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UK	This article offers 1 non-interactive CET point (C-75859) or 1 interactive point (C-75861). (For instructions on how to complete the interaction see the end of this article.) 	 	     	6
ROI	All articles are CPD accredited in the Republic of Ireland			6

Needs-based decision making in the context of COVID-19

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The evidence base for the SARS-CoV-2 virus and COVID-19 disease is expanding at pace. Please read this in conjunction with the relevant guidance for your nation of practice.

Outline

With a greater emphasis on needs-based consultations, this article considers some of the clinical decision-making considerations to decide when it is appropriate to use tonometry, visual fields and other diagnostic and imaging tests in the context of the COVID-19 pandemic. Tonometry and visual fields are two examples of commonly performed tests which may be used as both a screening and a diagnostic tool, and these have been impacted by the pandemic. This article looks at how they, and other investigations, can be best utilised over the COVID-19 recovery period as a diagnostic tool as part of a needs-led consultation. Although the use of non-contact tonometry (NCT) was suspended during the lockdown initially, recent updated evidence and an expert consensus review published by the Royal College of Ophthalmologists and College of Optometrists has stated that NCT can be resumed, but nonetheless still used on a needs-led approach.

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About the author



Daniel has over 20 years' experience working in optics. He is a consultant to Specsavers professional advancement team and is employed by the College of Optometrists as a clinical adviser, providing advice to optometrists on professional, clinical and ethical issues. He was managing director of an optical practice in Cambridge and a visiting clinician at Anglia Ruskin University. He has also worked as a senior glaucoma optometrist at Addenbrooke's Hospital in Cambridge and as a diabetic retinopathy screening optometrist. Daniel is well known throughout the industry for his insightful blogs and public engagement work raising the profile of optometry and the importance of good eye health. He currently divides his time between being clinical adviser to the College of Optometrists, practicing as a glaucoma specialist optometrist across East Anglia and a consultant to the professional advancement team.

COVID-19

The first doctor to sound the alarm about coronavirus causing severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) was an ophthalmologist, Lin Wenliang, based in Wuhan, China. Shortly after he first raised awareness for SARS-CoV-2, he was infected by an asymptomatic patient with glaucoma and sadly died.² The possibility that COVID-19 (SARS-CoV-2) can affect

the eyes, causing conjunctivitis and, perhaps whether there is conjunctivitis or not, has the potential to transmit the virus via ocular fluids has been subject to much discussion during the initial months of the pandemic. There have been isolated case reports to suggest that conjunctivitis can be the first clinical manifestation of the disease. Based on the currently available evidence (June 9 2020), we conclude that conjunctivitis is a rare complication of COVID-19, with an estimated prevalence of less than 4%.³

Table 1 Prevalence of conjunctivitis among COVID-19 cases

Study	Sample size	Cases of conjunctivitis/ conjunctival congestion
Chen 2020 ⁴	534	25
Guan 2020 ⁵	1099	9
Lan 2020 ⁶	81	0
Seah 2020 ⁷	17	1
Wu 2020 ⁸	38	12

The transmission of COVID-19 is thought to occur mainly through respiratory droplets generated by coughing and sneezing, and through contact with contaminated surfaces. The predominant modes of transmission are currently considered to be droplet and contact. Alternative modes of transmission remain unknown; although infected ocular tissue or fluid has been recognised as a theoretical risk, it remains controversial as to how likely this route is, with most studies suggesting a low risk.⁹

The delivery of sight tests involves close physical proximity between optometrists and patients, and this is why they can be considered to be at raised risk of contracting infection with the SARS-CoV-2 virus. It is believed that the virus is transmitted in exhaled liquid droplets of 5µm diameter or larger, such as are generated during coughing, sneezing and speaking. Transmission may also occur via aerosols a route that has been established by the World Health Organisation for influenza and the SARS viruses.^{10,11}

Case finding

Over the last thirty years, the sight test in the UK has evolved, with advances in diagnostics, imaging, and an increased practitioner skill set performing an examination that looks quite different now. It is now commonplace to go beyond the minimum required standard of the detection of signs of injury, disease or abnormality in the eye or elsewhere as described in 1989 in The Opticians Act and, for the most part, that has been in a context where performing more advanced tests have always been considered to be in the patient's best interests.

