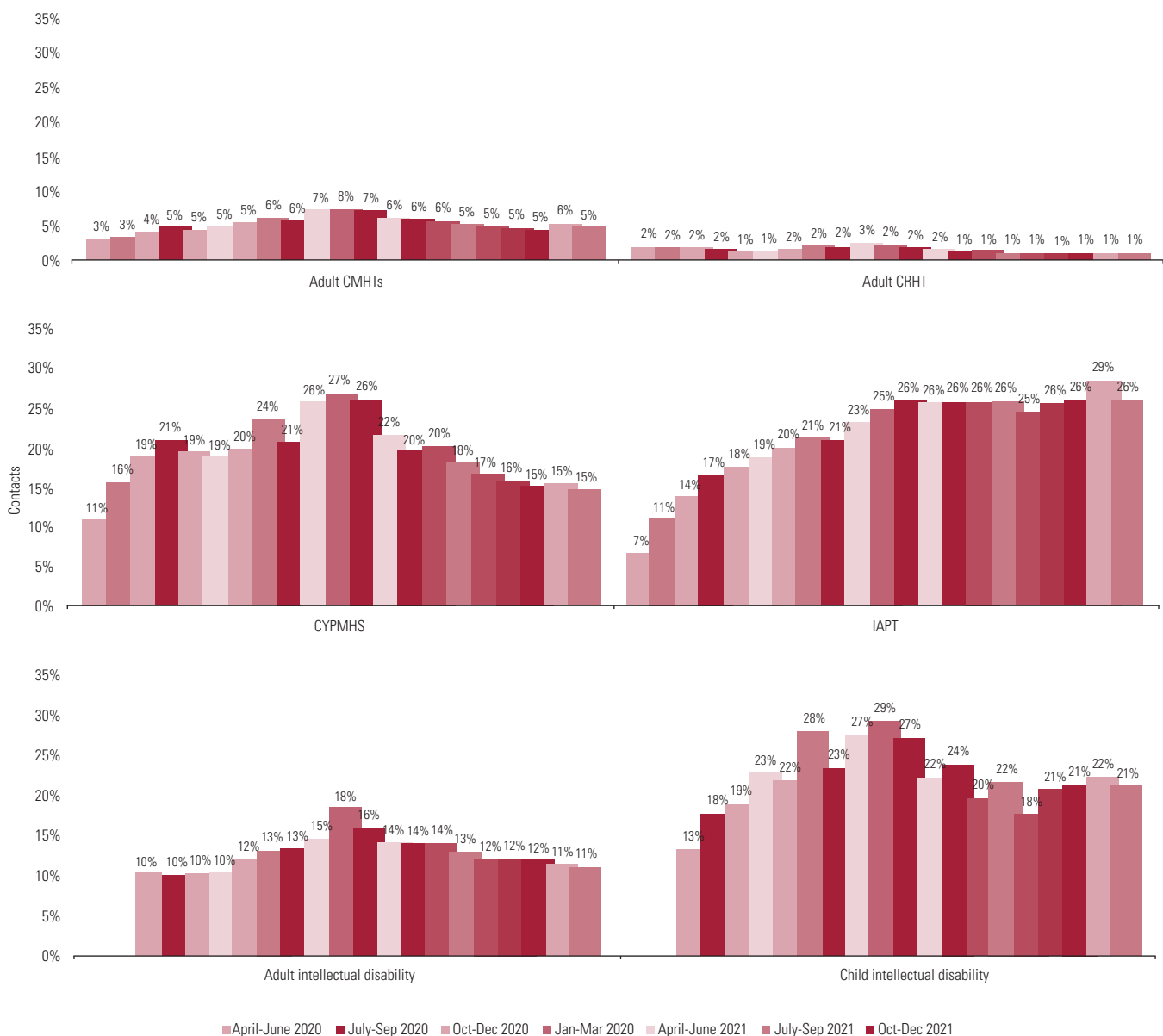


FIG 1 Proportion of clinical contacts delivered using digital technologies in the UK in November and December 2021, divided by subspecialty. CMHTs, community mental health teams; CRHT, crisis resolution and home treatment; CYPMHS, children and young people’s mental health services; IAPT, Improving Access to Psychological Therapy services. Data used with permission of NHS Benchmarking Network COVID-19 Monthly Tracker Mental Health, Learning Disability & Autism Services (NHS 2022).

money – or appropriate privacy at home. Some patients may be less familiar and comfortable with online working and communication.

