Coronavirus update: Need to know points

*Please note the coronavirus situation changes rapidly. This is the most up to date advice we have at this time, please check the Gov.UK website: https://www.gov.uk/government/collections/coronavirus-covid-19-list-of-guidance

and the RCOphth website for updated information
https://www.rcophth.ac.uk/2020/03/covid-19-update-and-resources-for-ophthalmologists/

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1 Background

How is the virus transmitted?

As a new disease, transmission may not be full understood, but the following is believed to be the case currently. Coronaviruses are mainly transmitted by large respiratory droplets via coughing and sneezing and direct or indirect contact with infected secretions. It is potentially transmissible through contact with or aerosol droplets from tears of infected patients. Isolation, standard cleaning and disinfection combined with suitable personal
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protective equipment (PPE) directed to the correct patients are very effective in preventing transmission.

There is concern that ophthalmologists and other ophthalmic professionals, with close contact on slit lamps or other close up procedures, may be at increased risk compared with other health care professionals and uncertainty as to whether there is any risk from drops/spray generated in intraocular procedures such as phacoemulsification.

What to do

Liaise closely with your clinical lead for ophthalmology and infection control team to find out and follow national and local policy including the exact process for your eye clinic and hospital.

The principles of action are as follows. The risk of patients acquiring COVID-19 infection during an ophthalmology appointment must be weighed against their risk of coming to harm through failure to treat serious eye disease. The Royal College of Ophthalmologists recommends the following be implemented at NHS clinics, private practice, and independent treatment centres with immediate effect:

1. All routine ophthalmic surgery should be postponed
2. All face-to-face outpatient activity should be postponed unless patients are at high risk of rapid, significant harm if their appointment is delayed
3. Ophthalmology Accident and Emergency services should stay open with consultant level support for both triage and seeing patients
4. Routine diabetic retinopathy screening should be postponed, with provision made for high risk situations eg pregnancy.

Highly urgent and emergency eye services must not cease for those with imminently sight or life threatening conditions who need to be treated urgently.

2 Cutting elective and non-urgent care and prioritising patients

All non-urgent elective operations and low risk or non-urgent outpatient care should be suspended immediately or as soon as humanly possible, to reduce transmission of infection between patients and to staff, and also to free up staff for refresher training, beds for COVID patients, and theatres/recovery facilities for other work. You should discharge all in-patients who are fit to leave. The government is taking action to increase social care support for those remaining in for social reasons. There are few such patients in ophthalmology but there may be some.

Hospitals and eye units need to put plans in place in order to prioritise care for patients who have sight or life threatening conditions, to deliver non face to face care and to defer and rebook appointments. For patients who still need some care but are not high enough risk to warrant hospital attendance, use other forms of consultation, such as telephone review or virtual clinics. There is an RCOphth guide to telemedicine systems which are compliant with healthcare requirements.
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When undertaking urgent surgery restrict general anaesthesia to cases where there is no other option but to use a general anaesthetic. Low risk patients attending for minor eye conditions eg. conjunctivitis in non-contact lens wearers should be proactively diverted with appropriate advice on self-management, the likelihood of spontaneous resolution and red flag symptoms.

Note: currently there is no advice to treat conjunctivitis as a high-risk situation in the absence of other symptoms suggestive of coronavirus. We understand conjunctivitis is usually a later onset symptom and isolated conjunctivitis would be unlikely to be an early presenting feature of coronavirus. However, most conjunctivitis does not need to attend a hospital.

The College has an escalation plan detailing low, medium and high risk cases for each subspecialty (that can be further adapted as required for local use) and shared resources from Moorfields Eye Hospital and other units.

Draw up plans for future service maintenance for emergency-only patients should the situation seriously deteriorate, and ensure senior trust leaders understand some ophthalmology services MUST continue ie for conditions which are imminently sight, eye integrity or life threatening with requirement to be treated urgently, especially if patient under 70 and the only/better seeing eye is affected. These include:

- **Glaucoma**
  - acute glaucoma
  - uncontrolled very high IOP >40mmHg or rapidly progressive glaucoma
- **Wet active age-related macular degeneration**
- **Sight threatening treatable retinovascular disease (proliferative diabetic retinopathy and ischaemic CVRO)**
- **Acute retinal detachments (macular on, macular off < 4weeks)**
- **Uveitis – severe active**
- **Ocular and adnexal oncology - active, aggressive, uncontrolled or untreated lesions**
- **Retinopathy of prematurity (screening and treatment)**
- **Endophthalmitis**
- **Sight threatening trauma**
- **Sight threatening orbital disease eg orbital cellulitis, severe thyroid eye disease**
  - Giant cell arteritis affecting vision.

Patients within likely medical conditions which require urgent treatment eg acute third nerve palsy, retinal artery occlusions, stroke, giant cell arteritis may be better served seen by the medical or general A&E team.