This approach has started to receive some attention and challenge, as ultimately, it is a form of opportunistic screening and case finding.¹² Table 2 sets out a number of the key differences between screening and diagnostic tests. The sight test is not targeted, it is broadly self-selecting, based mainly on a need for spectacles or contact lenses and, for those who do attend for an eye health assessment reasons alone, they may do so on the bases of family history or other arbitrary factors which may or may not put them at high risk. This approach also may mean that those who would benefit the most from eye health screening may not necessarily be accessing the eye health screening they need, as there is no register or universal invitation. Whilst there is perceived wisdom in optometry that detecting more conditions at an earlier stage is a universal good, in health screening it is universally recognised that there is always some degree of harm that may result from a screening intervention and that harm requires the careful balancing against the benefits and true cost-effectiveness of screening¹³ or, in our case, a sight test with a battery of tests.

Table 2 Case finding versus diagnostic tests

	Screening tests	Diagnostic tests
Purpose	To detect potential disease	To establish presence/absence of disease
Target population	Large numbers of asymptomatic, but potentially at-risk individuals	Symptomatic individuals to establish a diagnosis, or asymptomatic individuals with a positive screening test
Test design	Simple, acceptable to patients and staff	May be invasive, expensive but justifiable as necessary to establish diagnosis
Result threshold	Generally chosen towards high sensitivity not to miss potential disease	Chosen towards high specificity (true negatives). More weight given to accuracy and precision than to patient acceptability
Reason for performing	Indicative of a suspicion of a disease or abnormality (often used in combination with other risk factors) that warrants further diagnostic investigation	Result provides a definite diagnosis
Costs	Cheap, benefits should justify the costs since large numbers of people will need to be screened to identify a small number of potential cases	Higher costs or more timely to perform are associated with diagnostic tests

The National Screening Committee has independently assessed means to ensure equity of access, and a net population benefit without excess harm. The only ocular screening that is currently performed in the UK is diabetic eye screening, where the at-risk population - people with diabetes - are assessed using visual acuities (VA) and fundus imaging to detect retinopathy.

COVID-19 has presented a new challenge to our approach when performing routine sight tests, as the harm that may result from a sight test has increased due to the risk of COVID-19 transmission. All health care environments represent a notable COVID-19 transmission risk. Although the attention is on secondary care, primary care settings pose an invisible risk due to asymptomatic individuals who may have COVID-19 attending the practice.

It is currently thought that the average time from contact to symptoms is 5.1 days, which is a window of risk for transmission¹⁴, despite screening (raised temperature, symptoms of a new cough and loss of taste or smell¹⁵) and infection control procedures, primary care clinical optometry poses a COVID-19 transmission risk, that has to be balanced against the benefits of performing the sight test, to the individual and the larger population.

Changes in clinical practice were first set in place during the COVID-19 pandemic lockdown, when only essential, urgent and emergency eye examinations were available. Now we are entering the longer recovery phase period clinicians need to carefully consider how they can best care for their patients. In addition to the risk of COVID-19 transmission, reduced clinic capacity due to social distancing, infection control procedures and greater use of PPE means we have to ensure that sight tests are prioritised for those who will get most utility and benefit from them.

The College of Optometrists' recovery document gives guidance on who should be prioritised, and what level of PPE is required for each stage of the recovery period. In the document there is an emphasis on optometrists using a needs- or symptoms-led style of practice and avoiding the use of a battery of tests for opportunistic screening.¹

Tonometry

Tonometry has long been a staple part of the sight test, often a practice or clinician chooses to perform this test on all adult patients over a set age, regardless of the person's risk factors for glaucoma or clinical presentation. This has in part been brought about by the availability of a test that can be delegated, is quick and easy to perform and requires no consumables: the non-contact tonometer. (NICE found the per-patient cost of NCT to be around £0.07 and for Goldmann contact tonometry £1.35) Despite being disliked by many patients, its primary use in UK optometry is as a screening tool, and where the IOP is found to be over 24mmHg the IOP is typically repeated using a contact tonometer.

In 2017 NICE made the recommendation that a decision to refer should not be based solely on IOP measurement using non-contact tonometry¹⁶. NICE reviewed the effectiveness of both NCT and Goldmann tonometry and was not confident in the diagnostic accuracy of the non-contact tests (specifically the low sensitivities), and therefore decided to recommend that referrals to secondary care must not be based on IOP measurements using a non-contact test alone, but that anyone referred on to secondary must receive a Goldmann-type applanation test, unless speed of referral was an issue.

