

# National Academy of Opticianry

# **Continuing Education Course**

Approved by the American Board of Opticianry and the National Contact Lens Examiners

# Hygiene and Protection Protocol in the Optical Environment – COVID – 19 and Beyond

**National Academy of Opticianry** 

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#### **PREFACE:**

This continuing education course was prepared under the auspices of the National Academy of Opticianry and is designed to be convenient, cost effective and practical for the Optician.

The skills and knowledge required to practice the profession of Opticianry will continue to change in the future as advances in technology are applied to the eye care specialty. Higher rates of obsolescence will result in an increased tempo of change as well as knowledge to meet these changes. The National Academy of Opticianry recognizes the need to provide a Continuing Education Program for all Opticians. This course has been developed as a part of the overall program to enable Opticians to develop and improve their technical knowledge and skills in their chosen profession.

The National Academy of Opticianry

#### **INSTRUCTIONS:**

Read and study the material. After you feel that you understand the material thoroughly, take the test following the instructions given at the beginning of the test. Upon completion of the test, mail the answer sheet to the National Academy of Opticianry, 8401 Corporate Drive, Suite 605, Landover, Maryland 20785 or fax it to 301-577-3880. Be sure you complete the ABO – NCLE evaluation form on the answer sheet. Please allow two weeks for scoring and test results.

#### **CREDITS**:

The American Board of Opticianry and the National Contact Lens Examiners have approved this course for one (1) Continuing Education Credit toward certification renewal. To earn this credit, you must achieve a grade of 80% or higher on the test. The Academy will notify all test takers of their score and mail the credit certificate to those who pass. You must mail the appropriate section of the credit certificate to the ABO and/or your state licensing board to renew your certification/licensure. One portion is to be retained for your records.

#### AUTHOR:

Diane F. Drake, LDO, ABOM, NCLEM, FNAO

#### **INTENDED AUDIENCE:**

This course is intended for opticians of all levels.

## **COURSE DESCRIPTION:**

Recently, as not only our industry but our world has been impacted with COVID – 19, it is necessary for us to understand hygiene and protection protocol on a higher level. This course will present information on a view of infections and identifying potential problem areas in the office and recommended corrections. Various types of personal protection equipment and hygiene protocol will be discussed for all involved. (As the CDC and OSHA will be changing some recommendations, the information will be updated as needed in this course.)

## **OBJECTIVES:**

At the conclusion of this course, the participant should be able to understand, discuss, and implement hygienic protocol in the office and personally to ensure a safer environment for both patients and staff.

At the completion of this course, the participant should be able to:

- Effectively demonstrate an understanding of the overall hygienic procedures
- Have a better understanding of how infections are spread including COVID 19
- Identify and correct problem areas in the practice that need better monitoring

# Hygiene and Protection Protocol in the Optical Environment – COVID-19 and Beyond

Diane F. Drake, LDO, ABOM, NCLEM, FNAO

Business in the USA as well as the entire world changed significantly in March 2020 in our industry as well as other industries. There entered a new virus that seemed to take control of how we live our lives. We saw a shutdown of a lot of our businesses. The term "Essential businesses" and "Essential workers" became a normal term. While the COVID-19 virus had an impact, the far-reaching impact includes more than just a single virus. It has made us aware of the need to ensure more stringent hygiene and protection protocol is in place for our offices to protect not just our patients but our employees as well. This course is designed to offer suggestions on these very important protocols.

While I have not considered myself a germaphobe previously, I have been conscious of good hygiene practices. Many years ago, I placed a sign in the restrooms of my office that stated: Proper handwashing is the most important way to prevent the spread of infection and illness. I read with great interest that the Center for Disease Control (CDC) still advocates proper handwashing as one of the primary ways to prevent the spread of infection. Proper handwashing, in addition to other hygiene and protection protocols, can help ensure that you have a healthy work environment. Therefore, a good practice would be to have a sign in your restrooms stating the importance of proper handwashing.

#### What is proper handwashing?

According to the CDC guidelines, faucets should be disinfected after EACH use. Next, the proper method for washing hands is to wet hands with clean, running water, apply soap (may turn off water). Lather hands by rubbing them together with the soap. Lather backs of hands, between fingers and under nails. Scrub at least 20 seconds. Rinse hands well under running water. And finally, dry hands using a clean towel (never been used, single-use) or air dry them. Do not blow on them to dry.

