



Optometry in Practice

Research

Optometry practice in the UK in 2020 during the COVID-19 pandemic: initial response and ongoing clinical implications

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Abstract

To minimise the spread of COVID-19 during the pandemic, optometric practices had to restructure their service provision in order to provide a safe eyecare environment for their patients. These changes included the introduction of new pathways, enhanced infection control procedures, changes to assessment routines and greater use of remote consultations. Nagra et al. recently published a paper detailing the results of a survey conducted on practising members of the College of Optometrists investigating changes in clinical optometric practice in the UK as a result of the pandemic. This article summarises the key findings of the survey including the challenges and benefits identified, such as how to ensure safe working practices, how to continue to provide a comprehensive service and navigation of the financial implications. Benefits such as refined pathways, streamlined services, increased skill acquisition and improved professional relationships are also highlighted. The impact on current practice and implications for future clinical care are also discussed.

Introduction

The rapid spread of an infectious respiratory disease, known as COVID-19, led to a global pandemic being declared on 11 March 2020,¹ that disrupted nearly every dimension of life. It has changed the way we socialise, interact and access medical care. Soon after the pandemic was announced, regional lockdowns were introduced to minimise the risk of spreading the virus (SARS-CoV-2). Healthcare services focused on treating patients in a critical condition following presentation of COVID-19. Many healthcare services in the UK were therefore halted, including routine eyecare, following advice from the College of Optometrists that primary care optometry practices should only remain open to deliver essential or emergency eyecare. Practices were faced with difficult decisions regarding how to continue to care for patients during a period of fluctuating restrictions. To ensure those with urgent care needs were appropriately managed, optometric practices had to restructure their service provision. As these changes were not carefully planned, but rather imposed, optometric practices had very little time to prepare for the rapid and sudden changes in care provision. To establish how continued care was provided, Nagra and colleagues² explored what optometric care was provided in the UK during the COVID-19 pandemic. This study formed a cross-sectional survey and was distributed between 7 May and 1 June 2020 to 3000 practising members of the College of Optometrists and undertaken by 1250. Practitioners represented a wide age range, as seen in Figure 1, with most falling within the 25–54-year age range (74%). The majority lived in England and 32% were practice owners or franchisees, 31% were employed by large multiples, 20% were employed by small

independent groups and 16% were self-employed. This study provided insights regarding adaptations to the changes in working practices. The aim of this paper is to review the clinical challenges imposed on optometric practice and highlight future implications to the profession as a result of the COVID-19 pandemic.

Early adaptations to optometric practice during the COVID-19 pandemic

Despite the need to change service provision in a very short timeframe, optometric practices rose to the challenge of implementing the adaptations required early in 2020. Changes included the introduction of new pathways, infection control procedures, changes to assessment routines, changes in staffing and remote consultations. This is summarised in Figure 2 and discussed in the sections below.

Creating new patient pathways

To ensure patients were appropriately managed, new pathways were developed by NHS England, Local Optical Committee Support Units and the Clinical Council for Eye Health Commissioning and clinically endorsed by the College of Optometrists and the Royal College of Ophthalmologists.^{3,4} These pathways differed in England, Wales, Scotland and Northern Ireland. In England, a new pathway, the COVID-19 Urgent Eyecare Service (CUES), was introduced within the context of the pandemic to cater for patients with urgent needs and promoting remote consultations if feasible.⁵ CUES included care for those presenting with potentially sight-threatening conditions and was intended for patients for whom a delay in care would be detrimental to their sight or well-being.⁶ This pathway incorporated remote technologies to

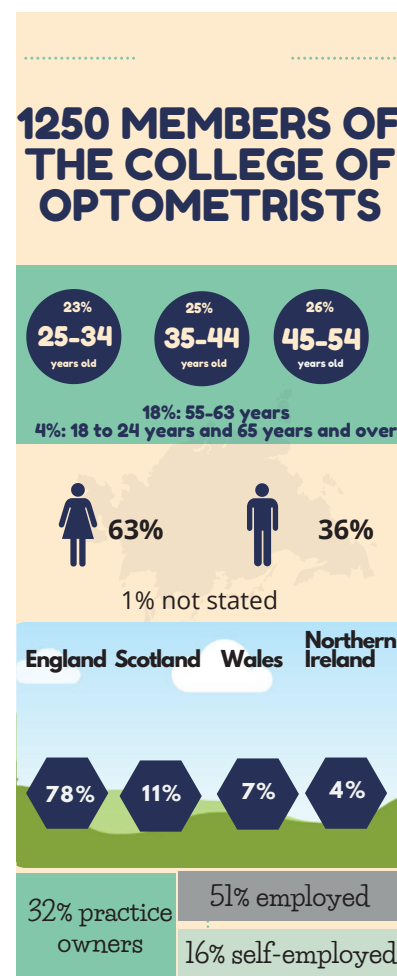


Figure 1. Profile of practitioners who shared information about their current working practices during the COVID-19 pandemic.

