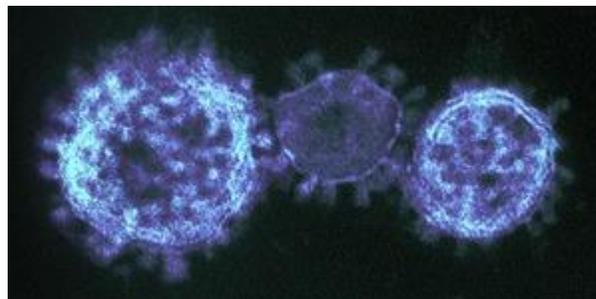


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MAY 11, 2020

Important coronavirus updates for ophthalmologists



CDC, WHO

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Returning to Ophthalmology Practice

A message from Academy CEO, David W. Parke II, MD, on reopening ophthalmology care.

Special Considerations for Ophthalmic Surgery

Updated guidance for surgical decision-making and indications for preoperative testing and PPE.

For complete coverage of the COVID-19 pandemic, visit the Academy's resource page [Coronavirus and Eye Care](#).

The Academy is sharing important ophthalmology-specific information related to the novel coronavirus, referred to as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The highly contagious virus can cause a severe respiratory disease known as COVID-19.

This page is principally authored by James Chodosh, MD, MPH, with assistance from Gary N. Holland, MD, and Steven Yeh, MD.

Questions you should ask to identify patients with possible exposure to SARS-CoV-2

- Does your patient have sore throat, fever, fatigue, loss of smell or respiratory symptoms?
- Has your patient been in the presence of someone with known COVID-19 in the last 2 to 14 days?

In regions currently managing significant outbreaks of COVID-19, it is safest to assume that any patient could be infected with SARS-CoV-2, and to proceed accordingly. The CDC is urging health care providers who encounter patients meeting these criteria to **immediately** notify both infection control personnel at your health care facility and your local or state health department.

Outpatient clinics and elective surgery

On March 18, the Academy issued a statement urging all ophthalmologists to immediately cease providing any treatment other than urgent or emergent care. That statement was made based on recommendations from the American College of Surgeons and the CDC. Since then, many facilities have resumed elective surgeries.

Decisions on keeping eye clinics open for routine care and elective eye surgery should be made in consideration of numerous factors, as outlined by the American College of Surgeons and other leading medical organizations. These include but are not limited to evolving city and state restrictions to nonessential services, local/regional new case rates, availability of PPE and access to COVID-19 testing.

Read the full message from Academy CEO, David W. Parke II, MD, on reopening ophthalmology care.

Interim guidelines on resuming elective ophthalmic care

Until there is reliable point-of-care testing, an FDA-approved and highly effective therapy and/or an approved and effective vaccine, practices and clinics should continue to mandate social distancing in waiting rooms, frequent and meticulous disinfection of patient waiting and care areas, and the wearing of face coverings by both patients and caregivers. This means that clinic schedule volumes may need to remain below pre-COVID-19 levels for the foreseeable future. Additional precautions required in operating rooms may lead to longer turnover times between cases, thus impacting the number of surgical cases that can be performed per session. Presuming compliance with state and local regulations, the Academy recommends clinical activities be performed with continued caution. The American Academy of Ophthalmology, the American Society of Cataract and Refractive Surgery and the Outpatient Ophthalmic Surgery Society developed a checklist to assist with reopening ophthalmic surgery centers.

Elective cataract surgery in some states can be performed but under ongoing mandates that “vulnerable individuals” continue to shelter in place. However, the latter should not preclude the elderly from leaving home to obtain essential services. Cataract surgery is considered semi-urgent, not elective, when the affected person cannot drive, work or see to take their medications properly, or has an increased risk of falling, phacomorphic glaucoma or intolerable anisometropia. Such cases warrant surgery within days to weeks.

The Academy recognizes the potential role of testing for ophthalmologists, other health care providers and patients, when considering resumption of elective visits and surgeries. RT-PCR, typically performed on a nasopharyngeal swab, can identify the presence of SARS-CoV-2 nucleic acid and can remain positive for as long as 35 days from onset of symptoms, although it is very unlikely that a person would remain infectious for this long. Serology can be used to determine whether someone has recently been infected with SARS-CoV-2, but studies have not yet proven that

the presence of neutralizing antibodies confers protection against reinfection. Notably, a SARS-CoV-2 antibody test from Roche was awarded FDA Emergency Use Authorization, with a reported 99.8% specificity and no cross-reactivity to other coronaviruses associated with the common cold. When used 14 days post-PCR confirmation of COVID-19, the sensitivity was 100%. However, because humoral antibody responses to SARS-CoV-2 typically appear within 1 to 2 weeks of infection, while infected individuals have been shown to shed virus for as long as 5 weeks from the onset of infection, a person with positive serology could still be shedding virus and therefore remain infectious. It is also unknown to what degree a positive IgG response confers resistance to reinfection with SARS-CoV-2, and for how long.

