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COVID-19 and beyond: virtual consultations in primary care—reflecting on the evidence base for implementation and ensuring reach: commentary article

Freda Mold ,[1] Debbie Cooke,[1] Athena Ip,[1] Parijat Roy,[2] Susan Denton,[3] Jo Armes[1]

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[1]Faculty of Health and Medical Sciences, School of Health Sciences, University of Surrey, Guildford, UK
[2]River Wey Medical Practice, Farnham, UK
[3]Guildowns Group Practice, Guildford, UK

Correspondence to
Dr Freda Mold;
freda.mold@surrey.ac.uk

INTRODUCTION

COVID-19 has resulted in an unprecedented expansion of virtual consultations in primary and community care services.[1] Although virtual consultations have been available for a long time, they were not widely adopted before COVID-19.[2] There has now been a rapid deployment of virtual consultations and telephone consultations (TCs) in response to COVID-19.[3]

Virtual consultations come in many forms, including synchronous TCs, video, text/image messaging and asynchronous email consultations. Virtual consultations enable communication with a range of healthcare staff and are based on an array of provider platforms (Attend Anywhere, WebGP, accuRx, eCONSULT). Digital (or online) triage systems are often linked to virtual consultations, to determine the priority and urgency of a patient condition to manage demand, and are considered the first step in determining whether a virtual consultation is needed. Digital triage is a workflow management system, such as FootFall and AskMyGP. Although much has been written about triage in primary care,[4] or indeed the use of the telephone in arranging care,[5] relatively little is known about the potential for web-based, real-time (synchronous) communication for some patient groups. Before COVID-19 most practices offered TCs, with few offering video consultations. However, the potential for video consultations, in particular, has still not been realised. In time, these may be considered complementary forms of care delivery.[1 2] COVID-19 has led to the rapid expansion of virtual consultations, in its various forms. This commentary paper focuses primarily on web-based virtual consultations.

There are currently vast avoidable inequalities in healthcare and health outcomes (mortality and morbidity) for different service user groups globally.[6] This includes Black, Asian, other ethnic and older groups who are also at higher risk of contracting COVID-19 and being adversely affected.[7] Evidence collected before COVID-19 indicated the potential of virtual consultations to widen care disparities for specific groups, including people with physical/cognitive disabilities (sensory/communication impairments (audio/sight))[8] and those living with social deprivation, with limited digital access (including vulnerable groups)[9 10] and areas with poor broadband coverage.[11]

COVID-19 clinicians and researchers/academics are moving forward in developing ways to mitigate these disadvantages by developing strategies to enable greater access and engagement for a wider range of service users.[12] Primary care has adapted rapidly to virtual consultations and embraced their use, despite concerns about confidentiality, safety and security, with the view that many professional and organisational lessons can be learnt to improve access and delivery. To improve delivery moving forward during COVID-19, there is a need to reflect on experiences of delivery, examine and build on current evidence, and consider the training needs and competencies of healthcare professionals delivering care virtually.

SERVICE USERS

There is little long-term evidence to support the implementation of virtual consultations due to a lack of knowledge about barriers to use, non-use, and whether these services disproportionately disadvantage vulnerable

and hard-to-reach groups. We need to understand how to promote virtual consultations without worsening existing health inequalities.[10] The current evidence base also reports mixed impact on health outcomes[13 14] and how use of virtual consultation promotes self-help is unclear.[15]

Service users and their carers' ability to consult with general practice clinicians digitally/online improves access for specific groups (younger, women, employed)[10 16 17] by providing an alternative route to care[18 19] or perceptions that it might lead to better follow-up.[16]

Other benefits have also been reported, such as enabling some service users to express themselves more openly on health issues through virtual consultation,[20] the possibility of sharing images, when needed[8 10] or reducing relatives/carers' need to accompany service users to face-to-face appointments,[19] greater opportunities for multi-person interaction with relatives/carers,[19] reducing time off work for appointments[21] and widening opportunities for access[18] including those in geographically remote areas,[22] if housebound[23] or when transport is costly/time-consuming.[19 24] As such service users report greater satisfaction, convenience[9 10] and timeliness of care.[25] Virtual consultations might also empower individuals thereby improving engagement with service providers.[26] Consideration might also be made to service users who are shielding (and housebound) during the COVID-19 pandemic.