When possible, doctors and staff should wash their hands in the presence of patients. Hand washing is critical before any interaction with patients. Certainly, prior to and after eating and using the restroom. A guideline for handwashing in the office is as follows:

- Before and after eating
- After using restroom
- After blowing nose or coughing
- In-between patients
- After adjusting eyewear
- Before handling contact lenses
- Before handling frames
- Before using instrumentation that comes into contact with any patient or other person

- Slit lamp
- Pre-test equipment
- o CRP
- Any measuring device
- Others
- After cleaning and sanitizing instruments

#### **Alcohol-based Hand Sanitizer**

Hand sanitizers should be alcohol-based and contain a minimum of 60% alcohol. They are referred to by the CDC as alcohol-based hand rubs (ABHR). They should be available for the patient as they enter the office or at the front desk and they should be instructed to use it when entering and upon leaving the office. Patients should also be instructed to wash their hands prior to handling contact lenses. Because they contain alcohol, keep hand sanitizers away from fire or flame as they are flammable.

The CDC also recommends that if hands are visibly dirty or greasy, that hand sanitizer should not be used in place of handwashing with soap and water. If no soap and water are used, then use hand sanitizer but wash with soap and water as soon as possible. Hand sanitizer should be applied to all surfaces of the hands and fingers and rubbed until the hands feel dry. The hand sanitizer should NOT be washed off or wiped off as the efficacy is reduced.

#### What is COVID-19?

While COVID-19 may go away or be controlled, the original purpose for this course was due to this pandemic. Therefore, we first have to ask, what is COVID-19?

COVID-19 is an acronym. In its full form, COVID-19 stands for coronavirus disease of 2019. It is the name given by the World Health Organization (WHO) on February 11, 2020, for the disease caused by the novel coronavirus SARS-CoV-2. COVID is considered a "novel" coronavirus. A "novel" coronavirus means that it is a new coronavirus that has not been previously identified in humans. This means it is different from coronaviruses that cause the common cold, and those that caused SARS in 2002 and MERS in 2012. Like, SARS and MERS, the novel coronavirus is a zoonotic disease. The definition of a zoonotic disease is one that begins in animals and is transmitted from animals to people.

What is the difference between COVID-19 and influenza? According to the CDC, both are contagious respiratory illnesses but are caused by different viruses. Flu is caused by infection with influenza viruses while COVID-19 is caused by infection with a "new" coronavirus (SARS-CoV-2). Some symptoms are similar. Results can only be confirmed by testing.

Symptoms for COVID-19 may appear 2-14 days after exposure to the virus. People with these symptoms may have COVID-19. Usually, symptoms take longer than with flu. Flu is generally 1-4 days. Some of the symptoms include the following:

#### Both COVID-19 and Flu

- Fever or chills
- Cough
- Shortness of breath or difficulty breathing
- Fatigue
- Muscle or body aches
- Headache
- Sore throat
- Congestion or runny nose
- Nausea or vomiting
- Diarrhea

Generally, identified in COVID-19

- New loss of taste or smell
- Skin changes
- Confusion (mostly in elderly with severe infections)
- Eye problems
  - Enlarged, red blood vessels, swollen eyelids, excessive watering, and increased discharge. The infection also might cause light sensitivity and irritation. These symptoms are more common in people with severe infections.

For both COVID-19 and flu, it's possible to spread the virus for at least 1 day before experiencing any symptoms. However, persons with COVID-19 are generally contagious longer than persons with flu. *How long someone can spread the virus that causes COVID-19 is still under investigation*.

Some studies show that it's possible for people to spread the virus for about 2 days before experiencing signs or symptoms and remain contagious for at least 10 days after signs or symptoms first appeared. If someone is asymptomatic or their symptoms go away, it's possible to remain contagious for at least 10 days after testing positive for COVID-19.

We can be fairly certain of ourselves and any symptoms we may have, however, sometimes it's possible we need to be aware of other persons and their symptoms. Emergency warning signs to look for include the following and if someone is showing these signs, seek emergency medical care immediately:

- Trouble breathing
- Persistent pain or pressure in the chest
- New confusion
- Inability to wake or stay awake
- Bluish lips or face

#### How are COVID-19 and influenza spread?

According to the CDC, both COVID-19 and influenza are spread in similar ways. Spread is more likely when people are in close contact with one another (within about 6 feet). Primarily it occurs through person to person through respiratory droplets by coughs, sneezes, laughing, talking, surface contact, etc. However, COVID-19 is more contagious than flu and COVID-19 spreads quickly and to more people groups than flu.

