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The Royal Australian and New Zealand College of Ophthalmologists
THE LEADERS IN COLLABORATIVE EYE CARE

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Corona Virus (COVID-19) Guideline

Approved by:	RANZCO CEO	**Last review:**	5 March 2020
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1. Introduction and purpose

This guideline was developed by The Royal Australian and New Zealand College of Ophthalmologists (RANZCO). The purpose of the guideline is to outline the potential impact of the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-Cov-2) and its Coronavirus Disease 2019 (COVID-19) on clinical practice in Ophthalmology and highlight risks of exposure and strategies to manage these risks. **The situation is evolving rapidly, and new information from the Australian Government Department of Health and New Zealand Ministry of Health should be reviewed daily.**

2. How to notify a suspected case of COVID-19

Symptoms are variable but the most common are **fever** (43.8% on admission and 88.7% during hospitalisation) and respiratory symptoms including **cough** (67.8%).[1]

COVID-19 has been declared a pandemic by the World Health Organisation[2] and is an urgently notifiable disease under Part 9 of the *Public Health Act 2016* and there will be links to your local reporting mechanisms on your government health website.
(eg: in WA https://ww2.health.wa.gov.au/Articles/N_R/Notification-of-infectious-diseases-and-related-conditions)

More information can be found at https://www.healthdirect.gov.au/notification-of-illness-and-disease

3. Countries and regions considered to pose a higher risk of COVID-19 transmission

Travel through **any** overseas country within the last 14 days is now deemed to be a risk.

Further information can be found at:

- Australia:
  https://www.health.gov.au/news/health-alerts/novel-coronavirus-2019-ncov-health-alert travellers-and-visitors

  https://www1.health.gov.au/internet/main/publishing.nsf/Content/ohp-covid-19-countries.htm

  For a more extensive list of travel affected destinations refer to https://www.smartraveller.gov.au/crisis/covid-19-and-travel

- New Zealand:
  https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-novel-coronavirus-health-advice-general-public/covid-19-novel-coronavirus-self-isolation

4. Managing patients considered to pose a risk of transmission

COVID-19 resources for health care professionals can be found here:

Australian Government Department of Health

https://health.govcms.gov.au/resources/collections/coronavirus-covid-19-resources-for-health-professionals-including-pathology-providers-and-healthcare-managers

Communicable Disease Network Australia (CDNA)
https://www1.health.gov.au/internet/main/publishing.nsf/Content/cdna-song-novel-coronavirus.htm

Routinely ask all patients before their appointment and again on arrival at the practice if they have returned from overseas in the past 14 days.

Symptoms mostly occur within 2-14 days after exposure, with the majority within 5 days. Ask patients if they have symptoms suggestive of COVID-19 including fever, respiratory symptoms (cough, sputum, shortness of breath), fatigue, myalgia, headache.

Most patients presenting with viral conjunctivitis will have adenovirus. However, a study by Guan W et al.[1] indicated conjunctival congestion was present in 0.8% of the Chinese cohort of 1099 patients with laboratory confirmed COVID-19. There is some evidence that the virus can cause conjunctivitis and be spread by aerosol contact with conjunctiva.[3,4]

Follow all recommended guidelines for protecting yourself (section 5a) and protecting your work environment (section 5b) against infection.

Special precautions are required for **confirmed, probable** or **suspected** cases of COVID-19. Case definitions for these are changing and may be found at:

Australia
https://www1.health.gov.au/internet/main/publishing.nsf/Content/cdna-song-novel-coronavirus.htm

https://health.govcms.gov.au/resources/publications/interim-advice-on-non-inpatient-care-of-persons-with-suspected-or-confirmed-coronavirus-disease-2019-covid-19-including-use-of-personal-protective-equipment-ppe

New Zealand
https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-novel-coronavirus-information-specific-audiences/covid-19-novel-coronavirus-resources-health-professionals/case-definition-covid-19-infection

1. Non-urgent eye problem
Should have their eye appointment postponed for 14 days until COVID-19 has been excluded.

2. Emergent and Urgent eye problems
Ophthalmologists seeing a patient with an emergent or urgent eye problem who is at risk or has symptoms suggestive of COVID-19 will need to use their discretion to triage the relative urgency of each condition.