Plans need to be made to support and utilise staff and help to identify how to maintain services including different deployment of staff, rotation and cover of gaps. Some staff will be deployed to general medical care services but this needs to be in a planned way with appropriate training.
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There need to be systems to communicate with and advise patients on their condition and care, reassure that those who need to come will be protected as much as possible from covid infection risks and those who are asked not to come will be protected as much as possible from harm to eye condition and sight

3. For patients still needing to be seen

Before arrival in clinic
Work with your clinical lead for ophthalmology and your hospital infection control (IC) team to ensure messages reach patients that, if they are at risk or symptomatic, they should check before attending and can assess their symptoms online through the NHS 111 online symptom checker. This may involve website changes, communication in letters and text alerts, recorded messages on the hospital phone line, posters and admin staff at the front of the hospital or in reception, or proactively calling patients with appointments.

Detect at risk patients
Ask patients whether they have symptoms of coronavirus infection, particularly:

- fever
- acute onset persistent/continuous cough but also
  - hoarseness
  - shortness of breath
  - sore throat
  - wheezing
  - muscle pains.

You should also establish if the patient has or has had contact with a known or likely coronavirus infected person or if they have travelled to any at risk area. Follow the detailed guidance on case definition and risk and categorise as detailed by Public Health England. Ideally the patients are temperature checked. For unplanned attendances, establish if they have an immediate sight threatening issue but do not let that delay any required isolation or sending the patient home.

Ensure that you have a suitable isolation room agreed with IC, and you know where it is, or use the nearest room and shut the door if necessary. Ensure you have a supply of PPE and understand how to use this including removal after use.

PPE and infection control

Ophthalmologists and other ophthalmic clinical professionals performing similar clinical assessments are in prolonged close contact with patients and may be at higher risk than other specialties. This table below adapts the PHE advice for ophthalmology care.

General principles for patients with suspected or confirmed COVID-19:
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1. **Maintain a scrupulous standard of infection control.** Good hand and tissue hygiene are key: CATCH IT, BIN IT and KILL IT.
2. Minimise accompanying adults in the examination room, wherever possible only allowing the patient in.
3. Minimise staff in the operating theatre.
4. Clean the consulting room door handle after each patient.
5. Minimise the time in close contact, using alternative treatment where appropriate.
6. Clean slit lamps before and after each patient, including the breathguard, on/off switch and any controls used.
7. Ensure the clinical area and all equipment is cleaned regularly.

### Personal protective equipment (PPE) requirements

<table>
<thead>
<tr>
<th>COVID status</th>
<th>Risk of life- or sightthreatening harm if not seen urgently</th>
<th>Brief close contact (eg. slit lamp examination)</th>
<th>Prolonged close contact (eg. laser, intravitreal procedures)</th>
<th>Aerosol Generating Procedures eg GA, ophthalmic surgery involving high speed devices</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Asymptomatic</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>Discharge or postpone until after pandemic or offer remote consultation.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>Slit lamp breathguard Surgical face mask</td>
<td>Slit lamp breathguard Surgical face mask</td>
<td>Surgical face mask Disposable sterile gloves Disposable surgical gown Eye protection (if required)*</td>
<td></td>
</tr>
<tr>
<td><strong>Suspected or confirmed COVID19</strong></td>
<td>Discharge or postpone until after pandemic or offer remote consultation.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>Isolate patient Slit lamp breathguard Surgical face mask Disposable gloves Disposable plastic apron</td>
<td>Isolate patient Slit lamp breathguard Surgical face mask Disposable gloves Disposable plastic apron</td>
<td>Isolate patient Face mask on patient or drape covering nose and mouth FFP3 respirator Disposable sterile gloves</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>Eye protection (if required)*</td>
<td>Eye protection (if required)*</td>
<td>Disposable surgical gown Disposable eye protection</td>
<td></td>
</tr>
</tbody>
</table>
Notes on specific PPE

- The same surgical mask may be worn for multiple patients to be seen on the slit lamp. However scrupulous care must be taken not to transmit the virus on the front of the mask via hands or clothes. If using the same mask, do not take on and off between patients and do not allow to dangle on the chest.

- PPE should be put on and removed in an order that minimises the potential for selfcontamination: the order for PPE removal is (i) gloves, (ii) hand hygiene, (iii) apron or gown, (iv) eye protection, (v) surgical face mask or FFP3 respirator and (vi) hand hygiene.