assess urgent ocular presentations and improved local timely care for patients. Through triaging, urgent eye referrals were made as required using a network of local optometry practices, supported by ophthalmologist guidance. In addition, patients in England were triaged to the General Ophthalmic Services (GOS) and existing Minor Eye Conditions Service (MECS).⁷

In Wales, patients were seen through the existing Eye Health Examination Wales (EHEW), part of the Wales Eye Care Service (WECS).⁸ Pathways in Scotland were guided by the National Eyecare Framework.⁹ Emergency Eyecare Treatment Centres were established for the provision of in-person emergency eyecare after triaging by an optometrist. Emergency pathways in Northern Ireland were established while the Northern Ireland Primary Eyecare Assessment and Referral Service (NI PEARS) and Glaucoma Care Pathway Enhanced Services were suspended until they were reinstated in June 2020.¹⁰

These pathways resulted in practitioners needing to follow new ways of triaging patients to identify which patients required in-person essential emergency consultations.⁴ Nagra and colleagues² identified that the decision as to whether a patient qualified as an emergency was most frequently made by a General Optical Council (GOC) registrant (94%). Due to 42% of practitioners being on furlough and 20% being unemployed, on maternity leave or self-employed, only 38% were working. Of these, less than half were involved with in-person appointments as part of the emergency care during the initial COVID-19 pandemic period, whereas the majority were only involved in remote appointments. Pathway changes often take time to streamline, but the majority of practitioners mentioned that these new pathways were helpful and effective. Further studies are required to investigate the clinical and cost-effectiveness of such pathways.

Enhanced infection control procedures

Practices delivering in-person eyecare during the pandemic had to transform the way services were delivered in line with government guidance to minimise the risk of SARS-CoV-2 transmission. These included the use of personal protective equipment (PPE) for all clinical encounters and adhering to social-distancing restrictions where possible. For most optometrists, the use of PPE and increase in stringent infection prevention and control procedures within their practices were new. Nagra and colleagues² reported that 39% of optometrists received training through their professional bodies, 35% did their own research, 28% received PPE training through their employer and 18% received no PPE training. In response to the pandemic, online training modules were developed to facilitate widespread PPE training specifically for optometrists.¹¹ Optometrists were advised to wear a mask when working within 2 metres of a patient and guidance on the use and disposal of masks and other PPE was issued on government websites as well as by the NHS and professional bodies.^{12–15} The need for PPE was met with numerous initial anxieties following the World Health Organization (WHO) warning of a global shortage of PPE.¹⁶ Concerns were raised by 53% of practitioners to their employer or professional body regarding poor access to PPE and 58% acknowledged having to supply their own PPE.

As PPE was seldom used in optometric practice before the pandemic, Nagra and colleagues² explored the specific items of PPE being used by practitioners (Figure 3).



Figure 2. Changes within optometric practice during the COVID-19 pandemic.

Although the majority were wearing surgical masks, gloves and aprons and using large slit-lamp breath guards, at the point of the survey data collection, some practitioners were still not using any PPE, generally due to a lack of PPE and not having received any PPE training (Figure 4).

NHS/WHO hand-washing recommendations during the pandemic were followed by 99% of practitioners, of whom 41% started using these recommendations during the pandemic. Infection control procedures such as cleaning instruments (94%) and cleaning surfaces touched (92%) were undertaken between patients. Ensuring enough time between appointments to allow for these additional cleaning procedures needs to be factored into appointments, as long as the pandemic continues, to ensure the safety of practitioners and patients receiving optometric care.