In our anecdotal experiences, several types of challenge are emerging, although how common and problematic these are in broader practice awaits better evidence. For staff, although working from home might offer conveniences, some feel uncomfortable having their home and home life visible to others, even with options such as screen filters. Similarly, out-of-hours appointments risk becoming a requirement or burden for staff, and may problematically blur work and home life, and, anecdotally, some are reporting longer working hours when working from home. So-called ‘Zoom fatigue’ is a recognised, but poorly understood, contemporary problem, and many report finding it increasingly challenging to undertake repeated virtual assessments and meetings. Some of this appears to be due to their ‘back-to-back’ nature, without the natural breaks that otherwise tend to occur between in-person meetings; some might be due to the artificial nature of engagement, in which the absence of ‘real’ eye contact requires increased cognitive effort to assess the emotions of the person on the other side of the camera (Bailenson 2021). **Box 1** highlights some practical considerations when undertaking virtual assessments.

The digital mental state examination

It is worth an initial clarification of the uses of the phrase ‘digital mental state’, as it can mean quite

different things, all of which are relevant to the broader ‘digital’ topic. We use it here quite explicitly to mean the use of technology to assess an individual’s mental state; in other words, a modified version of what psychiatrists have always done. However, ‘digital mental state’ has been used, particularly with younger people, to inquire about the use of social media, internet, mobile phone and other related technology. This can reveal a range of clinically relevant behaviours, with examples ranging from changed online activities in mania through to searching for content on self-harm or eating disorders. A third contemporary use of ‘digital mental state’ is in the harvesting of information through apps and ‘wearables’ (see later in the article and the second article in this series) that can, for example, provide useful clinical data on a person’s activities and travel through ecological momentary analysis approaches.

The structure of the mental state examination is long established in psychiatry, and virtual assessments potentially disrupt this. Individuals might conduct calls with their video off, although in many ways this is no different from ‘old fashioned’ telephone conversations. It might be harder to assess movement abnormalities or more subtle aspects of behaviour. Individuals with paranoia might find it harder to engage via a virtual interface using a camera. There might be concerns about how well risk and safeguarding assessments can be undertaken through such media, both in terms of the clinician’s ability to determine these directly through discussion and also in terms of factors such as who might be listening (see the next

BOX 1 Practical considerations when undertaking virtual assessments

- Ensure that the communication method and software are agreed by your organisation and the patient, and that both are secure. Test out the system before you put it into practice, giving you the opportunity to resolve any problems in good time and contact IT for support if necessary.
- When using the internet, it might be helpful to have a preliminary phone call to understand how the patient will be receiving the call and to ensure that they have a comfortable, private space where they cannot be overheard. If others are in the house, agree what you will do someone if the patient is disturbed. If a collateral history is needed, agree how this can be obtained, and if the patient is under 18, agree if and how the treatment plan will be shared with a parent or carer. Agree what you will do if the technology fails during the consultation.
- Have appropriate space with a background free from confidential information and distractions. Have a separate room if possible, as you would with a face-to-face consultation. Try avoid having a window behind you, as you may appear as a silhouette. Ensure that your face is appropriately lit, and use headphones where possible to maximise sound quality and encourage optimal therapeutic engagement.
- Consider whether the patient’s developmental, emotional or financial factors might affect their ability to participate. For example, if the person has intellectual disabilities or physical impairments you might require greater preparation or thought about how the consultation will be conducted. Does a carer need to be present to facilitate the interaction? If yes, plan this in advance and if you are recording the session, ensure that you have their consent and an agreement that the patient will only have any recording for private use.
- Try to allow as much non-verbal communication as possible to be captured. Let the camera see your head, neck and shoulders and encourage the patient to do the same. Consider slowing your rate of speech to be as clear as possible. Look into the camera to establish eye contact. When the patient is new to you, take more time over consent and your introduction, so that they are fully aware of the process. After the consultation ensure that your record keeping is complete with an appropriate care plan in place.

section). However, reviews on the topic supports its use and effectiveness in managing a range of mental health conditions (Barnett 2021), although clinicians have reported some concerns that it may limit the ability to build up a rapport (Hubley 2016, cited in Barnett 2021). Risk assessment and safeguarding should be carried out as in a face-to-face session and any resultant actions, such as contacting other professionals, should be the same as usual.

