The Coronavirus (COVID-19) outbreak is now a global pandemic. In Singapore, there are ongoing clusters of community spread. The College of Ophthalmologists, Singapore would like to share guidelines developed in the public healthcare institutions (PHI) clusters on maintaining access to ophthalmic care, whilst protecting staff and patients from the COVID-19 infection.

“Circuit Breaker” Period (6th April to 4th May, 2020)

- As announced by MOH, all clinical services which are triaged as non-essential should be deferred from 7 April onwards for 4 weeks, while essential services and COVID related operations should be continued.

- For ophthalmology services, all non-essential appointments should be deferred, and any on-site staffing kept to a minimum. An example of what MOH considers non-essential service is “Elective eye procedures including cataract surgeries for stable cataracts”

- Please refer to MOH Circular No. 92/2020 “CIRCULAR ON SERVICES DEFERMENT AND REDUCTION DURING COVID-19 CIRCUIT BREAKER PERIOD”, released 6 April 2020, for further details.

Staff Protection

- The indication for use of PPE, and level of PPE to be used, should be clearly documented and circulated to all staff, in keeping with the institutions’ infection
control recommendations; compliance to these PPE guidelines are mandatory for all staff.

- Provide refresher training for all PPE, such as the donning and doffing of PPE.
- Repeat and document fitting of N95 mask if not done within a year ago, and with every change in type/brand of N95 mask.
- Staff to perform twice a day temperature taking and reporting. Staff who are unwell with fever, and/or respiratory symptoms should report to line managers/heads, and sent to the appropriate medical facility (e.g. the institution’s Staff Clinic).
- Strongly encourage all staff to have influenza vaccination to the prevailing seasonal strain, to avoid clusters of fevers due to other infections and unnecessary quarantine of staff and workplaces.

Screening of Patients and Visitors

- Establish triaging process at the hospital or clinic entrance, to identify patients and visitors at greater risk of COVID-19 infection.
- This may include (but not restricted to)
  - Temperature check for fever
  - Questionnaire on:
    - Acute respiratory illness (ARI)
    - Travel History
    - Close contact with a Covid-19 patient
    - If patient or visitor is under a Home Quarantine Order (HQO), Stay Home Notice (SHN), or 5-Day Medical Certificate for acute respiratory illness.
  - Patients that fulfill the MOH definition of a suspect case should be isolated and escorted/conveyed immediately to the institution’s/nearest Accident and Emergency for proper assessment (Please refer to MOH CIRCULAR 73/2020: “REVISION OF SUSPECT CASE DEFINITION FOR CORONAVIRUS DISEASE 2019 (COVID-19)”, or the latest MOH guidelines on suspect case definition for COVID-19)
- At triaging area, consider rescheduling non-urgent appointments if the patient is deemed to be at increased risk; visitors accompanying patients should be turned away if deemed to be at increased risk.
• Higher-risk patients who require same-day consults should be separated from the other patients. An isolation room may be appropriate.

• Patient should be given a surgical mask. Staff should don appropriate PPE when reviewing these patients.

• The same staff(s) should perform all examinations in the same isolation room. Minimise contact time, while still ensuring safe patient care. Cancel or postpone any non-essential investigations/tests.

• Use single use consumables for the review.

• Terminal cleaning should be performed after review concluded.

**Infection Control**

➢ Ensure proper decontamination of ophthalmic devices and optical surfaces after each use. Review product inserts for each device to determine the most appropriate cleaning method and ensure that the recommended cleaning agent is effective in disinfecting coronaviruses such as COVID-19.

➢ Maintain strict hand hygiene during clinical care – wash hands with soap and water if soiled, or use alcohol-based handrub if not visibly soiled. Hand-washing with povidone-iodine or combination chlorhexidine with ethanol and cetrimide may be preferred by some eyecare workers, if available.

➢ Increase the frequency of cleaning of ‘high-touch’ surfaces during the day – these may include chairs and tables, door handles and grab bars, lift buttons and keypads, etc.

**Outpatient Care**

➢ Actively reduce patient attendances and patient time in clinic in accordance to “safe-distancing” principles. Regularly reperform a review of case records to stratify patient appointments, and postpone those that can be delayed safely. Resupply of medications should be offered when appointments are rescheduled.

➢ Universal precautions with patient contact. All patient-facing staff should wear a surgical mask to mitigate inadvertent exposure to patients with COVID-19.

➢ To reduce droplet transmission from sporadic coughs and sneezes by patients during slit lamp examination, consider installing a protective splash shield on the slit lamp to serve as a physical barrier between the clinician and patient.
Consultation and examination should be brief and directed, without compromising patient safety. Investigations, especially lengthy ones such as automated perimetry, should be kept to a minimum unless it will materially impact patient management.