Finally, in regions with low prevalence of COVID-19, there is increased likelihood that a positive serologic test result, if performed in the absence of a prior positive RT-PCR, would be an artifact or a testing error rather than a sign of prior asymptomatic infection. The FDA also awarded Emergency Use Authorization for an antigen detection test from Quidel. This test is rapid and available at point-of-care but has a higher risk of being falsely negative and requires a fluorescent immunoassay analyzer to develop the result.

Recommended protocols when scheduling or seeing patients

- If the office setup permits, patients who come to an appointment should be asked prior to entering the waiting room about fever and respiratory illness and whether they or a family member have had contact with another person with confirmed COVID-19 in the past 2 to 14 days. If they answer yes to either question, they should be sent home or to a testing center.
- Keep the waiting room as empty as possible, advise seated patients to remain at least 6 feet from one another. As much as prudent, limit the length of visits of the most vulnerable patients.
- The use of commercially available slit-lamp barriers or breath shields is encouraged, as they may provide a measure of added protection against the virus. These barriers do not, however, prevent contamination of equipment and surfaces on the patient's side of the barrier, which may then be touched by staff and other patients and lead to transmission. Homemade barriers may be more difficult to sterilize and could be a source of contamination.
- To further decrease the risk of viral spread, ophthalmologists should inform their patients that they will speak as little as possible during the slit-lamp examination, and request that the patient also refrain from talking.
- When examining patients, a surgical mask or cloth face covering for the patient, and a surgical mask and eye protection for the ophthalmologist are recommended. The recommendation that ophthalmologists wear eye protection is based on the theoretical risk of infection of the ocular surface if exposed. The Academy recognizes that in some situations, wearing goggles may be impractical, and we will reappraise the issue as new data emerges.
- For any in-office procedures that require physical proximity to the patient (e.g., intravitreal injection, lateral tarsorrhaphy), regardless of the prevalence of COVID-19 in your area, the Academy recommends the patient wear a surgical mask or a cloth face covering if surgical masks are in short supply, and that the surgeon wear a surgical mask and eye protection. An N95 mask for the surgeon can be considered if not in short supply. The CDC's recommendations on N95 extended use and/or reuse should be followed.
- Because U.S. testing for SARS-CoV-2 infection remains incomplete, the true regional prevalences of SARS-CoV-2 within the United States remain mostly unknown. Therefore, for surgical procedures that may generate aerosolized virus, preoperative testing (RT-PCR) for

asymptomatic patients, or the use of N95 masks (and eye protection) by operating room personnel is recommended. In the absence of preoperative testing, for cases that require general anesthesia, personnel not in N95 masks should remain out of the OR during intubation/extubation. For non-aerosolizing procedures performed under monitored anesthesia/conscious sedation, the patient should be placed in a surgical mask. Because of prolonged proximity of the eye surgeon to the patient, the surgeon can consider wearing an N95 mask if supplies permit.

- Increasingly, ophthalmologists will be asked to examine and perform office-based procedures on patients who have recovered or are recovering from COVID-19. Because viral shedding can be prolonged (up to 37 days in one study), repeat testing (RT-PCR performed on a nasopharyngeal swab) is recommended for patients prior to treatment if less than 6 weeks from COVID-19 diagnosis, except in emergent circumstances. If the repeat SARS-CoV-2 test is positive, delayed or not available, the patient should wear a surgical mask. The treating ophthalmologist should wear an N95 mask, rather than a surgical mask, in addition to gown, gloves and eye protection.
- The CMS and HHS have allowed for the expanded use of telehealth services during the COVID-19 public health crisis. For more information on telephone services, internet-based consultation or telemedicine exam, visit the Academy's [Coding for Phone Calls, Internet and Telehealth Consultations](#).

