

GUIDELINES FOR OPHTHALMOLOGISTS DURING COVID-19 PANDEMIC IN MALAYSIA



**Academy of Medicine
of Malaysia**



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PREFACE

In the light of the recent COVID-19 pandemic, the College of Ophthalmologists, Academy of Medicine, Malaysia has prepared a guideline on the management of patients with COVID-19 in the ophthalmology clinic. COVID-19 is currently the global cause of significant morbidity and mortality in the world. It is a highly contagious virus that can cause severe respiratory disease and patients typically presents with symptoms such as fever, cough and shortness of breath. One of the presenting symptoms is conjunctivitis leading to affected COVID-19 patients presenting early to the eye clinics. Thus, this increases the likelihood of ophthalmologists as the first providers to assess patients possibly infected with COVID-19. We hope this guideline will assist Ophthalmologists in protecting patients as well as themselves in facing the COVID-19 pandemic.

Take care and stay safe!

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Disclaimer

This document is intended to provide general information. While the advice and information in these documents is believed to be true and accurate at the time of preparation, neither the authors nor the Academy accept any legal responsibility for the content of these guidelines. You are advised to keep updated with latest medical information and act accordingly.

GUIDELINES FOR OPHTHALMOLOGISTS DURING COVID-19 PANDEMIC IN MALAYSIA

COVID-19 AND CONJUNCTIVITIS

Several reports suggest that patients with COVID19 infection may present to the ophthalmologists with conjunctivitis.^{1,2} This increases the possibility of ophthalmologists being infected by COVID-19 virus if unprotected at the time of examination.

PREVENTING SPREAD OF COVID-19

In order to ensure patients and staff safety during the clinic visit, these measures must be taken :

I. Screening of patients

Ophthalmologists should screen their patients by asking a few basic but important questions to identify patients with possible exposure to COVID-19.

Patients should be asked the following questions:

1. Do you have fever or respiratory symptoms such as sore throat, cough or shortness of breath? (If possible, take the forehead temperature of patients)
2. Have you or your family members traveled recently (within 14 days) especially to areas with known outbreaks with COVID-19?
3. Have you or your members attended any mass gatherings or had any close contact with the positive COVID-19 patient?

If patients answer yes to any of the above questions, health care providers encountering such patients who meet these criteria should notify and refer the patient to the nearest COVID-19 screening facility for further investigation.

II. Protecting the Ophthalmologists

Ophthalmologists are advised to wear protection for the mouth, nose and eyes when caring for patients as all patients can be potentially infected with Covid-19. The following protective gear and measures are recommended when seeing

patients:

1. Eye shield
2. Face mask
3. Slit lamp/laser shields
4. Shield for binocular indirect ophthalmoscopy (BIO)
5. Do not touch your face, nose or eyes
6. Wash hands with soap and water (duration of 20 seconds)

III. Preventing Spread of COVID-19

- **Triage all patients**
 - Ask pertinent questions to exclude COVID-19. Refer to screening centre if positive.
 - Triage all ophthalmology patients. Limit clinic visits to only urgent/semiurgent cases (See Table 1 - Guidelines for triage of ophthalmology patients)

- **Reduce the number of persons within the clinic at any one time**
 - Limit entry to only the patient and/or one accompanying person
 - Ensure social distancing within the clinic (at least one (1) meter)
 - Ensure distance between the patients and the clinic staff - set up barriers
 - Appointments should be spaced to avoid crowding

- **Reduce the duration of time spent with the patient on the slit lamp**
 - Avoid talking at the slit lamp

- **Frequent cleaning of surfaces within the clinic and door handles**
 - Provide hand sanitiser

- **Tonometer care**
 - The virus causing COVID-19 is an enveloped virus, unlike adenoviruses that are much more resistant to alcohol. The tonometer tip should be cleaned with alcohol and allowed to dry in room air as

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70% alcohol solutions is effective at disinfecting tonometer tips from SARS-CoV-2. Use single-use, disposable tonometer tips if available. Avoid non-contact tonometry (air-puff tonometry) to reduce risk of virus DNA in virus-loaded aerosol that may be produced.

Table 1 - Guidelines for triage of ophthalmology patients during COVID-19 pandemic

(Based on the AAO 202 guidelines)

Clinical Status	Recommendation
<p>A. Routine / scheduled appointments</p>	<ul style="list-style-type: none"> • Routine problems and previously scheduled appointments should be canceled. • New appointments should be rescheduled to later date or once situation is back to normal. • Reorder all necessary medications.
<p>B. Urgent ophthalmology appointment No risk of COVID-19 NO: fever, respiratory symptoms (cough, sore throat or shortness of breath) and recent travel to high risk country /mass gathering</p>	<ul style="list-style-type: none"> • Standard precautions. • Avoid speaking during slit-lamp bio microscopic examinations. • Surgical Mask is highly recommended for Ophthalmologist and slit lamp shield protection is highly advised.
<p>C. Elective /scheduled ophthalmic surgery</p>	<ul style="list-style-type: none"> • Elective ophthalmic cases such as cataract surgery, strabismus surgery, pterygium surgery and other non urgent procedure should be defer to later date/once situation is stable. • Semi- emergency and emergency cases can be performed with precautions, taking into consideration of the patient's status and risk of COVID -19 infection. • Non urgent cases in COVID-19 positive cases should not be done for any reason.
<p>D. Urgent ophthalmic problem in a patient with respiratory illness symptoms NO: fever or other COVID-19 risk factor</p>	<ul style="list-style-type: none"> • The patient can be seen in the ophthalmology clinic if stable. • The patient should be asked to wear a surgical mask. • The treating ophthalmologist and health care personnel require surgical masks. • Proper gowns, gloves and eye protection are recommended (Personal Protective Equipment (PPE)) if a procedure is planned. • The examining room must be cleaned after examination.