Table 3 Examples of primary care sight test tonometry

Screening	Diagnostic
Using on all adult patients to determine if their IOP is above 24mmHg, requiring referral or triage	To confirm IOP where angle closure is suspected
Using on all adult patients to determine if their IOP is above 21mmHg	To confirm IOP where it aids the differential diagnosis of a pathology
Using on all patients to determine a person's risk factor for developing glaucoma	To establish the IOP when disc, visual field or anterior segment findings indicate primary open angle glaucoma

In early March 2020 the College of Optometrists issued guidance that practitioners should stop using non-contact tonometry due to the risk posed by micro-aerosols. Aerosols have been considered a high-risk means of transmission of coronaviruses, based on work completed by the WHO during the SARS outbreak in Asia.

A number of case studies^{17,18} had been published in response to the COVID-19 pandemic, and along with the College, several different countries had recognised the theoretical risk posed by NCT based on a paper published in 1991 describing micro-aerosol formation¹⁹.

NCT would not meet the WHO or NERVTAG definition of a high-risk aerosol generating procedure²⁰, however the College of Optometrists considers that there is a low and material risk of transmission, and further research was required to establish safety.

The primary concerns regarding NCT relate to:

- the risk of transmission posed to the practitioner
- tear particulates of a patient to the mouth, nose or eyes of the clinician and
- the risk of contamination - tear particulates of the previous patient being projected into the tears and conjunctiva of subsequent patients.

The risk posed by NCT was thought to be both theoretical and low³². Shortly after entering the amber recovery phase, the Royal College of Ophthalmologists and College of Optometrists issued a joint statement stating that more recent evidence and an expert consensus concluded that there is a low likelihood of viral particles in the tears and conjunctiva, even in those with active COVID-19 infection or conjunctivitis and, as such, NCT could be safely resumed, with the additional safety measures of wiping the head of the instrument with an appropriate wipe and performing three puffs between each patient to clear the tip.²² The College of Optometrists then issued further guidance on

hand-held instruments and stated that slit-lamp or stand-mounted tonometers should be used where possible. When using a handheld device, such as a Perkins or Pulsair, you should ask the patient to wear a face covering.

This means that tonometry for the recovery period will be performed only when clinically indicated. The ultimate decision of when it is performed should be a matter of clinical judgment made for each patient based on their presentation; the decision should not be made from blanket rules.

Examples of when tonometry may be indicated diagnostically:

- A person at high risk of developing primary open angle glaucoma, multiple risk factors
- Diagnosis of angle-closure
- Diagnosis of primary open-angle glaucoma where there is evidence of glaucomatous optic nerve head (ONH) changes
- Diagnosis of PXE (pseudoexfoliation syndrome) and PDS (pigment dispersion syndrome) on the basis of anterior segment signs
- Diagnosis of primary angle glaucoma where the patient is a glaucoma suspect based on previous findings
- Differential diagnosis of a painful red eye
- Hypotony due to a ruptured globe, choroidal detachment, ciliary body shutdown or ocular ischaemic postoperative complications
- Retrolbulbar haemorrhage
- Postoperative complication

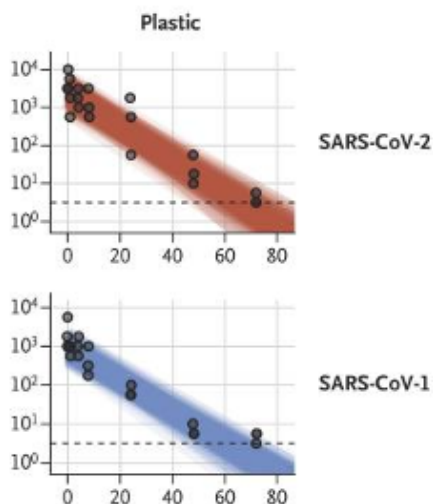
Visual fields

Like tonometry, visual fields investigations have long been a staple part of the sight test, often a practice or clinician chooses to perform this test on all adult patients over a set age, regardless of the person's risk factors for glaucoma or clinical presentation. The visual field test is more time consuming to perform and being subjective is more susceptible to false-positive results as a result of tiredness, concentration or over-enthusiastic responses. NICE has recommended that clinicians should consider repeating visual fields measurements and, based on its poor specificity,¹⁶ only to refer a patient based on a repeatable field defect.