Interim guidance for triage of ophthalmology patients

Clinical Situation	Patient Management / Precautions
1. Routine ophthalmic issues and previously scheduled appointments	<ul style="list-style-type: none"> • Appointments should be rescheduled only upon clearance from public health authorities. • Refill all necessary medications.
2. Urgent ophthalmology appointment for a patient with no respiratory illness symptoms, no fever, and no COVID-19 risk factors	<ul style="list-style-type: none"> • Standard precautions.* • Added precaution of not speaking during slit-lamp biomicroscopic examinations is appropriate. • In the setting of adequate PPE supplies, use of surgical mask and eye protection** for the clinician as well as surgical mask for the patient may reduce asymptomatic and presymptomatic transmission.
3. Urgent ophthalmic problem in a patient with respiratory illness symptoms, but no fever or other COVID-19 risk factor	<ul style="list-style-type: none"> • The patient can be seen in the eye clinic. • The patient should be placed in an examination lane immediately with the door closed and <u>placed in a surgical mask</u>. The treating ophthalmologist and health care personnel require surgical masks at minimum. • Gown, gloves, surgical mask and eye protection are recommended for the clinician.† An N95 mask should be worn if a procedure is planned that will result in aerosolized virus. • The examining room must be disinfected after examination.

4. Urgent ophthalmic problem in a patient who is at high risk for COVID-19

- The patient is best sent to the ER or other hospital-based facility equipped to evaluate for, and manage, COVID-19.
- If the patient has an urgent eye problem based on screening questions, the facility should be one that is equipped to provide eye care in the hospital setting.
- If SARS-CoV-2 infection is confirmed, CDC (or hospital) guidelines for care of suspected COVID-19 patients should be followed for [health care facility preparation](#) and [infection control](#).
- Eye care is best provided in the hospital setting. Transmission precautions[‡] for treating ophthalmologists include wearing a surgical mask, gown, gloves and eye protection (face shield or goggles, if available).

5. Urgent ophthalmic problem in a patient with documented COVID-19 (or person under investigation [PUI])

- The patient should remain in the hospital setting if possible.
- Determine whether the eye problem is urgent based on screening questions, and if so, evaluation and management should be in the hospital setting.
- If the patient is not hospitalized at the time of referral, the patient is best referred to the ER or other hospital-based facility equipped to manage both COVID-19 and eye care.
- CDC or hospital guidelines should be followed for care of COVID-19 patients.
- Transmission precautions[†] for treating ophthalmologists include wearing an N95 mask, gown, gloves and eye protection (face shield or goggles, as above).

[Read the [American College of Surgeon's guidelines](#) for operating on COVID-19 patients]

* **Standard (Universal) Precautions:** Minimum infection prevention precautions that apply to all patient care, regardless of suspected or confirmed infection status of patient, in any health care setting (e.g., hand hygiene, cough etiquette, use of PPE, cleaning and disinfecting environmental surfaces). See [CDC: Standard Precautions](#).

** Supply permitting, tight-fitting [goggles may be preferable to face shields](#) for eye protection.

† Currently, there are worldwide shortages of personal protective equipment (PPE), which also warrant consideration. Excessive use of PPE may deplete the supply of critical equipment required for patients with COVID-19 as the epidemic expands. Use of PPE should be considered on an institutional and case-by-case basis; universal usage for all patient encounters is appropriate in regions with particularly high COVID-19 prevalence. Surgical masks reduce asymptomatic transmission *by the person wearing the mask*. N95 masks reduce infection *of the person wearing the mask*. Note that although the FDA now permits importation of Chinese-made N95 masks as an alternative to those made in the United States, recent reports caution that [some masks may not meet U.S. quality standards](#).

‡ **Transmission Precautions:** Second tier of basic infection control, used in addition to Standard Precautions when patients have diseases that can spread through contact, droplet or airborne routes, requiring specific precautions based on the circumstances of a case. Transmission precautions are required for cases of suspected COVID-19. See [CDC: Transmission-Based Precautions](#).

Environmental cleaning and disinfection recommendations

Rooms and instruments should be thoroughly disinfected after each patient encounter. Wear disposable gloves when cleaning and disinfecting surfaces, and discard the gloves after use. Slit lamps, including controls and accompanying breath shields, should be disinfected, particularly wherever patients put their hands and face. The [current CDC recommendations for disinfectants](#) specific to COVID-19 include:

- Diluted household bleach (5 tablespoons bleach per gallon of water)
- Alcohol solutions with at least 70% alcohol.
- Common [EPA-registered household disinfectants](#) currently recommended for use against SARS-CoV-2 include Clorox brand products (e.g., disinfecting wipes, multi-surface cleaner + bleach, clean up cleaner + bleach), Lysol brand products (e.g., professional disinfectant spray, clean and fresh multi-surface cleaner, disinfectant max cover mist), Purell professional surface disinfectant wipes and more. The EPA offers [a full list of antimicrobial products](#) expected to be effective against COVID-19 based on data for similar viruses.