Virtual consultations have also raised questions about the suitability of delivery across different service user groups (such as vulnerable/ hard-to-reach and those with sensory and/or learning disabilities) across different health conditions, or at different time points in the service user care journey (newly diagnosed vs management of long-term chronic conditions).[9 10] In exploring virtual consultations, both its barriers and facilitators, we also need knowledge to go beyond simply looking into age, gender or sociodemographic differences of users, and consider other factors.[25] These include the use of proxies in virtual consultations (children/grandchildren offering technical support, use of family translators), safeguarding for specific service user groups, accuracy of medicine prescribing/issues, and confidentiality and data security.[13 27]

There is a need, therefore, to understand and carefully evaluate the process of implementing virtual consultations so that we can learn how to embed this approach as part of routine care, so it is inclusive. This will be invaluable in exploring its use, especially over time, and may also highlight unexpected consequences of use, such as offering alternative access routes or possible disparities in access for specific service user groups. Indeed, further evidence would be invaluable to understand the experience of specific groups especially those who are digitally disadvantaged, such as those living in areas with poor/intermittent broadband coverage, those with no means to use or acquire the technology needed to use virtual consultations or those with low computer/technology literacy. Likewise, practical issues also need consideration when attempting to develop and implement virtual consultation, including insufficient broadband widths for both service users and clinicians.[17]

CLINICIANS/WORKFORCE

Early pre-COVID-19 research indicates primary care staff/clinicians were already concerned about the impact of implementing virtual consultations on workload, and potential to change the length, workflow or structure of the working day.[28 29] Although these concerns might have declined since COVID-19, use of virtual consultations during the pandemic may highlight other documented concerns[30] such as raised clinical risk/medicolegal risk,[8] shifting role responsibilities/greater reliance on general practice administrators[31] and increased need for subsequent follow-up (either via telephone or face-to-face), thereby adding to clinicians' existing workload concerns.[18]

The conversation around virtual consultations also highlights the need to be aware of the very real impact of this new working style/pattern, and its impact on well-being or 'cognitive load' of primary care colleagues.[32] As this type of working uses many more skills than face-to-face communication, there needs to be an acknowledgement of the burden of multitasking and the potential impact this might have on the patient–professional interaction. Virtual consultations, however, might equally improve communication, by building rapport and confidence in openly discussing health issues[20 21] which might not have otherwise been raised. Multiple skills are needed for both clinicians and service users to feel the encounter was successful. This includes having the camera/sound equipment, to begin with, the information technology (IT) skills to use the virtual consultation system and the ability to pick up/provide verbal and visual cues in the conversation (if via video), and overall confidence in the system and security to share personal health information via remote means.

Other benefits of virtual consultations may be to offer new opportunities to extend service provision to a broader variety of service user groups and clinical settings,[33] provide shared learning opportunities[19] and greater joint working across professional groups, including allied health professionals (physiotherapists, pharmacists) and settings,[34–38] and possibly reducing the number of referrals to specialists.[39]

Virtual consultations might also become the new medium for general practitioners (GPs) to use in their additional training roles. This provides opportunities for shared clinics and learning (eg, dermatology, heart failure) using virtual consultations as a learning event[40] but also presents potential challenges when multiple clinicians are needed (eg, joint surgeries). Virtual consultations might also be reframed towards more patient-centred approaches, allowing for different ways of engagement to services.[41]

Training and supporting materials will provide reassurance for clinicians and might be critical to embedding virtual consultations into current general practice. Training for staff to use virtual consultations is essential to familiarise them with the system, the equipment and treatment procedures. Moreover, the lack of staff training has been shown to affect the uptake of virtual consultation.[42] Training material will also need to be grounded on existing, up-to-date national guidance, local primary care policies and governance. The growth of virtual consultation has impacted on the need to include advanced communication training for GPs, which starts from an undergraduate level through to continuing professional development. Education techniques currently include video-based feedback (either prerecorded or in real-time) to improve GP communication skills in consultations.[43 44] COVID-19 has presented challenges for GP trainers in terms of delivering training that ensures safety for all participants in the consultation (trainer/observer, GP, patient/actor) in face-to-face encounters. Solutions for remote training include audio/video three-way consultations between participants, which may open exciting possibilities for training, enabling wider geographical, specialists and joint-working across clinics/settings.