Ethical concerns

Several obvious ethical challenges present themselves, not all of which have agreed solutions. Confidentiality is a key part of all medical assessments, but this is harder to control outside of health-care settings. If this is a patient they have not met before, the clinician should verify that this is the correct person and check that the individual understands the purpose of the consultation.

From a patient's perspective, for practical reasons, individuals might be in shared space or an environment where others can overhear their conversations (this and other digital matters are reflected on in Box 2). It might not be possible to ascertain with confidence whether there are others in the background who cannot be seen, and indeed it might be difficult to ask such questions openly. This is of particular note where there are concerns about any coercion or harm from other parties. Children and young adults, individuals with intellectual disabilities and elderly people might present as carrying greater than average risks, as might those with a history of abuse or exploitation, although of course there can be much variation. If anyone else is in the room, ask them to introduce themselves, seek consent

from the patient for them to remain and, if practical, try to ensure that they remain in view throughout the consultation. If the person is in a public place, consider whether it is possible for them to move to a private area or reschedule the consultation.

The hospital or clinic room, often with the patient being greeted by a receptionist, has a formality to it, which elicits in most patients an interaction that is expected, with the doctor–patient relationship clearer. This expected dynamic can be lost when patients are assessed online, leading at times to the patient not being fully prepared for the interview or exhibiting an informality that is not in keeping with the task ahead. It may be necessary to set expectations before commencing the online assessment or to interrupt an assessment and resume later. If the person is in a public place, consider whether it is possible for them to move to a private area or reschedule the consultation.

After every virtual assessment the clinician should document clearly what was discussed and what was consented to.

Capacity and the Mental Health Act 1983

Following on from this is the challenge of assessing someone who may lack capacity to make a decision on a relevant topic, or the nature of whose symptoms are such that they require, or might require, a Mental Health Act assessment. Linked with these are issues of confidentiality and safeguarding. Essentially the 'rules' and guidelines remain the same, but their application may change. Of note, at this time, it is not considered acceptable to undertake a Mental Health Act assessment virtually, and a recent ruling necessitated that a person be 'personally examined' by the doctor carrying out the assessment (*Devon*

BOX 2 A patient's perspective on 'digital'^a

Regarding patients' requirements for privacy during diagnostic or therapeutic appointments, the setting up of 'digital hubs' that they can use in local general practitioner (GP) surgeries might facilitate access to psychiatry/psychotherapy remotely, complying with professional, pandemic-related or cost-saving pragmatism, while promoting privacy and protecting the free movement of the people they live with in their homes. This proposal recognises that the potential for accidental disclosure may restrict, compromise or endanger the participant, and acknowledges that internet connectivity is not universal owing to personal choice or financial factors.

I also propose that in a society where digital access is not ethically or legally mandatory, the post-pandemic extension of working-from-home policies necessitated by the exceptional global crisis requires further research for best ongoing practice, assimilating patient perspectives, which can be gathered through focus groups. Ongoing clinical provision should

acknowledge that the digitally equipped culture of professional clinicians (with private working-from-home space) is not consistently replicated in vulnerable sectors.

On the subject of wearable devices, a recent study of their use by people with bipolar disorder reported that participants felt the context needs to be considered when interpreting the data collected, for example data related to sleep and exercise. Such findings should feed into conclusions and onward collaborative research by digital technologists and clinicians to ensure that mental health practice reflects patients' experiences of using new technologies (Saunders 2017).

In a rapidly expanding digital culture, telepsychiatry and mental health apps certainly merit further study.

a. Written by Maria Heath, a patient representative on the RCPsych's Digital Special Interest Group.

Partnership NHS Trust v SSHSC [2021], para. 9). This is interesting as inferentially it suggests that virtual assessments are less adequate than face-to-face ones, which might offer up a legal argument against decisions made virtually. However, the Royal College of Psychiatrists has noted that standards expected of doctors ‘apply equally to digital and conventional consultation settings’ once one gives ‘consideration to the potential limitations of the medium used’ (RCPsych 2020).

Data storage and recording

Some problems regarding data storage remain unresolved. In an eLetter response to an earlier article of ours on digital technology in healthcare, Zacharia wrote that an early review of the roll-out of digital devices by their NHS trust begun in late 2021 revealed considerable use of personal devices (particularly personal mobile phones) for patient-identifiable work, in part due to some initial shortages of the NHS hardware (Zacharia 2021). The use of personal devices risks unwitting breach of data protection rules: the simple use of NHS mail can involve downloading patient-identifiable information onto an unprotected device. Conversely, the more stringent the limits on devices that can access information, counter-risks emerge, such as not being able to access patient-relevant information to guide clinical decision-making.