Both COVID-19 and flu illness can result in severe illness and complications. Those at highest risk include older adults, people with certain underlying medical conditions, and pregnant women.

## **Complications**

While having COVID-19 or influenza is serious enough, both COVID-19 and flu can result in further and ongoing complications, including:

- Pneumonia
- Respiratory failure
- Acute respiratory distress syndrome (i.e. fluid in lungs)
- Sepsis
- Cardiac injury (e.g. heart attacks and stroke)
- Multiple-organ failure (respiratory failure, kidney failure, shock)
- Worsening of chronic medical conditions (involving the lungs, heart, nervous system, or diabetes)
- Inflammation of the heart, brain, or muscle tissues
- Secondary bacterial infections (i.e. infections that occur in people who have already been infected with flu or COVID-19)

#### Difference between cleaning and disinfecting

If we wash it, that's good enough, right? Well, washing is important but let's discuss the difference between cleaning (washing) and disinfecting. *Cleaning* with soap and water removes germs, dirt, and impurities from surfaces. It lowers the risk of spreading infection by reducing the number of germs on a surface. *Disinfecting* kills germs on surfaces. By killing germs on a surface after cleaning, it can further lower the risk of spreading infection. For example, let's think of instructing our contact lens patients regarding their cleaning protocol. We know that if a patient simply takes their contact lenses out and places them in a disinfecting solution, the disinfecting solution is not able to as thoroughly disinfect due to the surface lipids and deposits on the surface of the lenses. For that reason, we instruct them to digitally rub the contact lenses with a cleaning solution (whatever is prescribed) to remove the surface deposits, dirt, etc. and then thoroughly rinse them before placing the lenses in disinfecting solution. However, if they simply clean and rinse the lenses, they still have harmful bacteria that are not killed. By doing both, the lenses are clean and properly disinfected.

In, your office, it is equally important to both clean first and then to properly disinfect.

### Cleaning

Let's begin with cleaning the office.

The CDC recommends that persons who clean and disinfect an office wear gloves and face masks and even disposable gowns (in some environments) for protection.

#### Vacuuming

*To begin with – eliminate any small area floor rugs.* Use a vacuum cleaner with high-efficiency particulate air (HEPA) filter. It is advisable to NOT vacuum a room with other people in it. The person vacuuming should wear adequate personal protection equipment (PPE). Consider temporarily turning off room fans and the central HVAC system that services the room or space, so that particles that escape from vacuuming will not circulate throughout the facility. However, do NOT leave the HVAC system off after vacuuming as it will help with recirculating clean air.

Surfaces frequently touched by multiple people, such as door handles, bathroom surfaces, and handrails should be cleaned with soap and water or another detergent at least daily when facilities are in use. Look at your office and identify high touch surfaces. They should be cleaned and disinfected before each use. They can include the following:

- Tables
- Doorknobs
- Light Switches
- Countertops
- Handles
- Desks, Phones
- Keyboards
- Toilets/handles
- Faucets
- Sinks, Etc.
- Chairs
- Chair arms
- ALL parts of exam instruments
  - Example slit lamp where the patient may hold on to the side of the slit lamp
  - Example on/off knobs on equipment
  - Clipboards eliminate if possible

The question is, who should clean the office? According to the CDC, regular cleaning staff can clean and disinfect community spaces. Cleaning staff should be trained on the appropriate use of cleaning and disinfection chemicals and provided with the personal protective equipment (PPE) required for the chemicals used. HOWEVER, cleaning should be done throughout the day between patients and when changing rooms/areas by staff.

#### Disinfecting

The Environmental Protection Agency (EPA) had a list of EPA-registered household disinfectants listed on their website for use in disinfecting offices. That is not to say that these are the only products that may be used; however, they have been tested and registered by EPA. The EPA does not endorse any products, they only register the products.

It is interesting to note that all alcohols, peroxides, and ammonias are not the same. For that reason, it is important to follow the instructions on the label to ensure the safe and effective use of the product.