Previous research indicates concerns about local governance[8] and that general practice policies were either not known about or followed.[9] However, this may rapidly change with the publication of guidance on using virtual consultation, such as that produced by the General Medical Council to support ethical decision-making and risk assessment.[45] However, clear guidelines for general practice staff are necessary to support implementation.[8 13] Since COVID-19, it is possible that the rapid development of local policies, together with research, may result in more robust and reassuring care delivery for general practice staff moving forward.

A recent study demonstrated a higher risk of death from COVID-19 among GPs from single-handed general practices in areas of economic deprivation.[46] This increased risk may be explained by the limited implementation of virtual consultations, due to practice size/resource resulting in a greater need for face-to-face care delivery. As such, uptake of virtual consultations within these areas needs to be increased and further support provided to reduce the risk of contracting COVID-19 and further widening of health inequalities across poorer regions.

THE ORGANISATION OF CARE

Before COVID-19 there seemed to be fewer benefits for the use of virtual consultations for general practices, this was mainly based on the lack of effective platforms or limited technology stock for use in primary care.[18] Since COVID-19 the rapid deployment of digital/online platforms and investment (laptops with cameras, duel headsets) has led to improved technical infrastructure.[16] However, implementation is reliant on several factors, from consistent internet provision and reliable wi-fi[7] to continued adjustments and agile approach to working practices to cater to specific service user groups and expectations of all users. This also includes flexibility about redistributing tasks to support implementation. This will include greater reliance on administrative staff to monitor/manage and signpost/support new systems workflow,[31] such as time spent on virtual consultations over other modes of contact (and differences in distribution between staff).[15]

Virtual consultations may offer opportunities for reform in primary care, however, we must be cautious not to consider it to be a golden bullet. A recent study by Farr *et al* shows that although virtual consultations may offer alternative routes to care access for some service users, it may also inadvertently lead to subsequent or more frequent follow-up visits, either via telephone or face-to-face[18 25 47] or an even greater need for care delivery 'downstream' between secondary and primary care providers.[48]

Potential benefits of virtual consultations might be the rapid responsiveness to care, including use of emailed images or use in visual assessments to pick up on visual cues.[17 23] This is especially important when needed to support diagnosis, and when physical presence is deemed too risky, in light of COVID-19, and when socially distanced care provision is preferred.

It may be too soon to evaluate whether there are any cost-savings from virtual consultations[15 30] as these are reliant on robust and long-term evaluation data. However, the opinion of some GPs is that virtual consultations may be cost-effective for those in rural areas.[19] The picture is unclear as to whether they are cost-effective long term, especially as the financial implications of this mode is reliant on many other factors, such as reducing the number of face-to-face appointments, need for follow-up face-to-face/telephone calls/visits—for the same issue, or whether more referrals are made, pushing demand to other parts of the health system (two-way direction between primary and secondary care). Ultimately, cost and organisational considerations may dictate the success and long-term sustainability of this service.

Integration of virtual consultations is an important topic if post-COVID-19 care via this mode is to become more established. However, the need to successfully embed them into the current system while limiting any barriers to its interaction with pre-existing systems is complex. There is a need to fully embed these practices across different platforms and primary, secondary care and tertiary care across regions and services. Likewise, integration of virtual consultation between health and social care organisations, like care homes, could further offer opportunities to improve timely care delivery and prevent hospital admission.[11] The impact of these services is again yet to be explored in greater detail.[11 21 25]

Recent National Health Service (NHS) England guidance illustrates the need to support general practices to scale up and extend the range of digital solutions to meet current care needs.[49] While there remain variations in structural factors (phone lines/equipment issues)[9] and

the need to fully integrate and financially support these systems across differently sized practices, there remains great optimism that by working together, service gaps and the inequalities that might arise in access can be addressed.

FUTURE RESEARCH AND SERVICE DEVELOPMENTS

Research to date into virtual consultations use in primary care has indicated many areas for future research. These include exploration of equality issues associated with use for specific service user groups[10 18] (acceptability, barriers and facilitators), and professional/organisational issues regarding quality, cost and sustainability of virtual consultations over time.

