Responsible “Social Distancing” in the Examination of the Urgent Eye Patient during COVID-19

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Disclosures

• Opinions expressed here are personal and do not reflect the views Tusculum University or Anthem.
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• No additional funding was received in the preparation of this presentation.
• This presentation is in no way, a solicitation.
Disclosures

• Dr. Hom is currently an Adjunct Faculty in Health Policy at the Niswonger College of Optometry at Tusculum University and the Optometric Director at Anthem.
• He holds doctorates in Biomedicine and Optometry as well as an MPA degree. A retired LTCOL, USAR, Dr. Hom is also a Diplomate in Public Health and Environmental Vision with the American Academy of Optometry.
• While the Coordinator for Primary Care Optometry at the San Mateo Medical Center he set up a “clean and safe” work environment for the Eye Department
Disclosures

• Dr. Moore is currently the Associate Dean for Clinics at the Niswonger College of Optometry and Director of Clinical and Surgical Education and Training. He is also the CEO of Greater Regional Eye Group PLLP.

• Dr Moore has CE courses for both optometry and ophthalmology meetings on 4 continents and in 36 different states.

• Prior to entering academia, Dr. Moore was in private practice where he owned and operated WV Laser Eye Centers LLC. At its peak WVLEC had WV’s largest free standing LASIK surgical center, with 2 locations in WV and 1 in KY, and staffed by 4 ophthalmologists, 2 optometrists, and 28 support personnel.
Course Description

The examination of a potentially contagious patient balances the risk factor of both the patient and the doctor in minimizing the spread of any contagion. A workflow is proposed that reduces the chance of transmission among patients and staff in the clinical environment. This course is suitable for optometrists at any training level and of their staff.
Course Objectives

After completing this course, the participant will be able to:

• Describe the concepts of transmission of community-acquired infections and its mitigation
• Workflow that promotes “social distancing”, personal and surface barriers and disinfection strategies.
• Risk stratification in handling the patient who is symptomatic with early respiratory problems.
Introduction – SARS-CoV-2

• Assume all patients might be contagious.
• The SARS-CoV-2 virus is related to the SARS and MERS-CoV viruses. These viruses are highly contagious with significant morbidity
• A high-risk patient presents with cough, fever, shortness of breath, and sore throat.
• Unintentional exposure and ensuing infection from high-risk patients is probable. Protection of the staff or patient from additional morbidity is necessary.
Viral transmission among humans

• The origin of SARS-CoV-2 is believed to be similar the bat virus. (Lai, 2020)
• Virus derived from animals and then transmitted to humans have the highest possibility for pandemic properties (Richard, 2016).
• An asymptomatic infected patient can transmit the COVID-19 virus (Bai, 2020).
The Kinetics of the cough and sneeze

At 30 inches (70 cm), the plume from a cough or sneeze is still substantial (Bourouiba 2005). With ventilation currents, the spread could be as much as 25 feet.
Viral transmission among humans

• Viral shedding varies
• ↑ shedding in colder than warmer climates. (Lowen, 2007)
• Factors (Nicas, 2005)
  o Exhaust ventilation (breathing)
  o viral particle size and the diameter decrease with distance
  o settling of the particles in air
  o viral die-off
Survivability of the SARS-Co-V-2

- Up to 3 hours post-aerosolization (median half-life 1.1-1.2 hours)
- Up to 4 hours on copper (median half-life 1.1-1.2 hours)
- Up to 24 hours on cardboard (median half-life 3.5 hours)
- Up to 2 days on stainless steel (median half-life 5.6 hours)
- Up to 3 days on plastic (median half-life ~6.8 hours)

Goals:
1. Spread the incidence of new cases to align with available beds
2. Permit the introduction of a vaccine and valid treatments
3. Social distancing minimizes transmission from asymptomatic individuals
Medical-legal (in CA)

• A health emergency can be declared by the County Health Officer (CHO). The CHO receives its authority as an agent of the County Board of Supervisors.
• The CHO “may take any preventative measure that may be necessary to protect and preserve the public health from any public health hazard during any “state of wear emergency,” “state of emergency”, or “local emergency”.

Medical-legal (in CA)

• The CHO “may require isolation (strict or modified) or quarantine for any case of contagious, infectious or communicable disease when this action is necessary for the protection of the public health.”

• An individual who “...refuses or neglects to comply to a lawful CHO order is subject to a misdemeanor.”