Bowl visual field machines of all types require close contact of the patient to the equipment and proximity of the operator to the patient and equipment. Many parts of the instrument come into direct contact with the patient, including the forehead and chin rests, the patient response button, the chair, and the eye occluder. The corrective lens may also come into contact with the patient's eyelashes or nose. Respiratory droplets may accumulate on these surfaces and importantly within the perimetry bowl itself.

The duration of the viral particle on the bowl surface and how long the particles remain suspended within the bowl is a challenging infection control consideration. There is no definitive answer; the risk is likely to be low, but how low is unknown and as such it poses a material risk. Disinfection of bowl visual fields machines is complicated, with a variety of strategies currently being considered and adopted in the UK.

Firstly, resting the instrument in between uses. It is thought that the viral concentration of COVID-19 shows an exponential decay on hard plastic surfaces, with the median half-life 6.8 hours²³, resulting in a 48-72 hour period being required in between patients in order to rest the machine. Secondly, visual fields instrument manufacturers have made a recommendation for cleaning and disinfection;²⁴ however, this is often time-consuming and require a laborious process to be completed after each patient use. Using non-bowl instrument results in a more straightforward disinfection process, making visual field assessments more viable and practical to incorporate into practice.



van Doremalen N, BT, *Aerosol and Surface Stability of SARS-CoV-2 as compared with SARS-CoV-1*. *New England Journal of Medicine*, 2020. **382(16):1564-1567**.

The future of visual fields may change rapidly and the challenges presented in disinfecting bowl perimeters may be the catalyst. Over the next couple of years novel visual field tests based on a tablet device may also provide an alternative method of assessment either in practice or at home. A free app developed by Melbourne University called the Melbourne Rapid Fields enables a central 24 -2 visual fields test to be performed, subject to the limitation of positioning the tablet still and in the correct position. The app has a reasonable concordance with a traditional bowl visual field test and can be easily wiped down after each use.²⁵ A more recent tablet-based visual fields test called Eyecatcher has been developed by City University, London, which enables home monitoring of visual fields on a tablet and which, when completed at regular intervals, may result in a more reliable and meaningful visual fields assessment than using traditional instruments in practice.²⁶

Despite the possibility of tablet-based tests, visual fields investigations for the recovery period will be performed only when clinically indicated. When performed, careful disinfection of the instrument will be required. The ultimate decision of when it is performed should be a matter of clinical judgment made for each patient based on their presentation; the decision should not be made on the basis of blanket rules.

Examples of when a visual fields test may be indicated diagnostically:

- A person at high risk of developing primary open-angle glaucoma, multiple risk factors
- Diagnosis of a neurological defect, pituitary adenoma, meningioma, craniopharyngioma, aneurysm
- Investigation of headaches
- Diagnosis of optic nerve head pathologies such as ischaemic optic neuropathy (non-arteritic), optic disc drusen and papilloedema
- Diagnosis of primary open-angle glaucoma where there is evidence of glaucomatous ONH changes
- Diagnosis of macular disease such as occlusive conditions

Table 4 Visual fields

Screening	Regulatory	Diagnostic
For detecting primary open angle glaucoma in low risk groups (No other indication, ONH or clinical finding)	For establishing the visual field meets the required driving standard	Neurological symptoms requiring investigation
For detecting general asymptomatic neurological visual field defects in low risk patients (non-symptomatic)		Evidence of glaucoma such as suspect optic nerve head change, retinal nerve fibre layer (RNFL), thinning, anterior segment signs of PXE, PDS.
		A person in a high-risk category of developing primary open angle glaucoma, due to multiple risk factors.

Diagnostic imaging, fundus photography, OCT and autorefractometry

Both fundus cameras and OCTs may be used as either a qualitative test for informing a clinician's examination and recording the current ocular status or as a screening tool. During the recovery phase of the pandemic, these tests could be used as a qualitative investigation which supports the posterior assessment of the eye and may result in reduced contact time.