Breathguards for slit lamps

Ophthalmic staff are concerned that there may be an increased risk because of the prolonged close contact on the slit lamp and we recommend use of a breathguard. There are various possibilities for sourcing these including commercial slit lamp breathguards eg. from Zeiss, Haag Streit and Star Optical. In addition, some units have informed us they are able to source local businesses, DIY stores or even local school design and technology teams which can manufacture custom made breathguards to local specifications from perspex. Creating a cardboard template from them to work from has proved useful in some of these examples and Haag-Streit offers templates for slit lamps BQ 900, BP 900, BI 900 and BM 900 which can be found in the COVID-19 resources section on RCOphth website. Some hospitals have fashioned makeshift breath guards from A4 acetate sheets (previously used on overhead projectors) or A3 or A4 laminator “pockets” from a stationary shop or from NHS Procurement. The latter can be passed through a laminator to fuse the two layers to create a thicker clear sheet. By cutting circles out near the top of the sheet one can place it around the slitlamp eye pieces and secure above or below, trimming the bottom to not get in the way. This makes a large transparent shield similar to but thinner and not as robust as commercial or Perspex guards, which are preferable. All such guards will require regular cleaning with alcohol after every consultation.
Tips to reduce exposure for those who must attend

Minimise on site waiting time / patient journey time.

- Minimise close packed waiting areas.
- Reduce staff-patient contact time.
- Use treatment changes that can reduce the frequency of required attendances for the next few months eg changes in intravitreal treatment regime or longer-acting drug.
- Limit the number of accompanying adults with the patient in waiting rooms and avoid accompanying relatives in examination rooms unless absolutely necessary.
- Establish as much of the medical and ophthalmic history, or investigation results, as possible before calling the patient into the room including potentially via phone or video.
- Keep more than two meters away from patients except where clinical examination requires it.
- When testing visual acuity, start from the lowest achievable line to speed things up.
- Keep the examination brief and pertinent to the decision making required.
- Avoid re-examination of patients who have already been assessed.
- Avoid investigations (visual field, OCT, ultrasound) unless critical to decision making.
- Do not use airpuff tonometry; use I care tonometry or similar and confine Goldmann slit lamp tonometry to those in whom its critical for care,
- Minimise lengthy procedures at the slit lamp.
- Provide injection only clinics for wet AMD and other conditions where possible – it is acceptable to treat without visual acuity and OCT testing if necessary to protect patients and maintain service
  - Use other investigations if they can provide the required clinical information and reduce the time of close contact eg at slit lamp or gonioscopy eg. van herick, ret cam, optos, OCT, anterior segment cameras, ultrasound.
- Where appropriate use an indirect ophthalmoscopy in preference to slit lamp examination for laser delivery.
- Restrict general anaesthesia to cases where there is no other option.

For immunosuppressed and vulnerable patients
Immunosuppressed patients needing to attend uveitis or inflammatory disease clinics are at high risk medically and review by telephone or video triage should be used in place of face-to-face attendance where clinically appropriate. Where this triage identifies vision loss or other very high risk situations, they should be invited to attend face to face with efforts to isolate them from other patients via a dedicated clinic area or time period. Try to arrange local blood test taking and remote monitoring for therapy, and make arrangements to continue supply of their medicines by registered post or local pharmacy.

Follow the Academy of Medical Royal Colleges guidance on identifying and writing to such patients.

It is also important to formulate an action plan now to protect other vulnerable patients (pregnant, old and frail, serious systemic co-morbidities) in terms of deferring treatment or seeing away from other patients in crowded areas.

**Workforce**

Make contingency plans with 1st, 2nd, 3rd tier teams to cover as staff go off, including for on call.

Think how non clinical staff can be trained and used to support outpatient clinical care.

Consider segregating staff into teams with those dealing with covid + patients and those dealing with covid -ve patient, separated to segregate risks.

Colleagues who are at an increased risk (including pregnant women and those with underlying health conditions) should speak with their line manager in order to make adjustments to their working conditions, but with the aim of being able to continue to work such as working remotely or moving to a lower risk area.

Colleagues at risk of severe illness from Covid-19 (including people who have received an organ transplant and are taking immunosuppression medication and people with cancer undergoing chemotherapy or radiotherapy) should work remotely. For more information, please visit the PHE website.

Over the next few weeks registered nurses and allied health professionals currently in nonpatient facing roles may be asked to support direct clinical practice in the NHS, following appropriate local induction and support. Volunteers and retired clinical staff are being asked to help. The four UK chief medical officers have written to all UK doctors stressing that it will be appropriate and necessary for clinicians to work beyond their usual disciplinary boundaries and specialisms under these difficult circumstances, and they will support people who do so. Equivalent considerations apply for nurses, allied health professionals and other registered health professionals. The GMC has written to advise that, where treatment and care is adapted, including deferring patients or less than ideal care given the circumstances but in the interest of the greater good and saving lives, doctors will be supported and protected. The Royal College of Ophthalmologists will do everything possible to support clinicians if there are concerns or complaints once the pandemic is over.

Refresher training for clinical and patient-facing staff is being provided to those being or likely to be redeployed to provide medical care for covid patients.
As extra coronavirus testing capability comes online, Public Health England is trying to establish as a matter of urgency NHS targeted staff testing for symptomatic staff who would otherwise need to self-isolate for 7 days. For those staff affected by PHE’s 14 day household isolation policy, staff may be offered by their hospital - on an entirely voluntary basis - the alternative option of staying in NHS-reimbursed hotel accommodation.