Modified assessment routines

To comply with guidelines regarding social distancing and reducing the risk of SARS-CoV-2 transmission, Nagra et al.² showed that assessment routines were modified by 66% of practitioners. When examining ocular health, alternatives to direct ophthalmoscopy such as wide-field fundus photography and optical coherence tomography were used by 64% of practitioners. Further changes included asking patients to use hand sanitiser (58%), to wash their hands (18%), to wear a face mask (39%) and to keep an increased distance from the practitioner whenever possible (38%). The frequency of using face masks may have changed since the survey data were collected to be in line with subsequent government guidelines indicating the mandatory use of face masks in public indoor areas. Ways of minimising patient contact time were implemented where possible by conducting case histories over the phone or in a different room. If this was not possible, maintaining social-distancing guidelines during case history taking was attempted.¹⁷ Going forward, it will be of value to determine how patients and practitioners perceived these changes and what can be done to improve patient satisfaction.

Changes in staffing

Although some optometrists were involved in emergency eyecare (38%), many were furloughed (42%), self-employed and not working (13%), unemployed (4%) or not working for other reasons such as maternity leave (3%). Only 10% of those surveyed had volunteered for redeployment (to help elsewhere in the NHS), 17% were considering applying for redeployment, 24% had not heard of redeployment whereas 49% were not considering the scheme. For practitioners whose services were not employed during the pandemic, such as locums, there was a loss of income and uncertainty regarding future availability of work. These changes gave rise to additional anxieties which were distinct from those experienced by individuals working during the pandemic. There will undoubtedly be employment challenges moving forward. These include how to accommodate practitioners on site while remaining compliant with social-distancing restrictions; identifying ways to support vulnerable staff; and maintaining infection control procedures. The vaccination programme has offered reassurance, with optometrists being eligible for the vaccine in category 2, along with other front-line health workers. Data from England from the beginning of June 2021 show that 89% of front-line healthcare workers have received their first vaccine dose and 81% have received both doses, although there



Figure 3. The use of personal protective equipment (PPE) by optometric practitioners.

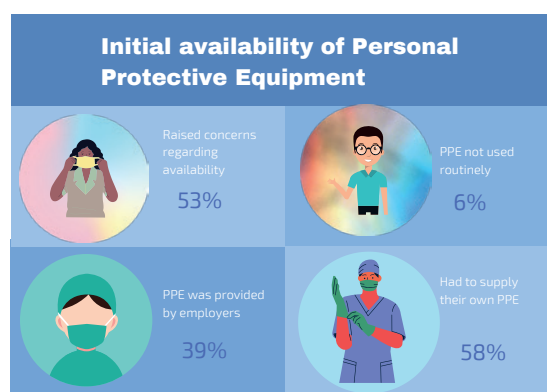


Figure 4. Initial availability of personal protective equipment (PPE).

are regional variations.¹⁸ In Wales, 92% of healthcare workers had received a first dose by April 2021. Similar data were not available from Scotland or Northern Ireland. Many patients have also been vaccinated, with 40.1 million first doses and 27.1 million second doses having been administered in the UK. However, not all individuals are choosing to have the vaccination and new strains of the virus may pose an ongoing threat. Therefore, risks may remain in the long term and a variety of measures to mitigate against such risks are likely to remain prior to in-person appointments.

Use of remote consultations

Although telehealth was available before the pandemic, most optometrists had little need for remote consultations as there was sufficient access to primary healthcare across most of the UK.¹⁹ Interestingly, before the pandemic 8% of practitioners had used telephone consultations and 2% video-conferencing consultations. The pandemic precipitated an immediate need for remote consultations to limit social contact and the spread of the virus. Patients were often initially triaged via telephone and eye examinations were tailored to the essential needs of the patient, some consultations taking place by telephone or video conferencing only. To facilitate use of remote technologies during the pandemic, professional bodies responded with advice and guidance^{20–22} and providers of continuing professional development courses produced relevant webinars and other materials, such as a triage form and visual acuity charts to enable such consultations.^{23,24}

Remote consultations were offered by 54% of practitioners for emergency/urgent care. Although this is encouraging, many were not offering such consultations (45%) or did not respond to this question (1%). Of those involved in remote consultations, 41% were doing so through MECS, 8% through CUES, 20% through other recognised pathways and 42% through other non-recognised pathways. The majority (83%) indicated feeling very or moderately comfortable conducting such remote consultations, but many practitioners held concerns regarding professional indemnity. Practitioners indicated using a variety of platforms for remote consultations: WhatsApp (44%), FaceTime (26%), Zoom

(18%) and Skype (6%). Other platforms (53%) used included AccuRx Fleming, Attend Anywhere, Whereby and Clinic.co, as well as making use of media such as photographs sent via e-mails or texts to assist decision making.