Imaging devices such as fundus cameras and OCTs will require disinfection when used. Forehead and chin rests come into direct contact with the patient. The exterior surface of the machine may be contaminated by a patient's respiratory droplets from breathing or speaking during the sight test. The disinfection advice of the manufacturer should be followed alongside local infection control procedures.

Autorefractometry and automated subjective refraction may be useful in reducing the contact time required with the patient and streamlining the sight test. These methods need to be used in practice and under the supervision of an optometrist. Optometrists can select appropriate patients for autorefractometry during triage, where young adult myopes may be well suited, older patients with media opacities may be best served using the previous prescription and retinoscopy as a subjective refraction starting point.

Disinfection

The World Health Organisation (WHO) recommends 70% ethanol solutions to disinfect reusable equipment such as chin rests, forehead rests and other hard surfaces. For commonly touched surfaces, the WHO recommends 0.5% sodium hypochlorite, although 0.1% has also been shown to be effective²⁷. You should check the manufacturer's advice to ensure these disinfectants are not likely to damage instrumentation or surfaces. Appropriately formulated wipes and sprays may be used, provided that they contain the correct concentration of an active ingredient, and there is sufficient contact time.

The correct PPE should be worn when completing disinfection and where possible, this should be completed before and after using the instrument.

Recall period in the context of COVID-19 recovery

It is widely accepted that blanket recall period should not be applied to patients, each recall should be an individual decision based on clinical need, and not less that the recommended periods set out in the College of Optometrists Guidance for Professional Practice²⁸.

Not performing a screening test does not mean that a shorter recall period is require; you should use your professional judgment to recommend a recall period that is in your patient's best interests as you usually would.

The memorandum of understanding with the NHS sets out the minimum re-examination interval, for the patient's age and conditions. These intervals are the minimum recommended and should not be taken as automatically applying to each patient category. There is no indication that post-payment verification systems will be altered in any way when wider services are resumed.

Not performing a screening test such as tonometry or visual fields is not a clinical reason for shortening the re-examination frequency, clinicians should ensure they are aware of the most up-to-date advice from professional bodies throughout the recovery phase.

Conclusion

Needs-based decision making is a skill that will be required throughout the COVID-19 recovery period, to provide eye care safely, efficiently and to ensure the patient's clinical needs are met. The targeted use of investigative tests that historically may have applied automatically to certain patient groups should now be reconsidered. Clinicians should act in the best interest of their patients by using tests based on patient need, and this may require some time to become accustomed to. However, the approach may help develop clinical confidence and be a useful decision-making methodology in the new normal beyond this COVID-19 pandemic.

The evidence base for the SARS-CoV-2 virus and COVID-19 disease is expanding at pace, in only a few months. We are now much better informed on some aspects of the virus, and the pandemic that it has caused, although there is still much to learn. Steps must be put in place to mitigate the risk of COVID-19 transmission in optometric practice – to ensure the safety of not only the public, but also our teams and ourselves – and also to ensure people have the confidence and trust required to access eye care.