• In other jurisdictions, the county may cancel a current or withhold a future business license. Other counties can even “shut off water and electricity.”
Medical-legal – Professional liability

• Nosocomial infection

• Not accepting a patient simply from symptoms without any investigation might be unprofessional

• Negligence could be attached if
  o The office failed to use PPE
  o There was a delay in effective or pertinent referral
  o Failure to follow disinfection/sterilization protocol
Medical-legal – Negligence

• The office could be liable for a negligence if the office failed to use caution, provide protective equipment, and failure to inform or consent.
  o Delay in effective treatment if an infection was acquired at the office.
  o Failure to follow disinfection/sterilization protocol
Planning needed to see the urgent patient

• Social distance begins before the first patient enters the office in the morning.

• Plan for a single patient at a time only.
  o If you have staff working you can have more than one patient in the office IF you have the space to keep the patients separated. 6 feet is minimal.
  o With reduced patient flow, we recommend no more than one patient in any work area (waiting room, dispensary, etc.) at a time.
Planning needed to see the urgent patient

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Planning needed to see the urgent patient

- Identify external parking spaces that are near the office. Consider parking cones to separate one car from another by one parking space.
- Consider external to the office triage before they enter the office.
Planning needed to see the urgent patient

• Social distance begins before the first patient enters the office in the morning.

• Telephone is the most effective strategy for SD
  o Resolve problems over the phone before arrival
  o Get as much information as you can over the phone (CC, PHI, etc)

• Bring only a government-issued picture identification and insurance cards into the office – no excess bags, leave any outer garments at the entrance door.
When they arrive at the office

• Consider meeting them just outside the office to see if identification and insurance cards were brought
• At the front, have a hand sanitizer and a “no-hands” medical waste container.
Prepare the office before the first patient

• Mark out spaces in the parking lot and separate each parked car with cones into alternating spaces.
• Consider cones or tape to lead the patient directly to your front office, if possible.
• The tape should direct the patient where you want them
• Signs or arrows may help clarify the direction of flow
Prepare the office before the first patient

- Use a glass or acrylic (i.e. Plexiglass) barrier at the reception desk between the patient and staff. Both are considered non-porous.
- Keep surfaces completely clear for easy wipe between pts
- Use disposable pens when signing documents
- Tape the floor to direct traffic to prevent wondering and to mark social distancing.
What supplies are needed

• N95 masks
• Nitrile gloves
• Infrared thermometer
• Optional
  • Gowns
  • Caps
• Alcohol-based hand wash
• Disposable towletts
Optional supplies

• At least long sleeve clothing
• Scrubs – an ideal solution
  o At home - Remove scrubs and YOU put them in the laundry immediately. Try not touch any surface in your home while doing this.
  o Go straight to the shower.
  o Then go back and wipe down any surface you touched (washing machine, etc.) before interacting with any other family member.
Typical gowns, gloves, masks and hats.

Gowns

• Reusable gowns
  ANSI/AAMI
  PB870 levels 1-4
  with 4 being the
  most protective
• ANSI/AAMI PB870
  standard Level 3 or
  4 gown
Isolation Gowns

- Reusable gowns ANSI/AAMI PB870 levels 1-4 with 4 being the most protective
- ANSI/AAMI PB870 standard Level 3 or 4 gown
Masks

Surgical mask (not recommended)  N95 Respirator (Minimal recommendation)

Gloves

- ASTM D6319-19 – Nitrile Examination Gloves for Medical Application.
- Nitrile butadiene rubber is a synthetic rubber.
- Nitrile gloves do not contain natural rubber latex. Medical nitrile gloves are also coated that provides greater chemical and water resistance.
- 100% latex free. Powder-free.
Disinfectants (Kariwa, 2004)

- Povidone-iodine (PVP-1)
- 70% ethanol
- Heat to 56 °C for two minutes
- Formalin, glutaraldehyde, methanol, and acetone for five minutes.
- Heating for 60% eliminated all infectivity
- UV 134μW/cm², for 15 – 60 minutes failed to eliminate all infectivity.
Hand washing

- WHO recommendations using one of two agents for hand washing.

- Both reduced infectivity to almost nil (Kratzel, 2020) Isopropanol at 75% had the best action against the MERS-CoV and bovin (BCoV), both closely related to SARS-CoV-2
  - Ethanol 85%
  - 2-Propanol 75%
Examples—Personal Protective Equipment

Typical office-based

Typical with splatter shield

High contagious environment w/respirator and Level 4 suit

Goldberg, 2020
When they arrive at the office

• When the patient arrives, have them call the office.
• The patient should have been screened for urgency and age <= 70 years as these are not likely be urgent.
• Reschedule or refer any patient who reports symptoms of fever, cough, and shortness of breath.
• DO NOT SEND THEM HOME OR RESCHEDULE WITH YOU LATER. Have them see their PCP.
When they arrive at the office

