COVID-19 INFECTION CONTROL AND PREVENTION IN OPHTHALMOLOGY OFFICES

PRE- APPROVED TEMPLATE

Title: South Hills Eye Associates Covid-19 Plan

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Project Description	Covid-19 is a highly contagious viral respiratory infection with high morbidity and mortality. Due to a long latency after infection and many asymptomatic carriers, community control has been difficult. The infection seems to be more aggressive and has a higher mortality rate in older populations, especially those with preexisting or underlying chronic medical conditions. South Hills Eye Associates has a majority of patients in the higher risk group. A plan to limit exposure and transmission between patients, staff and physicians is critical.
Background Information	Our country has not experienced a pandemic of similar health and economic significance in over one hundred years. Most ophthalmology practices will need to alter infection control and prevention measures to contain this threat.
Project Setting	Group Practice
Study Population	Measures to date have evolved according to guidance from the Federal Coronavirus Task Force, state and local agencies, and our professional societies (to include the American Academy of Ophthalmology, Pennsylvania Academy of Ophthalmology, and the Pennsylvania Medical Society). Below are the measures that we have instituted with patients and staff. 1. We have flyers up in the windows and doors of the office so that patients can see before they enter the building that we want them to reschedule their appointment if they have a fever, cough or shortness of breath, and that they should contact their PCP or hospital ER if they are having these symptoms. 2. All staff were issued N95 masks and instructed in their proper use. The staff wear the N95 masks at least during each patient encounter. Many of the staff wear them the whole time in the office. 3. All staff were instructed in the proper technique of hand washing and are washing their hands frequently and/or using hand sanitizer. 4. An extensive methodical cleaning of the office, optical supplies and frames, and exam lanes, testing equipment, offices and bathrooms was undertaken, and this process is repeated, as necessary. 5. Each exam room is thoroughly cleaned with Clorox wipes after each patient encounter, with meticulous attention to all examination equipment, light

	switches, computer monitors and keyboards, exam chairs, and counter surfaces. 6. Waiting room chairs were removed where possible (and obstructed where the chairs were connected) to allow patient seating of no closer than 6 feet apart. 7. Periodicals and waiting room reading materials were discarded. 8. Patient family members and/or friends are not allowed to accompany patients to examination rooms. 9. Certain testing where patients and staff are in confined spaces has been rescheduled (visual field, a scans, OCT, etc). 10. Our satellite office is closed, and the main office optical and contact lens fitting services is closed in both offices. 11. All patients except for postoperative and emergency appointments have been rescheduled, no routine care is being provided. 12. Our daily staffing has been reduced to a skeleton crew; and the doctors and staff are working on a limited rotational basis. 13. We have limited the amount of people within the waiting room, check in/out area, and examination lanes to less than 10 people at a time (includes patients and staff). 14. Some patients remain in their cars until we notify them to enter the office for their appointment. 15. All staff wear gloves during each patient encounter. Many of the staff were gloves during the entire workday, changing them appropriately as needed. 16. Patients are offered surgical masks and gloves if they desire. (unfortunately, we do not have N95 masks for patients). 17. We are developing a telemedicine capability. 18. Notice to patients of our limited office availability and current Covid-19 precautions is posted on our website and Facebook page. 19. We do not plan on altering our approach until our professional societies and governmental agencies advise that it would be appropriate. 20. We have quarantined 2 staff members. One who had traveled to Disney in Florida recently, and another who was developing flu 21. symptoms (subsequently had a positive test for influenza and not covid-19). 22. The physicians and office administrator continually look to the changing data

	and guidance from the authorities and are communicating several times daily. We adjust our protocols based on the current information.