Take steps to ensure “safe-distancing” in clinic. Refer to MOH Circular “GUIDANCE ON MEASURES TO ENSURE SAFE DISTANCING IN OUTPATIENT CLINICS”, or the latest MOH guidelines.

If resources permit, efforts should be made to track, reschedule and re-supply selected cohorts of patients who have missed their appointments, especially those predisposed to sight-threatening complications eg: glaucoma patients.

**Surgery**

- Actively reduce elective surgical load, and focus resources on urgent and emergent surgeries. Perform a review of case records to stratify elective patient surgeries, and postpone those that can be delayed safely.
- Establish a screening process to identify patients and visitors at greater risk of COVID-19 infection, prior to the surgery (e.g. over the telephone) and again on day for surgery.
- Reduce surgical volumes to facilitate proper environmental cleaning between cases.
- Don full PPE (N95 mask, goggles, disposable gown and gloves) for all aerosol-generating procedures (e.g. intubations, endoscopic DCR, suctioning), even for well patients.
- Surgical team should practice “safe distancing” principles (eg. in scrub room or prep room) during intubation and extubation.

**Inpatient Care**

- Review patients in the hospital ward if eye facilities are available, otherwise by the bedside if possible. Comply with all infection control and PPE requirements in the ward.
- Minimise transfer to the outpatient clinic. If absolutely necessary, arrange for the end of the work day. Separate inpatient and outpatient care areas to minimize interactions. Avoid cross-infection between different wards by arranging different time slots.

**Logistics**
Current global supply of PPE, alcohol hand rub and other medical consumables are limited due to overwhelming demand. Clinic managers should take stock of current supplies and devise sustainable usage strategies.

**Manpower**

- Manpower planning is required to cater for exigencies of service. Review and prioritize all leave applications to ensure continuity of services.

- All staff on medical leave (especially with ARI), or served with HQO, SHN or Leave of Absence (LOA) should be tracked and monitored. Similarly, if persons in the same household as the staff are served with a HQO or SHN, staff should inform the appropriate head/line manager.

**Workplace Social Distancing**

- Consider staff segregation into different teams with fixed members. Minimize intermingling of staff between teams, especially at mealtimes, and before and after work.

- Even within these teams, stagger staff mealtimes and restrict groups to no more than 3 colleagues. Encourage “safe-distancing” between staff with designated break rooms and adequate, separate facilities.

- Stop group gatherings as far as possible. Replacing education and research meetings and teachings with video conferencing.

**Communication**

- Setup a situational crisis group for COVID-19 response, comprising of the appropriate leaders (e.g., heads of departments, clinic managers, infection control and heads of different functional groups).

- Supplement e-mails with secure messaging applications (e.g., Tiger Connect).
  - Group chats can facilitate rapid dissemination of information, and promote consultation, clarification and co-ordination.

**Resilience and mental wellbeing**

- Be kind. This is a stressful time for all. Staff should be on lookout for colleagues experiencing stress reaction and provide support.

- Avenues for seeking help should be made known to all staff so that those experiencing an acute stress reaction can seek further help.
Understand the practical issues faced by staff and plan wellbeing initiatives.

Consider appointing a department welfare officer. He/she works toward the wellbeing of all staff at the behest of the department.

Staff could be taught self-help methods on coping with stress and increasing resilience.

Acknowledgements

This document was drafted by the following members under the College of Ophthalmologists, Academy of Medicine, Singapore and endorsed by the College Council. We would also like to acknowledge the contributions and inputs from the respective Heads of Departments from the various hospital clusters on this document, specifically Drs Wong Hon Tym, Vernon Yong, Clement Tan and Wong Tien Yin, with additional input from Dr Daniel Ting.

Co-Authors

Co-Authors: Members under the College of Ophthalmologists, Academy of Medicine, Singapore

(1) Dr Leonard Yip Wei Leon
Senior Consultant
Department of Ophthalmology
Tan Tock Seng Hospital & NHG Eye Institute

(2) Dr Khor Wei Boon
Senior Consultant
Department of Corneal & External Diseases
Department of Refractive Surgery
Singapore National Eye Centre (SNEC)
Head, SNEC Eye Clinic, Sengkang General Hospital

(3) Dr Paul Zhao
Senior Consultant
Department of Ophthalmology
National University Hospital
Chief of the Eye Surgery Centre, Alexandra Hospital
PUBLISHED: 9 APRIL 2020

College of Ophthalmologists
Academy of Medicine, Singapore
81 Kim Keat Road
#11-00 NKF Centre
Singapore 328836