i) If the eye condition can wait, the patient should be referred to an appropriate clinical centre for testing. The current interim advice from the Australian Government Department of Health (https://health.govcms.gov.au/resources/publications/interim-advice-on-non-inpatient-care-of-persons-with-suspected-or-confirmed-coronavirus-disease-2019-covid-19-including-use-of-personal-protective-equipment-ppe) suggests:

- Telephone the doctor or hospital emergency department to notify the patient will be

referred
- If the patient experiences severe symptoms, call 000 and advise the operator that the patient is in self-quarantine because of COVID-19 risk.

ii) If the eye condition cannot wait, the current interim advice from the Australian Government Department of Health should be followed including:

- Immediately give the patient a N95/P2 (surgical if N95/P2 is not available) mask and ensure they put it on correctly.
- Direct them to a single room, whether or not respiratory symptoms are present.
- If this is the first contact with a health care provider, contact the local public health unit or state/territory communicable disease branch for advice if you are uncertain about the need for testing.
- Standard precautions, including hand hygiene (5 Moments), should be observed for all patients. Patients and staff should observe cough etiquette and respiratory hygiene.
- Contact and droplet precautions should be used for clinical assessment and collection of specimens from a patient under investigation.
- Perform hand hygiene before putting on Personal Protective Equipment (PPE): gown, gloves, eye protection (goggles or face shield) and N95/P2 (surgical if N95/P2 is not available) mask. All assistants should do the same.
- To collect eye swabs, stand slightly to the side of the patient to avoid exposure to respiratory secretions, should the patient cough or sneeze.
- After the consultation, remove PPE and perform hand hygiene.
- Any contacted/contaminated surfaces should be wiped with detergent/disinfectant by a person wearing gloves, surgical mask and eye protection.
- Note that, for droplet precautions, a negative pressure room is not required, and the room does not need to be left empty after sample collection.

iii) Any patient with severe symptoms suggestive of pneumonia should be transferred to and managed in hospital. Call 000 and advise the operator that the patient is in self-quarantine because of COVID-19 risk.

5. Preventing infection

a) Protecting yourself and others

1. It is recommended that*:
   Ophthalmologists should not attend work and should self-isolate at home (other than for seeking individual medical care) if:
   i. They have returned or arrived from overseas (until 14 days have lapsed)
   ii. They have come into close contact with a confirmed COVID-19 patient (until 14 days have lapsed)
   iii. They have symptoms of an acute respiratory illness

   If fever or respiratory illness (even if mild) occur, seek medical attention as soon as possible. Call the healthdirect helpline 1800 022 222 for advice or call ahead before seeing your GP or go directly to the local Emergency Department.

   *Based on NSW Health Guidelines:
   https://www.health.nsw.gov.au/Infectious/diseases/Pages/coronavirus-healthcare-staff.aspx

2. Ophthalmologists who are at high risk of severe COVID-19 disease (including those with organ transplantation being immunosuppressed and those with cancer undergoing chemotherapy) should consider minimising patient contact and working remotely.

3. Implement basic infection control measures including hand hygiene, respiratory hygiene/cough etiquette (regular hand washing, covering mouth and nose with elbow when coughing and sneezing), and avoidance of touching of eyes, mouth and nose. It is important to proactively reinforce such infection mitigation techniques with doctors and staff, no matter the size of the office.

4. Avoid wearing unnecessary accessories such as watches, ties or lanyards.

5. Regular (minimum daily) environmental disinfection of office spaces, ophthalmic equipment and computers with appropriate disinfectants is recommended. 70% alcohol, 0.5% hydrogen peroxide and 0.1% sodium hypochlorite are all suitable.[5]

6. Minimise patient wait and consultation (staff-patient contact) times in the clinic. Try to establish as much of the history and investigation results before calling the patient into the consultation room.

7. When testing visual acuity, start at the lowest achievable line to speed things up.

8. Use iCare tonometry while standing beside the patient. Do NOT use puff tonometry and only use Goldmann applanation tonometry if essential. When using Goldmann applanation tonometry, disposable tips are preferred, but if this is not available, 70% alcohol solutions should be effective at disinfecting tonometer tips from SARS-CoV-2.[3]

9. Avoid re-examination of patients who have already been assessed.

10. Avoid lengthy procedures at the slit lamp. Avoid talking at the slit lamp or talking directly face to face in close proximity. Where appropriate, use indirect ophthalmoscopy in preference to slit lamp examination. Keep a distance of 1.5 metre away from the patient unless closer proximity is required for examination.