Quality Measures	Pre-screening of patients on the phone. Prior to this plan, no pre-visit screening happened over the phone, now all patients are asked from an infection risk questionnaire. 2. Regimented cleaning of waiting and examination rooms. Prior to the plan, more routine and less thorough cleaning was happening. Now it is meticulous and after every patient contact. 3. Limiting population density and social distancing. Didn't happen prior to our Covid-19 plan. Now, social density is in effect and a limit of 10 individuals in close proximity is being observed. 4. Personal protection gear (N95 masks and gloves). Prior to the plan, masks were rarely worn in the office by staff, patients or doctors; and never N95 masks. Gloves were only worn by physicians and assistants for surgical procedures. Now both staff and doctors glove for every patient encounter. 5. Virtual visits. Nonexistent prior to the Covid-19 plan. Now we are developing the capability6. Known Covid-19 exposures to patients and staff. None prior to the plan was put into effect. So far, no known patient or employee populations have tested positive for the virus.
Project Interventions and Improvement Period	1. Handwashing techniques (soap and water for more than 20 seconds or greater than 60% alcohol-based hand sanitizer). 2. Rigorous cleaning of everything that could have been touched during a patient encounter after each patient visit (examination equipment, counter surfaces, chairs, computer screens and keyboards, doorknobs, etc) 3. No routine visits. Only postoperative and emergent appointments are being made. 4. Staff and doctors wearing gloves and N95 masks. 5. Enforcement of 6 feet between patients and density of less than 10 people social distancing is implemented.
Project Team	All of the physician partners are stakeholders in the plan and helped to actively develop the plan. All doctors and staff understand the rationale and have agreed to comply. I and everyone in the office are all actively participating. I and my partner physicians and the office administrator daily review the adequacy of the plan and will make changes as appropriate.

COVID-19 Infection and Prevention in Ophthalmology Offices
Section 2. Project Evaluation

PROJECT SUMMARY	**Review the effect and adjustment of implementing the policy changes after a minimum of 30 days and in the following sections, please prepare a brief summary of the project highlighting the data collected, effectiveness of the measurement approach, interventions and the overall impact of the project.**
BASELINE DATA	Prior to the onset of the COVID-19 shutdown, our 2 offices would have a combined traffic of approximately 800-1000 patients per week (between doctor visits, testing, contact lens and optical services). 1. Prior to the visit: a. Printed and posted flyers on the entry door and reception window regarding COVID-19 symptoms and mitigation recommendations. It was not being done at baseline. (0/2 offices = 0%). b. Staff training regarding hand washing and office cleaning measures. At baseline, this was being done once per year during OSHA training. (1/52 weeks = 2 %). c. Telephone screening calls to ask for COVID-19 symptoms and to establish the history portion of the upcoming office examination. Was not being done at baseline. (0/1000 patients = 0%). d. Offer telehealth as an alternative to an in-office visit (0/1000 patients = 0%). 2. During the office visit: a. Temperature check. (0/1000 patients = 0%) b. Covid-19 symptom questionnaire. (0/1000 patients = 0%) c. Restricting companions from the office (0/1000 patients =0%) d. Maintaining 6 feet social distancing. (eliminated waiting room chairs and placed arrows/indicator stickers on the floor). (0/1000 patients = 0%). e. Leaving exam room doors open to avoid repeated doorknob handling. (0/1000 patients = 0%) f. Leaving patients in exam rooms and limiting movement to waiting rooms and other office areas. (0/1000 patients = 0%) g. Extensive cleaning of all surfaces between every visit. (at baseline, only light cleaning (tonometry and slit lamp surface cleaning was being accomplished; so 0/1000 patients = 0%) h. Requirement of staff and patients wear mask. (0/1040 patients and staff = 0%).

	i. Only payment accepted is credit cards handled by the patient, rather than cash or staff processed credit card. (0/1000 patients = 0%).
FOLLOW-UP DATA	Evaluation of the above parameters/indicators after 2 months. Over the course of this 2-month period, our 6-doctor group had only 941 office patient visits, with the majority of these happening in the last 2 weeks as we have increased our services from emergencies and postoperative care. 8 telehealth visits have occurred over this time period. Prior to the visit: a. Printed and posted flyers on the entry door and reception window regarding COVID-19 symptoms and mitigation recommendations (2/2 offices = 100%). b. Staff training regarding hand washing and office cleaning measures. This was done repeatedly, and the office cleaning was more extensive than ever before. (9/9 weeks = 100%). c. Telephone screening calls to ask for COVID-19 symptoms and to establish the history portion of the upcoming office examination. This was a practice that evolved over these past 2 months. We immediately began screening for symptomatic patients but had to devise changes with our EMR vendor to allow us to complete portions of the electronic record prior to the visit. (941/941 patients were prescreened for COVID-19 symptoms = 100%) d. Offer telehealth as an alternative to an office visit. (about 30/941 patients were offered telehealth services. = 3%) During the Office Visit: a. Temperature Check. (941/941 patients = 100%) b. COVID-19 questionnaire. (941/941 patients = 100%) c. Restricting companions from the office. (900/941 approximately = 96%). We found that some of our elderly patients, deaf, disabled, etc needed a companion. d. Maintaining 6 feet social distancing. We were successful with regard to our patients and staff. Separation of waiting room chairs, leaving patients in the exam rooms, stickers on the floor to show people where to stand apart from each other, staff eating lunch at staggered times and away from the lunch room, having patients and family wait in cars until texted or telephoned to come in, drastically limiting our schedules and spacing the appointments farther apart, etc. Encounters with the physician required interaction at close distance (slit lamp, ophthalmoscopy, etc).