Visual field analyzer cleaning

Manufacturers' guidance should be followed when cleaning delicate diagnostic equipment such as visual field analyzers. [Zeiss has updated its guidance](#) on how to treat their Humphrey perimeter during visual field examinations, and a quick-start guide demonstrates how to clean the bowl. Other manufacturers may offer similar guidance from their websites or in instructional materials. Because there could be aerosolization during disinfection, we recommend that staff wear a surgical mask and eye protection while cleaning visual field analyzers.

Tonometer tip cleaning

The virus causing COVID-19 is an enveloped virus, unlike adenoviruses that are much more resistant to alcohol. If a tonometer tip is cleaned with alcohol and allowed to dry in room air, 70% alcohol solutions should be effective at disinfecting tonometer tips from SARS-CoV-2. However, alcohol will not effectively sterilize the tip against adenoviruses. Use single-use, disposable tonometer tips if available. Tips cleaned with [diluted bleach remain a safe and acceptable practice](#).

Multidose eye drops

For diagnostic eye drops required for ophthalmic examinations, multidose eye drop containers should be kept in cabinets or other closed spaces away from anywhere that could become contaminated during a patient encounter. As should always be the case, care must be taken not to touch the eyelashes or ocular surface with the tip of the eye drop bottle, and the examiner's hands should be disinfected immediately after touching the patient's face.

Resources

WHO

- [Coronavirus portal](#)
- [Situation dashboard](#)

CDC

- [Coronavirus disease 2019 \(COVID-19\)](#)
- [General information for health care professionals](#)

- [Evaluating and reporting persons under investigation](#)
- [Resources for hospitals and health care professionals preparing for patients with suspected or confirmed COVID-19](#)

For ophthalmologists filling critical care roles

- [An ACP Physician's Guide + Resources](#) (American College of Physicians)
- [COVID-19 Resource Center](#) (American College of Emergency Physicians)
- [Critical Care for Non-ICU Clinicians](#) (Society of Critical Care Medicine)

Ophthalmic subspecialty-specific recommendations

- [Management and Triage of Ocular Oncology Cases](#) (American Association of Ophthalmic Oncologists and Pathologists)
- [Ocular Pathology Recommendations](#) (American Association of Ophthalmic Oncologists and Pathologists)
- [Management and Triage of Retinal Conditions](#) (American Society of Retinal Specialists)

Relevant articles

EyeNet magazine

- [Of Black Swans, TP, and Health Care](#), editorial by David W. Parke II, MD, CEO
- [COVID-19 and Ophthalmology](#), editorial by David W. Parke II, MD, CEO
- [Reflections During a Crisis](#), editorial by Ruth D. Williams, MD, Chief Medical Editor
- [COVID-19 Moves Telemedicine to the Forefront](#)
- [COVID-19 Pandemic: Ocular Tumor Triage and Care](#)

Journal studies and scientific articles

- [Ophthalmology Journal COVID-19 Article Collection](#)
- [Interpreting Diagnostic Tests for SARS-CoV-2](#)
- EyeWiki: [Coronavirus \(COVID-19\)](#) [in progress]
- [Stepping up infection control measures in ophthalmology during the novel coronavirus outbreak: an experience from Hong Kong](#)
- [Priorities for the US Health Community Responding to COVID-19](#)
- [Air, Surface Environmental, and Personal Protective Equipment Contamination by Severe Acute Respiratory Syndrome Coronavirus 2 \(SARS-CoV-2\) From a Symptomatic Patient](#)
- [Evaluation of coronavirus in tears and conjunctival secretions of patients with SARS-CoV-2 infection](#)
- [The Coronavirus Disease 2019 \(COVID-19\) Outbreak in China—Summary of a China CDC Report](#)
- [First Case of 2019 Novel Coronavirus in the United States](#)
- [Clinical Characteristics of Coronavirus Disease 2019 in China](#)
- [A Novel Coronavirus from Patients with Pneumonia in China, 2019](#)
- [Early epidemiological analysis of the coronavirus disease 2019 outbreak based on crowdsourced data: a population-level observational study](#)

If you have practical, clinical experience to share about the COVID-19 outbreak, email onefeedback@aao.org. The site editors will review and post items that will benefit the community.

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Richard Jahnle • 6 months ago

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To protect patients from the virus, keep 6 ft of distance from the patients. Be certain patient has a potentially urgent or emergent problem - otherwise send them home. To protect

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