Many products recommend:

- Keeping surface wet for a period of time (see product label).
  - Ranges in time from 1 minute (example some hydrogen peroxide, not all) to 10 minutes (alcohol) 5 minutes (ammonia), and others up to 25 minutes. Some ethanol alcohol is as little as less than a second, so read instructions carefully
- Precautions such as wearing gloves and making sure you have good ventilation during use of the product.
- This website has a continuing list of products recommended for cleaning and disinfecting and are registered by EPA.

https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2-covid-19

To ensure compliance, these guidelines should be followed.

- Check that the product is EPA recommended
- Read the directions for use
- Pre-clean the surface if it is visibly dirty with soap and water
- Follow the contact time
  - DO NOT wipe off until the time has been met
    - Disinfection takes appropriate time
- Wear gloves and wash your hands
- Keep in original containers if possible or label containers
- Keep disinfecting solutions out of the reach of children

According to the EPA, diluted household bleach solutions may also be used if appropriate for the surface. To make a bleach solution, mix 5 tablespoons (1/3rd cup) bleach per gallon of room temperature water OR 4 teaspoons bleach per quart of room temperature water. Never mix any chemicals/solutions. Bleach solutions will be effective for disinfection for up to 24 hours. Therefore, it is not advisable to mix more than can be used in a 24-hour period. Alcohol solutions with at least 70% isopropanol or ethanol alcohol may also be used.

#### Cleaning and disinfecting electronics

For electronics, such as tablets, touch screens, keyboards, remote controls, and ATMs, consider putting a wipeable cover on electronics. Follow the manufacturer's instructions for cleaning and disinfecting. If there is no guidance, use alcohol-based wipes or sprays (sprays only to be used on flat surfaces) containing at least 70% alcohol. Dry surface thoroughly.

#### Alternative disinfection methods

According to the CDC the efficacy of alternative disinfection methods, such as ultrasonic waves, high-intensity UV radiations and LED blue light against COVID-19 is not known at this time. In addition, the EPA does not review the safety or efficacy of these products. The CDC does not presently recommend sanitizing tunnels as they could cause skin, eye, or respiratory irritation or damage. This information can be found at

#### https://www.cdc.gov/coronavirus/2019-ncov/community/disinfecting-building-facility.html.

#### Frame cleaning and disinfecting

To limit the encounters, consider frame dispenses by appointment only. That should also limit the number of people in the frame select area. Ask enough questions to be able to limit the number of frames a patient can try on.

Disinfect all frames after contact according to EACH manufacturer's recommendations. Otherwise, use soap and water and set aside to air dry. Use some type of container to put all frames that have been tried on or handled. If patients/customers have access to frame boards without staff, ask that they carry a basket/container that is given to them and put all frames that they try on or handle in it so that they may be sanitized. The patients will actually appreciate knowing this much care is given to their safety.

Use trial bottles of solution (not large bottles) and give to CL patients when done. If possible, mail contact lenses to your patients. If in a pandemic, if possible, go to the car to dispense glasses. Consider a protective shield on the pupilometer or using a ruler to maximize distance.

#### Repairs and tools

As much of our work comes from repairs and adjustments, consider how to clean each tool that is used for repairs and adjustments. For example, a screwdriver that is used to tighten screws may come in contact with bodily fluids or grime that contains bacteria or viruses. Think of the green grime on nosepads or hinges. The tools should be cleaned regularly with soap and water and disinfected with alcohol between uses and allowed to air dry.

#### Personal protective equipment (PPE)

What is recommended for protection in the office? A surgical mask, eye protection (goggles, protective eyewear with solid side shields, or a full-face shield), a gown or protective clothing, and gloves during procedures likely to generate splashing or spattering of blood or other body fluids. If one would not be exposed to splashing or spattering of blood or other body fluids, a surgical mask, eye protection (goggles, protective eyewear with solid side shields, or a full-face shield), and gloves. Gloves should be changed between each patient. Doctors and staff should wear PPE at all times. According to OSHA, homemade masks don't meet PPE guidelines. They protect other people, not the individual wearing it. N95 and KN95 masks meet the highest level of protection to the wearer. They must cover the nose and mouth.

The type of clothing worn in the office should be able to be laundered after each wear. For that reason, you may consider scrubs.