- Examine prior completed registration forms (do in car)
  - The patients’ car is now your waiting room.
  - Only the patient enters your office. No one else, (including pets) unless there is an ADA need for assistance.
- Scan the governmental-issued ID and insurance ID cards.
- Ask the patient to don a mask and gloves
- Limit entry to the office to a single point and no two individual should use the entry as the same time.
- Upon passing the threshold of the door, the patient should wash their bare or gloved hands with an alcohol-based sanitizer.
When they arrive at the office

- Use the infrared thermometer.
- Remember, this is the first step when your staff greets the patient.
- Have face masks and procedure gloves available
- You or staff should not ever leave a patient, making a mental note of what they have touched so you can be sure its wiped down later.
When they arrive at the office

- When the office is ready, the staff will text message the patient to enter the office.
- Limit the reception area to one patient at a time.
- Scan any picture ID and insurance cards.
- As quickly as possible begin initial evaluation and handover to the doctor
- These patients are problem focused. Long histories are not required.
While in the office

- The case review should respect the six-foot-rule should the patient cough or sneeze.
- Optimally, the patient should spend the least amount of time in the office.
- Consider asking the patient for the case review while in their car over a phone.
Upon departure from the office

• Retrieve all masks, gloves, tissues from the patient and dispose in a biological waste container.

• Wipe down all horizontal surfaces, stationary and portable equipment even if the patient did not come in contact.

• Wipe down all pens and dispose of any paper that was touched.
Changes in examination procedures

• Note at the top of your record or in a high visibility area on your EMR that this is a modified exam during the COVID-19 pandemic. Include precautions taken and modification to the examination for patient and staff safety.

• Rely on imaging rather than direct or indirect ophthalmoscopy.

• Use the slit lamp for anterior segment pathology.
  • Use, or be creative and make a face shield that hangs off the oculars.
  • Remember to wear gloves and face mask
Changes in examination procedures

- For tonometry, as a minimum, global palpation through a glove is an absolute minimum.
- The iCare tonometer may be the optimal instrument. It has a disposable plastic tip.
- The Diaton transscleral tonometer is also a possible option, but its stainless-steel tip requires disinfection which takes 2 minutes. The manufacturer’s recommended product is:
Changes in examination procedures

• Confrontational fields are acceptable

• Use a posterior segment camera of choice. For an urgent visit with symptoms, an ultra-wide field of view camera may be optimal.

• For medico-legal reasons, interpret the photo.
Changes in examination procedures

- The pinhole acuity should be taken as a minimum if the purpose of the visit is medical.
- Refract only if there is a noted necessity and document it should there be a review later.
- Avoid referring patients to the Emergency Department where an acquired infection is much higher than in your office.
  - You can triage and treat most red eyes this way over the phone if there is no fever and other associated COVID-19 symptoms.
  - Call in medication you feel appropriate. If symptoms do not improve, then an office visit is warranted.
Changes in frame dispensing

- This is not a time to linger in the optical to find the “perfect” frame.
- Any frame that is demonstrated on a patient should be brought back to the “lab area” and wiped clean.
- Place the frame back in the frame bar only after the departure of the patient.
Changes in frame dispensing

• IF you have the patient’s last frame in your records get it and a few like it out. OR just have a few basic frames each for men, women, boys, and girls set aside for them to choose from.
  o This is a time of crises and these are urgent patients that need to be made functional. This is not a time to be worried about social engagements.

• When normalcy returns, the patient can come back and complete a more thorough exam and be more selective of their eyewear.
Documentation of the visit

- Establish the level of necessity of the visit
- Minimal components of the examination
- Establish medical necessity
- Document it is a modified exam due to COVID-19
- Submit claims for reimbursement based on reasonableness and necessity. If the photo is used for the internal exam, don’t bill as a fundus photo also. Include in the chart notes the rationale for the internal examination by photo.
Extra – Cleaning a mask

• An N95 mask with the metal nose clip can be heated with hot air to 70°C / 158°F for 30 minutes multiple times.

• Suspend the masks in the hot air without contacting or nearing the metal surface.

• Use a wooden or plastic-tipped clip on the edge of the non-breathing zone of the mask. You can also place on a wooden grill at least 6 inches away from any metal surface.
Extra – Cleaning a mask

• DO NOT TREAT the masks with any kind of alcohol.
• Gamma and ultraviolet radiation can also reduce significantly the life of an N95 mask by increasing their brittleness.
Summary

- Use “universal precautions.”
- Rely on social distancing, appropriate barrier protection and frequent disinfection of surfaces, equipment and hands.
- Document the circumstances and level of care
- Comply with any local, state or federal regulations
- Be safe for you and your family.
Questions and Answers

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