References

- College_of_Optometrists, *Optometric primary eye care during the COVID-19 pandemic table*. <https://www.college-optometrists.org/uploads/assets/467d55b0-3c4c-41b4-9d708b627c122ffa/COVID-19-Amber-phase-guidance-table.pdf>, 2020.
- Murray, P.I., *Spreading SARS-CoV-2 through ocular fluids*. Centre for Evidence-Based Medicine, Rapid review service, 2020.
- Lawrenson, J.B., R., *Editorial: COVID-19 and the Eye*. Ophthalmic and Physiological Optics 2020.
- Chen L, D.C., Chen X, et al., *Ocular manifestations and clinical characteristics of 535 cases of COVID-19 in Wuhan, China: a cross-sectional study* Acta Ophthalmol (Copenh), 2020. 10.1111/aos.14472.
- Guan WJ, N.Z., Hu Y, et al., *Clinical Characteristics of Coronavirus Disease 2019 in China*. New England Journal of Medicine, 2020. 382(18):1708-1720.
- Lan QQ, Z.S., Liao X, Xu F, Qi H, Li M, *Zhonghua Yan Ke Za Zhi*. CMAPH 您要查看的页面不存在 · 请尝试以下操作, 2020. 56(0):E009.
- Seah IYJ, A.D., Kang AEZ., *Assessing Viral Shedding and Infectivity of Tears in Coronavirus Disease 2019 (COVID-19) Patients*. Ophthalmology, 2020. S0161-6420(20)30311-0. .
- Wu P, D.F., Luo C, et al., *Characteristics of Ocular Findings of Patients With Coronavirus Disease 2019 (COVID-19) in Hubei Province, China*. JAMA Ophthalmol, 2020. 138(5):575-578.
- Seah, I., Anderson, D. E., Kang, A., Wang, L., Rao, P. et al, *Assessing Viral Shedding and Infectivity of Tears in Coronavirus Disease 2019(COVID-19) Patients*. Ophthalmology, 2020. S0161-6420(20)30311-0.
- WHO *Infection Prevention and Control Guidance for COVID-19 available at <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/infection-prevention-and-control>*.
- Bischoff WE, S.K., Leng I, et al, *Exposure to influenza virus aerosols during routine patient care*. Journal of Infectious Disease, 2020. 207: 1037-1046.
- McCartney, M., et al., *Why 'case finding' is bad science*. J R Soc Med, 2020. 113(2): p. 54-58.
- Wilson JMG, J.G., *Principles and practice of screening for disease*. World Health Organization, 1968.
- Lauer SA, G.K., Bi Q, et al., *The Incubation Period of Coronavirus Disease 2019 (COVID-19) From Publicly Reported Confirmed Cases: Estimation and Application*. Ann Intern Med. 2020;172(9):577-582.
- Menni C, V.A., Freidin MB, et al., *Real-time tracking of self-reported symptoms to predict potential COVID-19*. Nature Medicine, 2020. 2020;10.1038/s41591.
- NICE, *Glaucoma: diagnosis and management (update)*. <https://www.nice.org.uk/guidance/gid-ng10017/documents/html-content-2>, November 2017.
- Lai, T.H.T., Tang, E.W.H., Chau, S.K.Y. et al., *Stepping up infection control measures in ophthalmology during the novel coronavirus outbreak: an experience from Hong Kong*. Graefes Arch Clin Exp Ophthalmol 258, 2020. 258: p. 1049-1055.
- Li Chunchun, T.Y., Chen Zhangyan, Wang Aisun, Huang Xiaojiong, et al. *Aerosol formation during non-contact "air-puff" tonometry and its significance for prevention of COVID-19*. Chin J Exp Ophthalmol, 2020. 38(03): p. 212-216.
- Britt, J.M., et al., *Microaerosol formation in noncontact 'air-puff' tonometry*. Arch Ophthalmol, 1991. 109(2): p. 225-8.
- PHE, *Assessing the evidence base for medical procedures which create a higher risk of respiratory infection transmission from patient to healthcare worker* New and Emerging Respiratory Virus Threats Advisory Group (NERVTAG) in collaboration with PHS & PHE, 2020.
- Shabto JM, D.M.C., Cioffi GA, Liebmann JM., *Review of Hygiene and Disinfection Recommendations for Outpatient Glaucoma Care: A COVID Era Update [published online ahead of print, 2020 Apr 22]*. Journal of Glaucoma., 2020. 29:10.1097.
- RCOphth, C., <https://www.rcophth.ac.uk/wp-content/uploads/2020/06/Non-contact-tonometry-and-IOL-COVID19-1.pdf>. Joint statement, Use of non-contact tonometry to measure intra-ocular pressure during COVID-19 2020.
- van Doremalen N, B.T., *Aerosol and Surface Stability of SARS-CoV-2 as Compared with SARS-CoV-1*. New England Journal of Medicine, 2020. 382(16):1564-1567.
- COVID-19 *Cleaning Guidance for the Humphrey Field Analyzer (HFA)*. Humphrey®.
- Crowston, Y.X.G.K.M.H.J.G., *A Comparison of Perimetric Results from a Tablet Perimeter and Humphrey Field Analyzer in Glaucoma Patients*. Translational Vision Science & Technology, 2016. Vol.5, 2. .
- Pete R Jones, P.C., Tamsin Callaghan, Lee Jones, Daniel S Asfaw, David F Edgar, David P Crabb, *Glaucoma home-monitoring using a tablet-based visual field test (Eyecatcher): An assessment of accuracy and adherence over six months*. medRxiv, 2020. 05.28.20115725.
- Agoritsa Baka, O.C., *Interim guidance for environmental cleaning in non-healthcare facilities exposed to SARS-CoV-2* ECDC TECHNICAL REPORT 2020.
- College_of_Optometrists, *Guidance for professional practice <http://guidance.college-optometrists.org/home/>*. Nov 2014.