#### The next steps

The question is. What are the next steps?

#### Begin at scheduling

Modify scheduling to provide additional time for room cleaning/sanitizing. Advise patients that when they arrive to call the office and they will be instructed when to come into the office. Text or call back. Advise patients that they will have their temperature taken prior to being admitted to the office. Assign a staff member to escort patients to the appropriate area.

Advise patients that it is recommended that they wear masks when coming in. Provide disposable masks for those not having one. Advise patients that the number of people allowed in office will be limited at any one time. Only the only patient should come into the office, unless minor or need physical or mental assistance/support. Advise patients that you will verify their appointment one day prior and if you do not reach them, the appointment will be canceled because you will need to verify their health and risk factors through questions.

Consider some type of kiosk for check-in and portals for payments and/or co-pays to decrease exposure at check-out as well.

Some jobs may be handled through telecommuting such as scheduling, billing, etc. Don't share workstations if at all possible. Use barrier protection - Use plastic/plexiglass dividers at the front desk for check-in. Use breath shields on pupilometers and slit lamps and other pretesting equipment. Provide training on infection control. Perform temperature checks on staff EVERY day. Neither the OSH Act nor OSHA standards prohibit employer screening for COVID-19. Report any health symptoms.

Ask questions of patients relevant to their current health such as:

- Are you feeling well today?
- Have you tested positive for COVID-19 or been exposed to someone who has?
- Do you have a fever or had one in the last 3 days? (You may take their temperature)
- Do you have a cough?
- Do you have shortness of breath?
- Have you had chest pain in the past 3 days?
- Have you recently traveled to a high impact area such as New York, Detroit, Los Angeles, etc.?
- Have you experienced a change in taste or smell recently?

Reduce office touchable surfaces, evaluate office décor. Minimize touchable surfaces such as removing what is NOT absolutely necessary such as children's treasure boxes, toys, coloring books, etc. Also, evaluate excessive POP merchandising, remove books and magazines. Reduce the number of chairs in the reception area or cover them and include do not sit on signs. Since fewer people will be allowed in at one time, this will allow for less need for sanitizing. If you use videos, loops, etc. ensure that only staff has access to devices for changing, etc. At all times 6 feet minimum spacing is required between individuals.

Consider plexiglass divider to separate reception from patients. Frequently clean door handles, clipboards, pens, chairs, etc. Consistently clean all computers, keyboards, phones.

#### During the examination and/or pretesting:

- Wash hands and put on new gloves prior to each examination.
- Always wear other PPE.
- Take the patient directly to the examination room.
- Disinfect occluder after each use.
- Hold stereopsis and color test book for the patient (don't let the patient touch it).
- Use a protective shield on the slit lamp.
- Avoid conversation when close to the patient (during slit lamp examination or fundoscopy).
- Use single-use protective coverings, if possible.
- Non-contact tonometry may micro-aerosolize the virus.
- Disinfect tonometer prism/tip according to manufacturer's guidelines.
- Use binocular indirect or fundus photography to maximize distance during fundus examination.
- Clean/disinfect equipment before and after each use, including chair and anything touched during the examination.
- Minimize specialty tests to critical needs (visual fields, optical coherence tomography, corneal topography, etc.).
- Use touchless single-use paper towel dispensers.
- Slit lamps and Corneal Reflective Pupillometers (CRP) and any pretesting equipment should have all contact points cleaned and disinfected with single-use alcohol wipes and allowed to air dry prior to each use.

Other safety precautions

- Provide training to staff
- Provide signage for patient/customers to read regarding social distancing
- Provide signage for staff regarding safety precautions
- Limit occupancy to a number that can provide for social distancing
- Restrict movement in hallways/corridors/etc. to adhere to social distancing policy
- Limit the number of people in break rooms, etc.
- Reinforce information regarding PPE for staff

#### Office training

Without training, employees may not understand the importance of hygiene, infection control, and protection. Therefore, it is important to have a specific time of training for the staff on it. In addition, in order to emphasize the importance, there should be a policy developed and put in your office policy manual explaining the protocol for hygiene, infection-control, and protection. That should include all aspects of hygiene, infection control, and protection protocol. It should be reviewed regularly and updated as needed. In addition, it needs to be signed off by everyone in the office to ensure that everyone understands the importance will agree to adhere to the policy.

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