Before the pandemic, only 23% of practitioners who were offering remote consultations used specific protocols. During the pandemic, 62% followed protocols, with 31% using the College of Optometrists form²³ and 18% their own case history form. The case history formed the basis for the visual assessment for 91% of practitioners, 17% using the online vision chart produced by the College of Optometrists, whereas 3% used smartphone applications. Additionally, to establish any vision loss, 8% of practitioners indicated asking patients to check their vision with common everyday items in the house such as clocks or subtitles on the TV and/or to compare differences in vision between eyes. To explore if a patient had visual distortion, 76% of practitioners used case history, while 34% used an Amsler grid and 2% used smartphone applications. More subjective ways of assessing visual distortion were also mentioned, such as asking the patient to look at door frames to assess the presence of distortion (10%). With regard to assessment of anterior eye abnormalities/redness, the majority of practitioners relied upon case histories (69%), use of photographs sent by patients (65%) and visual observation during video-conferencing calls (38%). In the future, open communication channels should be promoted to facilitate practitioners raising concerns about training or confidence in the use of new procedures and ways of improving safe working practices. This could be particularly valuable for practitioners who may return to clinical practice after furlough or unemployment or those with limited in-person experience during the pandemic. Ensuring the availability of suitably encrypted technologies, that are GDPR-compliant, will be important in the future.

The challenges faced by optometric practice during the COVID-19 pandemic

The new ways of working during the pandemic meant addressing several challenges: provision of safe working practices, the way services were provided,



Figure 5. Profile of practitioners who shared information about their current working practices during the COVID-19 pandemic.

the use of remote tools, financial implications and concerns regarding the future of the profession, as summarised in Figure 5 and discussed below.

Ensuring safe working practices

The practitioner survey by Nagra et al.² found that the most reported challenge was safe working practices during in-person encounters (76%), due to the proximity between practitioners and patients during eye examinations. During the initial weeks and months of the pandemic, practitioners had to establish how social distancing could be implemented and enforced. There were also concerns regarding the availability of PPE and disinfection products (63%) and a lack of training on using and disposing of PPE (40%). Practitioners reported concerns that there would not be enough time to change PPE and do a thorough clean of consulting rooms between patients. Personal health concerns were also raised regarding contracting the virus for those conducting in-person

appointments. It is important to consider ventilation in consultation rooms to minimise exposure to SARS-CoV-2. The Association of British Dispensing Opticians (ABDO) has produced guidance in relation to ventilation within optical practices.²⁵ Guidance also exists for consultation rooms in the general practice setting²⁶ and such guidance may be followed to ensure adequate ventilation in consultation rooms within an optical practice. Specifically, guidance states: (1) ensure that the room has windows that can be opened to allow adequate ventilation; and (2) treatment rooms and minor surgery rooms should be designed with 15 air changes per hour. The ventilation system must be regularly maintained to ensure that the design rate is being achieved. It is recognised that many primary care properties will not have ventilation systems, and this guidance does not suggest that in these cases ventilation systems should be installed. However, where ventilation systems do exist regular maintenance should take place.

Comprehensive service provision

Nagra et al.² reported numerous service provision concerns, e.g. use of PPE could compromise the interpretation of clinical results. Some practitioners felt guidelines were ambiguous with respect to the definition of urgent referrals, thus increasing the possibility of differences in interpretation between optometrists. Urgent care provision varied geographically, and practitioners felt this may create barriers to accessing care in some regions.

Challenges in using remote tools

Further concerns included: adapting to changes due to a lack of remote communication tools (60%), lack of training on using these tools (30%) and lack of confidence using new technology (26%).²

Concerns were raised that certain diagnoses could be missed if patients were not seen in person. Practitioners expressed anxieties regarding adapting to using remote consultations and whether training would be provided. There were also GDPR concerns about using remote procedures if unencrypted e-mails or unsecured video software were used.

Professional liability concerns were raised by 66% of participants who had greater concerns about liability with remote consultations compared to in-person appointments, in particular due to concerns over missing ocular pathologies without an in-person examination.