As they are processing their own personal information, patients are, in such circumstances, exempt from data protection principles and do not need permission from a clinician to record a consultation, and indeed it is perfectly lawful to do this covertly (MDDUS 2021). This is because they are processing their own personal information and are therefore exempt from data protection principles. Section 36 of the Data Protection Act 1998 states: ‘Personal data processed by an individual only for the purposes of that individual’s personal, family or household affairs are exempt from data protection principles’. Anecdotally, where the issue arises, most patients report recording consultations to aid their memory, particularly for complex treatment regimens or understanding a difficult diagnosis. Research has shown that typically 40–80% of medical information provided by healthcare practitioners is rapidly forgotten, and the greater the amount of information presented, the lower the proportion correctly recalled (McGuire 1996). Memory of medical information can often be poor and inaccurate, especially if the individual has memory problems or is anxious. It has also been shown that many patients tend to focus on diagnosis-related information and fail to register instructions on treatment (Kessels 2003).

Indeed, a recording can be medico-legally protective of doctors’ professional welfare. If the patient

does record a consultation, it is usual to ask for a copy so that it can be placed in the patient’s notes to form an accurate, permanent and contemporaneous record. However, this can be an area of tension for some clinicians. Such recordings may be admissible as evidence in relevant legal scenarios. Whatever the professional concerns, clinicians need to appreciate and respect the legal position: organisations and professionals are not entitled to ‘ban’ such recordings, and refusing to undertake an assessment because the patient wishes to record it raises different clinical risks. It is our experience that it is always better to talk through any concerns with the patient, including trying to appreciate why they might wish to have such a recording. As a contemporary alternative, several videoconferencing technologies, such as Microsoft Teams and Zoom, offer the facility for high-quality transcriptions, and these can be added to medical records. Note that clinicians *cannot* record without the permission of all present, and this is covered by data protection legislation. None of this has changed in the era of digital or video consultations, although clearly the ways in which one might be recorded have increased. In our experience, professionals’ fears of being recorded are typically disproportionate to any adverse ‘use’ against them.

Medicolegal concerns and guidance

All of these issues, some of which are relatively new, raise concerns sometimes expressed by clinicians about their liability or culpability if ‘things go wrong’ following virtual assessments. There is an increased appetite for medical negligence actions in the UK. Clinicians can protect their professional welfare with careful documentation and robust governance procedures. Documentation needs to include the context for the remote consultation, the consent process followed, the rationale for any decisions, factors that may have affected the consultation and ability to interact with the patient. Guidelines are being devised or revised by many relevant organisations and bodies, most supporting the principles of digital working (for example, the General Medical Council (GMC, 2021a)), albeit some may lack specificity and detail. The GMC expects clinicians to ‘give patients the information they want or need to know in a way they can understand. You should make sure that arrangements are made, wherever possible, to meet patients’ language and communication needs’ (GMC 2021b: para. 32).

Mobile health (mHealth) digital applications (apps)

We are all familiar with the use of apps more broadly, and most of us will be aware of their

emergence into the health space as mobile health (mHealth) apps. The global digital health market was estimated to be worth \$111 billion in 2019 and projected to reach \$510 billion by 2025 (Simmons & Simmons 2020). mHealth apps are already being used to aid the monitoring and management of symptoms of mental disorders. There has also been a rise in the use of mHealth apps for the delivery of psychological therapy, with successful delivery of cognitive-behavioural therapy (CBT) (Karyotaki 2021). They have potential to increase access to care, and can provide a low-cost intervention with little staff training or presence required, increasing access to those geographically isolated. It has been proposed that apps could help redress ethnic disparities in the uptake of mental health services, as well as reduce stigma of accessing mental health services (Rauseo-Ricupero 2021). Novel apps for nursing staff can allow them to record observations and physical health monitoring data, food and fluid charts and sleep charts, minimising time spent in front of computers and taking better advantage of the capabilities of the tablet computers already available on the wards. Technology can make it possible for patients, not least those in more restrictive settings, to remain connected with the outside world.