There is good evidence to indicate how routine/low-acuity illness might be managed using virtual consultations.[47] However, virtual consultations do pose challenges to primary care staff in diagnosing and managing more complex/chronic conditions or multimorbidities.[3 30] Although we know some service user groups—such as those with type 2 diabetes—have been early adopters of both digital/online access to medical records and virtual consultations,[50–52] there is still relatively little known about the need for efficiency and sustainability of this type of contact for different service user groups, conditions and across geographically diverse areas.[22]

This research agenda can only be met by co-design studies with the central involvement of clinicians, a range of staff and service users across geographically diverse areas, to prioritise the research agenda, co-create more equitable systems and disseminate these practices.

This research also needs to be conducted by collaborative research teams across the UK, so we can learn from each other, general practice colleagues and service users to improve care provision, ensuring it is person-centred and addresses what is important to whom, at what times/when and for what purpose. In conducting this research, we might also find unintended consequences of virtual consultation use (or non-use), which would be equally valuable in understanding where systems fail to deliver, for whom and why.

Likewise, we may be surprised that barriers to use can be overcome with the implementation of very simple strategies, such as offering IT support at a general practice level, initiating new ways of working between staff members, and providing greater staff training and support and service user empowerment/support.[15 50] However, such strategies can only be implemented and sustained by acknowledging general practice IT, governance and reimbursement needs.

Indeed, pre-COVID-19 recommendations have also indicated the need for more robust evidence to support the large-scale roll-out of virtual consultations in primary care[53] ; however, the pandemic has changed this landscape, accelerating the need for high-quality research across geographical areas and general practice types/sizes.

Evidence-based frameworks are available through which to map and evaluate the success of new systems, including the Non-adoption, Abandonment, and Challenges to the Scale-Up, Spread, and Sustainability of Health and Care Technologies[54] and the Candidacy framework,[55] which might provide rich data concerning how service users seek healthcare and the underpinning decisions, behaviours and psychosocial factors which contribute to their care journey.

Future research outputs need to support a range of vulnerable service user groups, based on a range of multidisciplinary teams working across a growing number of integrated services in the community: applied to offer practical solutions (communication toolkits/IT support, professional and service user education, IT equipment at each site); inclusive of a range of service user groups (vulnerable and hard-to-reach groups); and based on an agile/flexible system (which can adapt at a general practice-level and service users circumstances, as and when they occur). Although the Royal College of General Practitioners and NHS England are beginning to develop such resources,[56 57] much work needs to be done to ensure equity and safety of these systems. Research into the acceptability and experience of use during the pandemic would also be valuable to move forward our knowledge and application of this technology.

IMPLICATIONS FOR GENERAL PRACTICE AND EDUCATION

Virtual consultations may now be here to stay, with the UK government calls for greater expansion and implementation moving forward.[58 59] This permanency has massive implications for general practice in terms of workload/flow, what works—for whom and why, what does not work—for whom and why, when to make reasonable adjustments and, how agile primary care is adapting to a hybrid approach of face-to-face and digital/online care delivery. Moreover, this change also has implications for the education of our future workforce, beginning at undergraduate level, provoking the need to advance digital/online communication skills training and education (eye contact, body language, environmental conditions). Furthermore, if virtual consultations are to maintain the quality of care, known to be the cornerstone of primary care, there is also a need to understand how they may impact on relational issues, such as building rapport, aiding communication, and demonstrating empathy and compassion, on which the quality of the patient–professional relationship is grounded.[18 20 23 31] There is also a need to consider care continuity, which both GPs and patients value.[60]

CONCLUSION

We need to maintain person-centred, timely and equitable access while also supporting staff to work safely and efficiently during, and crucially after, the COVID-19 pandemic. While there is research to indicate that virtual

consultations can promote access to care,[61] little is known about the barriers and facilitators of this type of consultation for people from vulnerable groups in primary care[51] and the long-term implications for digital access. Virtual consultation has facilitated access to primary care for many people throughout the COVID-19 pandemic. Future research will show how virtual consultation impacts on those using health services, their care providers and the organisation of care. Until then web-based virtual consultation will complement other care delivery options.

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ORCID iD

Freda Mold http://orcid.org/0000-0002-6279-5537

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