Challenges imposed by the financial implications

The changes imposed by the pandemic brought numerous financial concerns, mentioned by 59% of practitioners. For optometric practices, there were increased expenses through securing PPE equipment, alternative equipment and adapting clinics to establish COVID-secure workplaces. Moreover, income was expected to reduce as fewer patients could be seen. Employees were concerned about job security and self-employed optometrists about availability of work.

Concerns regarding the future of the profession

Analysis of free-text responses by Nagra et al.² identified that financial concerns made some practitioners question the future of the profession. Firstly, they were concerned that services could be operating very differently, with some practices forced to close. Secondly, optometrists might be forced to seek alternative employment if reductions in staff numbers were to be made. Many felt that optometrists did not receive the recognition they deserved for their services.

The benefits of the changes to optometric practice

A number of benefits regarding adapting to new ways of working during the pandemic were identified by Nagra and colleagues,² including streamlining service provision, improved professional relationships, increased skill acquisition and refining pathways, as summarised in Figure 5.

Streamlined service provision

The most frequently identified benefit from the Nagra et al. study² was the inclusion of remote care within service provision (66%). Participants also found the provision of tailored eye examinations (focusing on addressing the main concerns) beneficial to working practices.

Improved professional relationships

Practitioners reported that the changes in working patterns resulted in better communication between GPs, hospital eye clinics and optometrists. This improved professional relationships between healthcare providers and with the hospital eye service in particular, resulting in greater recognition of the valuable clinical contribution that optometrists provide, was mentioned by 36% of practitioners. This may possibly result in more conversations regarding secondary care eye services moving into a primary care setting to support doctors and nurses who have reported an increase in demand.

Increased skill acquisition

Practitioners felt the pandemic had led to an increase in their skills as more participated in the education and training that were available regarding the provision of remote services. Others were also pleased that skills they had not consistently been using previously were now utilised due to an expansion of their roles, for instance using independent prescribing (IP) and being involved in community clinics.

Refined pathways

Practitioners identified that the pandemic provided the opportunity to refine pathways, resulting in referrals being streamlined and more effectively managed. This resulted in fewer clinical visits due to primary and secondary care working together more effectively. Kanabar et al.²⁷ conducted a service evaluation of CUES in Manchester between June and August 2020. Their findings demonstrate that most CUES cases seen within primary care were managed without the need to refer to secondary care. The authors highlight the need for further improvements within the service and speculate that optometrists with IP accreditation and appropriate relevant experience will be key to improving the management of patients within primary care.

Optometric care going forward beyond the pandemic

This paper has highlighted how practitioners adjusted the delivery of optometric services during the COVID-19 pandemic. Although the

pandemic has led to much upheaval of both optometric employment and working practices, there have been some potential benefits for the optometric community. These include closer working practices between multidisciplinary professions (optometrists, dispensing opticians, GPs, ophthalmologists) and clinical and non-clinical employees. For some, including support staff, there was a role change, which in certain cases provided a more focused role. Further benefits included enhanced infection control measures, better hand hygiene, new pathways to streamline referrals and adapted assessments during in-person appointments to minimise the risks of contracting COVID-19 and other possible infections.

Remote consultations have also been utilised, and this has extended the scope of optometric practice. In addition, remote consultations help limit transmission of the virus and keep both professionals and patients safe. Such consultations were not universally used, possibly due to a lack of awareness of tools such as smartphone ophthalmoscopes or perhaps due to a paucity of evidence for eye-related telehealth tools. Providing additional support to practitioners should capitalise on the benefits of remote consultations in providing a more tailored service and potentially more flexible work patterns for optometrists (i.e. potential for working from home). Increasing the use of remote appointments also benefits patients with mobility issues, those with care commitments and those residing in geographically remote areas where they may face barriers to accessing healthcare.²⁸ While these changes may have a positive influence on future practice, these processes have not undergone the usual auditing procedures. A previous report²⁹ reviewed how practitioners might adapt contact lens services during the COVID-19 pandemic and concluded that gaps in the research ought to be addressed to facilitate the development of optometry-specific evidence-based guidance for telehealth. Similarly, Rowe et al.³⁰ evaluated the impact of COVID-19 on orthoptic services in the UK and Ireland and also highlighted emerging teleconsultation practice. Although the impact and response strategy of the pandemic differed from country to country, it is still

worth drawing on shared experiences. Tertiary eyecare in Italy had a clear strategy to adapt to the pandemic.³¹ Patients underwent a telephone screening to determine if they required an urgent visit or should be followed up in 14 days. Healthcare personnel were also appropriately trained and equipped to reduce the risk of infection.