A challenge is that very many mHealth apps are commercial and without an evidence base. Their rapidly changing nature means that any publication covering specific apps is likely to be out of date by the time of publication. Indeed there was an NHS webpage of mental health apps but, highlighting the contemporary challenge, it was taken down between iterations of this article. NHSX (now part of the NHS Transformation Directorate) has developed assessment criteria for such apps – Digital Technology Assessment Criteria (DTAC) – which assess whether apps meet clinical safety, data protection, technical security, interoperability, usability and accessibility standards (NHSX 2022a). What is required by practising clinicians is a broad awareness of their use and an ability to evaluate their evidence base before making any recommendations about their use. The Silberg scale can be used to assess the quality of online information in such apps, with researchers noting that many mHealth apps have poor scores and that there likely remains a need for healthcare professionals and developers to jointly conceptualise new apps with better information quality and evidence base (Zhang 2017).

Concerns also exist regarding safety and data privacy. When apps employ artificial intelligence, can they safely identify and manage risks, and can patients and clinicians be assured that their data are used only for the intended purposes? In a

review of mental health apps, out of 61 identified apps 41% did not have a privacy policy to inform users about how and when personal information would be collected and retained or shared with third parties (Parker 2019) and many existing commercial apps share personal data for the purposes of marketing and advertising with third parties such as Google and Facebook (Huckvale 2019).

Virtual reality

Virtual reality (VR) technology is the computer generation of a 3-D digital environment that the user can interact with in a realistic way, typically through the use of a headset. Although often seen as a new development, VR has been trialled in the treatment of mental disorders for at least 15 years (Valmaggia 2007). However, in the past 5 years there has been an explosion in the use of VR in diagnosing of, teaching about and treatment of mental disorders, brought about by recent improvements in the technology that make VR kits cheaper, smaller and of higher quality, such that clinical VR apps can now be accessed by affordable commercial technology such as a smartphone or desktop PC. These recent developments, combined with the increasing demand for limited psychological therapeutic resources, mean that it is likely that VR's move from the laboratory to the clinic will gather pace in the near future and so it is useful for practising psychiatrists to have some awareness of VR.

VR is having its most numerous successes in the treatment of anxiety disorders, with evidence of effectiveness in post-traumatic stress disorder (Rizzo 2017) and specific phobias (Anderson 2013; Gujjar 2019; Bentz 2021), helped by the unique ability of the technology to expose the user to the phobic stimulus in a safe environment. Such therapies are efficacious, with a meta-analysis comparing VR treatments against exposure therapy for social anxiety showing no difference in effect sizes (Chesham 2018).

Another advantage of VR over more traditional technology is the intuitive nature of its controls. For example, picking up an object in VR would involve physical movement rather than moving a mouse or pressing a button on a keyboard, affording ease of use to those with cognitive problems. One study has shown that performing a simple VR navigation task can differentiate individuals with mild cognitive impairment due to Alzheimer's disease from those whose impairment has other causes better than any other standard cognitive test (Howett 2019), and research into VR's ability to be able to detect so-called 'pre-clinical' cases of Alzheimer's disease is currently underway.

Perhaps more speculatively, the next generation of VR treatments may be automated, negating the need for a therapist. Such a treatment has already been developed for agoraphobia in psychosis (Freeman 2022) but there is a need for a stronger evidence base. A possible future direction for VR technology is its combination with artificial intelligence (AI) to produce cheap, effective treatments that can be delivered at home by an AI therapist with minimal human input.

Electronic prescribing and medicines administration

The aim of electronic prescribing and medicines administration (ePMA) is to enable a clinical system that contains a full record of all medicines activities, including prescribing and administration, and where medicines information can be accessed 24/7 from any location (NHSX 2022b). Already a lot more prevalent in physical healthcare (McLeod 2014), it brings together a number of professional groups – prescribers, nursing staff and pharmacy staff. In our experience, ePMA in mental healthcare faces an added element of complexity on the issue of consent to treatment, compounded by the fact that, traditionally, this information has not always been optimally recorded. Furthermore, the nature of clinical work in mental health settings, such as self-administered medication or periods of treatment at a different site or hospital, or prescriptions from visiting colleagues, needs to be considered and often workarounds have to be put in place. We have found that initial ePMA set-ups can lead to complex and unforeseen problems, such as combinations of oral and intramuscular (IM) medication often being poorly handled by such systems unless specific manufacturer ‘patches’ or software updates are installed. Clear governance and business contingency plans are required in the early stages of adoption.

ePMA is a prime example of a tool that was initially conceived to minimise errors (Franklin 2020) and release clinical time, creating a domino effect

of improvement by allowing, for example, quicker integration of prescribing decisions with pharmacy stock and information on immediately available medicines, interactions that paper versions cannot match. The benefits are obvious, however echoing a theme across digitisation, ePMA can come at a price of paradoxically reduced contact between the clinicians and patients as everything can be done remotely (McLeod 2019). Furthermore, again in our anecdotal experiences, there is the danger of lack of contact between the different professionals as, for example, pharmacy could in theory access the medication prescriptions without being on site.