11. Avoid direct contact with conjunctival mucosa or tears by wearing gloves or lifting the eyelid with a disposable cotton tip/bud.

12. Consider whether special close-contact examination and tests (gonioscopy, OCT's, anterior segment and fundus imaging, visual fields, ultrasounds) are absolutely necessary and minimise these if possible.

13. Install protective slit lamp breathshields of large enough size to limit droplet spread.[6]

14. Wash or disinfect your hands immediately before and after examining every patient.

15. Clean the slit-lamp and chair immediately after each patient use.

16. The use of full Personal Protective Equipment (PPE, gown, gloves, eye protection (goggles or face shield) and mask) is required when managing any patient who is COVID-19 positive or a COVID-19 suspect.[7]

17. As yet there is no specific evidence that wearing PPE minimizes the risk of infection by SARS-CoV-2 during routine ophthalmic consultations but it is unlikely that this evidence will be forthcoming soon. There is also no evidence to show that it is safe

not to wear PPE. There is strong evidence from other respiratory viral epidemics that wearing PPE (including mask and eye protection) minimizes the risk of infection.[8-10] It is likely ophthalmologists are at higher risk of being infected by SARS-CoV-2 compared to the general population. This is based on the following:

1. COVID-19 is known to cause conjunctival congestion.[1]
2. SARS-CoV-2 has been isolated in tear and conjunctival secretions[4] (although this is infrequent and one study failed to detect it in tears of 17 patients with COVID-19[11]).
3. The virus has shown viability in aerosols for hours and surfaces for days.[12]
4. Infected patients can be asymptomatic.[3,13,14] In a testing of the entire population of Vo, Italy, almost 3% of residents tested COVID-19 positive and most were asymptomatic.[15] In Yokohama, Japan, within a cruise ship holding 3711 passengers, 634 passengers tested positive for COVID-19. It was estimated that 17.6% of these were asymptomatic.[16] One paper has suggested an undocumented infection rate of up to 86%.[17]
5. Ophthalmologists come into close contact with our patients, closer than the 1.5m social distancing that is being recommended by the Australian government. This occurs at the slit lamp and for longer periods whilst operating.
6. Ophthalmologists have died from COVID-19, and at least 3 from the Central Hospital of Wuhan, including one after contact with an asymptomatic patient.[18-21]

Given the fact that ophthalmologists may themselves be asymptomatic carriers and see multiple patients, mask-wearing may prevent infection of patients. This is particularly relevant for our patients who tend to be older and co-morbid (the most vulnerable to COVID-19).

A retrospective review of 493 medical staff at Zhongnan Hospital of Wuhan University found none of 278 staff became infected by SARS-CoV-2 when wearing N95 respirators versus 10 of 213 staff who were infected when they did not wear a mask. This is despite the fact that the non-mask wearers worked in departments that were considered to be of lower risk than the group that wore N95 masks (who worked in the Departments of Respiratory Medicine, ICU and Infectious Disease).[22]

Surgical masks are currently recommended for ophthalmologists seeing asymptomatic routine patients in the following countries: USA, UK, China, Italy, South Korea and Singapore.[23]

When face to face consultations are required, ophthalmologists are advised to use their own judgement regarding use of PPE in asymptomatic, routine patients. They should be able to assess infection risk on a case by case basis and be permitted to wear their own PPE if they feel this is clinically justified. Any decision should acknowledge the need to preserve critically low supplies of PPE in Australia.

b) Protecting your work environment/clinic

1. Consider a telephone consultation or rescheduling non-urgent appointments in elderly patients (over 70 years), those who are immunosuppressed, have multiple serious co-morbidities or are pregnant, as this demographic has the worse prognosis if they develop COVID-19. There are Medicare rebates available under certain circumstances: http://www.mbsonline.gov.au/internet/mbsonline/publishing.nsf/Content/0C514FB8C9FBBEC7CA25852E00223AFE/$File/COVID-19bbspecialists.pdf

2. Have SMS and telephone systems in place to screen patients for epidemiological risk factors and symptoms of COVID-19 and ask these patients to defer their appointment 14 days if possible. Most conjunctivitis does not need to attend an ophthalmology clinic and may be able to be managed via telehealth.

3. Display proper signage on arrival to deter suspect COVD-19 patients entering the premises (unless the patient has an emergent or urgent eye problem- see "4. Managing Patients Considered to Pose a Risk of Infection").