<p>E. Any patient at high risk for COVID-19</p>	<ul style="list-style-type: none"> • The patient should be sent to the Emergency Department (ED) or other hospital-based facility equipped to evaluate for, and manage, COVID-19. • If the patient has an urgent ophthalmology problem the facility should be one that is equipped to provide ophthalmology care in the hospital setting. • If COVID-19 infection is confirmed, hospital guidelines for care of suspected COVID-19 patients should be followed. • Ophthalmology care should be provided in the hospital setting. • Transmission precautions for treating ophthalmologists include complete PPE suit.
<p>F. Patient with documented COVID-19 (or person under investigation [PUI]) who is referred for evaluation and management of an ophthalmology problem</p>	<ul style="list-style-type: none"> • The patient should remain in the hospital setting and assessment to be done in the ward area if the ophthalmology problem is urgent based on history taking and symptoms. • If the patient is not hospitalized at the time of referral, the patient should be referred to the ED or other hospital-based facility equipped to manage both COVID-19 and ophthalmology care. • Hospital infection prevention guidelines should be followed for care of COVID-19 patients. • Transmission precautions for treating ophthalmologists include complete PPE suit.

IV. HANDLING PATIENTS WITH COVID-19 WHO REQUIRE EMERGENCY OPHTHALMOLOGY SURGERY

Facility

- Designated hospital to have a designated operating theatre (OT) to operate PUI and COVID-19 cases exclusively.

Anesthesia

- Regional is preferred. If regional technique is chosen, the patient should wear a surgical face mask at all times.
- General anesthesia if require, the induction and reversal should be preferably done in a negative pressure room. Staff present should have Powered Air purifying Respirator (PAPR).
- Staff participating in aerosol generating procedures should wear PAPR equipment.

Staff

- During the intubation and extubation to avoid being in OT unless PAPR worn.
- Paramedics and surgeons must be in full PPE and well fitted N95 mask and PAPR if available or indicated.
- Full PPE includes well-fitted N95 mask, goggles or face shield, splash resistant gown and foot covers.
- Ensure your staff are trained in “donning and doffing” of PPE.
- Universal precautions to be adhered to.
- Reduce the number of staff in operating room.

Table 2 – Pros And Cons of Powered Air Purifying Respirator (PAPR)

Pros	Cons
Higher protective factor than N95 respirators	No definitive evidence that PAPR reduces likelihood of viral transmission for potential airborne infections
Provides eye protection (hooded models only)	Inability to auscultate for heart and lung sounds (for hooded PAPR)
More comfortable to wear than N95 respirator	Challenges in communication
Can be used if user has facial hair (not possible with N95 respirator)	Patient apprehension (especially among pediatric patients)
Hooded models do not require fit-testing (unlike N95 respirator)	Training on use, doffing, and care of PAPR is needed to prevent contamination
Eliminates unexpected poor N95 respirator fit	Requires decontamination after use
Less likely to be dislodged when managing an agitated patient	More expensive than N95 respirator
PAPRs with hood may provide additional protection against contamination compared with typical gear worn with N95 mask	Inability to re-use disposable filters between patients (need large supply of filters)
	Need to train staff repeatedly to maintain competency if not frequently used
	Risk of battery failure and inadvertent exposure

References

1. <https://onlinelibrary.wiley.com/doi/abs/10.1002/jmv.25725>
2. <https://www.nejm.org/doi/pdf/10.1056/nejmoa2002032>.
3. <https://www.aao.org/headline/alert-important-coronavirus-context>
4. <https://www.eurotimes.org/guidelines-for-italian-ophthalmologists-on-covid-19/>
5. Wong, J., Goh, Q.Y., Tan, Z. *et al.* Preparing for a COVID-19 pandemic: a review of operating room outbreak response measures in a large tertiary hospital in Singapore. *Can J Anesth/J Can Anesth* (2020). <https://doi.org/10.1007/s12630-020-01620-9>

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*What we do when a COVID-19 patient needs an operation:
Operating room preparation and guidance from a frontline Singapore Hospital*

Department of Anaesthesia, National University Health System and Yong Loo Lin School of Medicine, National University of Singapore

- 1. **Consistent use of an isolated operating room with thorough understanding of its airflow characteristics**
- 2. **Transfers in full personal protective equipment (PPE) including a well-fitting N95 mask, goggles or face shield, splash-resistant gown, and boot covers**
- 3. **Use disposable equipment, including airway equipment whenever possible**
- 4. **The airway should be secured using the method with the highest chance of first-time success to avoid repeated instrumentation of the airway, including using a video-laryngoscope**
- 5. **Dedicated transport ventilator; to avoid aerosolization, the gas flow is turned off and the endotracheal tube clamped with forceps during switching of ventilators**
- 6. **Powered air-purifying respirator (PAPR) is worn for induction and reversal of anesthesia**
- 7. **A minimum of one hour is planned between cases to allow thorough decontamination of all surfaces, screens, keyboard, cables, monitors, and anesthesia machine**
- 8. **After confirmed COVID-19 cases, a hydrogen peroxide vaporizer will be used to decontaminate the OR**

Lian Kah Ti, *et al.* *Can J Anesth* 2020
<https://doi.org/10.1007/s12630-020-01617-4>

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