Further information

Box 3 lists some sources of further information on the use of digital technologies in the NHS.

Conclusions

‘Digital’ is potentially a nebulous term and also one that the average clinician assigns to specialist services or particular roles, such as (within the NHS in the UK) a trust’s Chief Clinical Information Officer. This risks a lack of engagement with tools that can be transformative in providing better care, about which there is an increasing necessity to be aware and trained. We argue that psychiatrists should take this on positively. For all the challenges of virtual appointments and meetings enforced by the pandemic, none of us would return to the earlier era that removed such flexibility. We are, perhaps, at a more nascent stage with mental health apps and virtual reality, but one can foresee their potential. The skill and art for us all moving forward will be growing the evidence base (some of which will be experiential and based on best practice as much as randomised controlled trials) and learning to optimise technology, mitigate its risks and still understand the best of more traditional methods such as face-to-face assessments. This is a message we will pursue in the second article in this series,

BOX 3 Resources for clinicians on digital healthcare

Higher Education England: *Digital Literacy of the Wider Workforce* (<https://www.hee.nhs.uk/our-work/digital-literacy>)

Faculty of Clinical Informatics: *Core Competency Framework for Clinical Informaticians* (<https://facultyofclinicalinformatics.org.uk/core-competency-framework>)

NHSX. *Data Saves Lives* (<https://transform.england.nhs.uk/key-tools-and-info/data-saves-lives/>)

Goldacre B, Morley J (2022) *Better, Broader, Safer: Using Health Data for Research and Analysis. A Review*

Commissioned by the Secretary of State for Health and Social Care. Department of Health and Social Care (<https://www.gov.uk/government/publications/better-broader-safer-using-health-data-for-research-and-analysis>)

ORCHA academy: Free digital health CPD course (<https://orcha-academy.com/>)

NHSX: Digital playbooks (<https://transform.england.nhs.uk/key-tools-and-info/digital-playbooks/>)

MCQ answers

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which will explore electronic health records, social media and outcome measurements.

Author contributions

D.K.T. conceptualised the article. All authors were involved with the writing of the article and approved the final submission.

Funding

This work received no specific grant from any funding agency, commercial or not-for-profit sectors.

Declaration of interest

None.

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Case

Devon Partnership NHS Trust v SSHSC [2021] EWHC 101 (Admin).

MCQs

Select the single best option for each question stem

1 Clinicians generally consider one advantage of virtual assessments to be:

- a improved risk assessments
- b flexibility in working hours
- c better mental state assessments
- d enhanced ability to undertake safeguarding assessments
- e patients getting an insight into clinicians' homes and personal lives.

2 Which of the following is not a practical consideration when undertaking virtual assessments?

- a patient access to the required technology
- b the need for adequate internet connections for all parties
- c the patient's developmental factors
- d the availability of private space to engage with the assessment
- e the prior approval of a Caldicott Guardian.

3 Which of the following statements on ethical challenges of digital assessments is false?

- a a Mental Health Act assessment can be conducted virtually
- b the rules for assessing capacity are the same as for face-to-face assessments
- c unseen individuals may be listening in to conversations
- d patients can record virtual discussions without seeking permission
- e the clinician's use of personal equipment, such as their own mobile phone, risks breaching data protection rules.

4 Regarding mobile health apps, which of the following statements is false?

- a the global market is projected to be shortly worth over \$500 billion
- b they offer the potential for low-cost interventions to those geographically isolated
- c most contemporary marketed apps have a reasonable underlying evidence base
- d their use is allowed within NHS services
- e it is argued that use of apps might reduce stigma in accessing mental health services.

5 Which of the following is not a proposed advantage of electronic prescribing and medicines administration (ePMA)?

- a reduce administration errors
- b easier auditing of practice
- c robotic administration of long-acting injectable medications
- d link with electronic patient records (EPRs)
- e active alerting about any potential medication interactions.