4. Consider screening the temperature of all staff and patients on arrival. Non-contact Thermometers are preferred. Defer appointments for 14 days in patients with a fever and a non-urgent eye condition even if they do not meet the Australian criteria for a suspect COVID-19 case. Tell the patient to self-isolate and wear a mask. They should seek medical care if they develop respiratory symptoms.

5. Encourage regular use of hand disinfectant by staff and patients on arrival to the clinic.

6. Decompress the workplace by distancing patients sitting in waiting rooms. Use mobile phone calls to notify patients when to return to the clinic.

7. Minimise magazines, toys and waiting room items that may be handled by multiple patients.

8. Minimise the number of accompanying people with the patient. Discourage carers and family members of patients from waiting inside the clinic waiting room.

9. Minimise visitors (e.g. representatives) to the clinic.

10. Consider treatment changes that might reduce the frequency of required attendances for the next few months e.g. changes in intravitreal treatment regime or a longer-acting drug.

11. Consider rostering of staff to specific teams, work times or locations to minimise cross-infection. Consider dedicating a staff team for managing COVID-19 positive or suspect patients.

12. Discharge all inpatients who are fit to leave.

13. Encourage infection control training by all staff: https://www.health.gov.au/resources/apps-and-tools/covid-19-infection-control-training

14. When undertaking surgery, discuss with the anaesthetist to try to restrict general anaesthesia to cases where there is no other option due to the higher risk of droplet and aerosol contamination.

15. Due to the high risk of covid-19 infection from the nasopharynx, avoid all nasal syringing, lacrimal surgery and nasal endoscopy. If it is still necessary to operate one should wear PPE, as recommended by ASOHNS guidelines. http://www.asohns.org.au/about-us/news-and-announcements/latest-news?article=80. Treat thyroid eye disease medically first. If orbital decompression is still required, avoid medial wall/floor decompression which creates an entry into the paranasal sinuses.

16. After attending a suspected or confirmed case perform cleaning of the room as follows:

Specialised equipment:
Slit lamps, tonometer, contact lenses pinhole occluders or any other equipment that has come into close contact with the patient or mucosal surfaces should be cleaned with alcohol wipes or chlorine dioxide disinfectant immediately after seeing a suspect or confirmed case.

Disinfect all surfaces patients may have come in contact with, including door handles and frames, equipment, chin rests, chair etc as per other virulent diseases (such as viral conjunctivitis).

Examination room and communal areas in clinic cleaning:
If there has been a suspect or confirmed case, seen in the clinic cleaners should observe contact and droplet precautions and don PPE. Clean frequently touched surfaces such as doorknobs, bedrails, tabletops, light switches in clinic and communal areas.

A combined cleaning and disinfection procedure should be used, either 2-step – (i.e. detergent clean, followed by disinfectant); or 2-in-1 step - using a product that has both cleaning and disinfectant properties. Hospital-grade, TGA-listed disinfectant that is commonly against norovirus is suitable, if used according to manufacturer's instructions.

6 Interim guidance for elective surgery and outpatient clinics

Links to recommendations can be found below:

https://www.health.nsw.gov.au/Infectious/diseases/Pages/coronavirus-elective-outpatient-guidance.aspx

7. Workplace advice

Workplace advice regarding staff who are sick with COVID-19 can be found below:

https://www.fairwork.gov.au/about-us/news-and-media-releases/website-news/coronavirus-and-australian-workplace-laws?fbclid=IwAR38FGJdDUDVD9jOUbyBcT7uZWDzFBsHkmIU1C4hzz8Qqiojto3s48J9-Ss&inf_contact_key=5a74d191210397dc26661fd5a0497f25842e902fbefb79ab9abae13bfcb46658#family-member-sick

8 Where can I get more information?

1. National Coronavirus Health Information Line on 1800 020 080 (Australia) or the Healthline team on 0800 358 5453 or +64 9 358 5453 for international SIMS (New Zealand).

2. Australian Government Department of Health
https://www.health.gov.au/news/health-alerts/novel-coronavirus-2019-ncov-health-alert

3. New Zealand Ministry of Health
https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus

4. American Academy of Ophthalmology
https://www.aao.org/headline/alert-important-coronavirus-context

5. Royal College of Ophthalmologists
https://rcophth.ac.uk/2020/03/covid-19-update-and-resources-for-ophthalmologists/

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10 Record of amendments to this document

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