GOC's Enhanced CET Scheme

CET and CPD regulators require practitioners to reflect on their learning. Additional activities are required to gain CET for distance learning.

Log into your CET dashboard via iLearn. On the menu you reach you can choose either interactive or non-interactive CET for this unit of learning.

If you choose 'non-interactive', you have to pass (>60%) a six-question multiple-choice quiz. If you choose 'interactive', you must pass the MCQ quiz and complete a further 30-minute discussion with a colleague, and upload a short summary of your discussion and reflections within 30 days. Note you must complete both tasks before your CET can be awarded. If you want the CET counted within a calendar year, make sure you submit the online record of discussion and remind your colleague to verify it online at least 2 weeks before the end of the year.

Further instructions for interactive learning are as follows:

The following steps must be completed within 30 days of completing the MCQ quiz:

1. Discuss the interactive questions below with a registered colleague. Note if you are an optometrist, the colleague must also be an optometrist. If you are a dispensing optician, the colleague may be a dispensing optician, a contact lens optician or an optometrist. The discussion should be in a quiet environment where you are not interrupted for at least 30 minutes. You should conform to any current social distancing requirements, and this discussion may take place by video call (eg Microsoft Teams) or face to face. Discuss the set questions and record a summary of the output of your discussion. Please ensure to create a paper copy of your record. Sign and date the document and keep it safely stored in case your CET is audited in future by the GOC.
2. In the event of an audit, we need to be able to show the GOC that the interaction has taken place in accordance with the instructions. Therefore, before you can be given points for this activity you must, within 30 days, record your answers to the set questions in the online Discussion Record and Reflection form (link provided on iLearn).
3. You will be asked for the GOC number, name and email address of the colleague who has completed the interaction with you, so please have those ready. Your colleague will be contacted by email (so please make sure you enter their correct email address) and will be sent a link to verify the interaction took place.
4. You can only be awarded interactive CET points if these steps are completed within 30 days.

The learning objectives for this article are:

2.7.6 Optometrists will have an enhanced awareness of how to make needs-based decisions about patient assessment and recall in the context of increased risk of infection and advice from public health and optical professional bodies

2.12.1 Dispensing opticians will have an enhanced awareness of the needs-based decisions of the supervising optometrist on use of diagnostic tests in the context of increased risk of infection and advice from public health and optical professional bodies, so they can work in a supporting role and provide information to patients within their scope of practice, as part of a multidisciplinary eyecare team

1.2.3 (interactive only) Dispensing opticians will have an enhanced understanding of how to act in a supporting role in communicating the safety precautions to prevent infectious disease associated with assessment tests performed and how to obtain consent

1.2.3 (interactive only) Optometrists will have an enhanced understanding of how to communicating the safety precautions to prevent infectious disease associated with assessment tests performed and how to obtain consent

3.1.6 Optometrists will have an enhanced appreciation of the specific precautions and indications for performance of tonometry and other diagnostic tests in the context of public health and optical professional body advice during a period of increased risk of infection.

3.1.5 (interactive only) Dispensing opticians will have an enhanced appreciation of the specific precautions and indications for performance of visual fields assessment, care of the instruments, and other diagnostic tests in the context of public health and optical professional body advice during a period of increased risk of infection.

The discussion tasks for the interactive learning option are as follows:

1. Discuss with your colleague a range of cases seen in the practice who should receive tonometry and visual fields under the current guidance.
2. Discuss with your colleague your practice procedures for disinfection of instruments, roles and responsibilities for performance of different types of assessment tests and how colleagues who perform certain assessments under supervision are informed about procedures. Discuss also advice and information to patients about the procedures, infection prevention and how consent is obtained.
3. Discuss with your colleague the personal learning outcomes you have gained from this module and how you will apply this learning to practice. Consider the following questions (you will upload these reflections to iLearn and to myGOC within 30 days of completing the quiz).
 - a. What are the main things you learned from the article?
 - b. How will you apply this learning in your future practice?
 - c. Has this module identified any areas in which you wish to pursue further learning?