The longer-term consequences of the pandemic remain unknown. Any impact from the so-called 'quarantine myopia'^{32,33} is presumably yet to materialise in full and, despite increasing reports of digital eye strain,³⁴ and dry eye,³⁵ these points were seldom mentioned by the survey practitioners from Nagra et al.²

The pandemic has caused a demonstrable impact on the viability of some optical businesses. A paradoxical situation now exists, where several large optical companies have reduced sites or staffing, yet the long-term demand for services, due to expanded clinical roles, escalating levels of myopia and increased life expectancies, is likely to rise. Predicting patient demand in the short term is, however, more challenging. Anxieties about lockdown lifting hold potential for a reduction in both returning patients and staff, the development of chronic conditions such as long COVID may affect the workforce and the widely reported career changes that individuals have embraced during the pandemic also hold potential to change the optical landscape.

The need to deliver care remotely and the necessity to maintain social distancing have galvanised research efforts into telecare and artificial intelligence. Whilst this opens the possibility of flexible working from home and may tempt and retain some eyecare practitioners, the economic impact of automation and potential for reduced clinician input are also yet to be characterised. As the pandemic continues, further work is required to continually review and update optometric practice.

Next steps

While the past year acted as a catalyst for improving some aspects of eyecare (e.g. streamlining services and improving communication with secondary care colleagues), it is unfortunate that it took

a pandemic to achieve these goals. Going forward, steps for a more proactive, rather than reactive, approach are recommended. This paper has identified the following key guidance requirements:

- Continued evidence-based revision of guidelines and protocols for triaging to new pathways and remote consultations
- Ensuring availability of effective and GDPR-compliant telehealth options for optometric practice
- Facilitating the increased use of remote tools by providing the resources required and training to use them
- Ensuring sufficient clarity on indemnity insurance for remote consultations
- Continued guidance and training on the use of PPE.

Key further research requirements

- Investigating the cost-effectiveness of various changes that have been introduced
- Auditing which changes are most clinically effective
- Determining patient satisfaction regarding the new pathways and accessibility to care
- Determining the psychological well-being of practising optometrists as the pandemic continues.

Acknowledgements

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Relevance to practice

This article can be applied to optometric practice as it:

- Highlights how optometric practice has changed as a result of the COVID-19 pandemic
- Identifies the challenges new ways of working pose in view of addressing these challenges
- Recognises the clinical benefits of the changes to optometric practice

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CET multiple choice questions

This article has been approved for one non-interactive point under the GOC's Enhanced CET Scheme. The reference and relevant competencies are stated at the head of the article. To gain your point visit the College's website college-optometrists.org and complete the multiple choice questions online. The deadline for completion is 31 May 2022. Please note that the answers that you will find online are not presented in the same order as in the questions below, to comply with GOC requirements.

1. According to the results of the survey by Nagra et al, what problems are most explored during remote consultations?

- Vision problems
- Eye health problems
- Contact lens problems
- Spectacle problems

2. Which pathway was developed in England for urgent eyecare?

- MECS
- CUES
- EHEW
- WECS

3. According to the survey results, during remote consultations what is the assessment aspect most relied upon to assess vision loss during the pandemic?

- Case history
- Amsler grid
- Smartphone applications
- Photographs

4. According to the survey results, what is the main challenge optometrists identified while working during the COVID-19 pandemic?

- Provision of remote appointments
- Paying staff
- Being able to maintain safe working practices
- Accessing PPE

5. Which of the following applications was not mentioned as having been used for remote consultations?

- Skype
- FaceTime
- Snapchat
- WhatsApp

6. Which one of the following was cited as a concern surrounding PPE?

- Discomfort of working in PPE
- Insufficient training in use of PPE
- Cost of PPE
- Appearance of practitioners in PPE upsetting to children

CPD exercise

After reading this article, can you identify areas in which your knowledge of the initial response of optometry practice to COVID-19 and ongoing clinical implications has been enhanced?

How do you feel you can use this knowledge to offer better patient advice?

Are there any areas you still feel you need to study and how might you do this?

Which areas outlined in this article would you benefit from reading in more depth, and why?