	(941/941 = 100%) e. Leaving exam room doors open to avoid repeated doorknob handling. (This varied by physician preference, force of habit and patient request); (this was done approximately 500 out of the 941 office visits = 53%). f. Leaving patients in exam rooms and limiting movement to waiting rooms and other office areas. (One physician resisted this. We accomplished this approximately 750/941 visits = 80%). g. Extensive cleaning of all surfaces between every visit. (941/941 = 100%). h. Requirement that staff and patients wear masks. (981/981 = 100%) We had great difficulty obtaining N95 masks, but everyone wore masks. I had procured N95 masks at the onset for the doctors, and within a week, we had N95 masks for all of the staff. We had to clean and reuse these masks until more became available approximately 4 weeks into our study. However, the staff quickly became intolerant to the N95 and most resorted to simple surgical masks. Patients presented with all manner of masks; from the N95 to scarfs, to surgical masks, ski masks, and homemade cloth masks. i. Only accepting patient handled credit cards. (941/941 = 100%). There were several upset patients who wanted to pay with cash. Some patients were allowed to mail in a check. Other Measures: a. Observance of CDC, AAO, Pennsylvania Academy of Ophthalmology and Pennsylvania state authorities recommendations regarding limitations on nonessential business activities. (4/4 = 100%). Our hospital and Ambulatory Surgical Centers stopped elective surgeries in mid-March. Only in the last 3 weeks have we begun to resume elective operations. We observed all recommended practices. Pennsylvania has adopted a 3-phase reopening strategy based on county cases and hospitalizations/deaths. Ophthalmology has been considered an essential service throughout the whole process; but we were limited to emergency and postoperative care until 2 weeks ago. As a result, we closed our satellite office, closed our optical and contact lens services, stopped vision care/optometric services, stopped routine testing (visual field, OCT, optical biometry, etc), limited doctor and staff hours, protected our pregnant staff from patient encounters, and enforced social distancing.

	b. Removal of waiting room periodicals and reading materials. (4/4 = 100%). c. Closure of one office. (1/2= 50%). Under our state's phased reopening strategy, both counties in which we have offices (Allegheny and Washington county) have moved from the Red to Yellow phase. Yellow is less restrictive, and we were able to open the second office and start doing some limited nonurgent care 2 weeks ago. We are hoping to move to a less restrictive Green phase in the next 2 weeks, although it is unclear whether we will be able to stop social distancing. If we must maintain social distancing practices, then we will still be seeing patients at a much-reduced schedule. We have instituted a split schedule strategy, whereby we only have 2 physicians and an optometrist in our main office at any one time, instead of 4 or 5 doctors at a time. By working extended hours, more Saturdays, and in shifts, we hope to improve patient flow and numbers of visits. d. Provision of only emergency and postoperative care. (approximately 150/150 = 100%). During the time where this was required, we were 100 % compliant. The majority of the patients seen over the past 2 weeks were non-emergent, although many were still not routine. e. Closure of optical and contact lens services. (4/4 = 100%). Over the past 2 weeks, we have opened our optical departments, although we are requiring visits by appointment to the optical departments. We are selling contact lenses, but just recently returned to contact lens fitting services. f. Discontinuance of testing services. (only approximately 10 visual field or OCT's were done during the time of more restricted practice, 140/150 = 93% compliance, and these were medically necessary; so really 100% compliance). Over the past two weeks, we have begun doing more routine testing again. g. Quarantining of at-risk staff. We had 2 of 40 that required a period of quarantine. One had COVID-19 like symptoms and was subsequently found to have a positive test for influenza. She was returned to work after 2 weeks. Another employee had a family member that lived with her test positive for COVID-19. Both our employee and her daughter were returned to work after the daughter's recovery and 2 weeks without symptoms by our employee. (2/40 = 5%). h. Protection of staff by providing PPE (personal protective equipment),

	limiting work hours, and keeping pregnant staff away from direct patient encounters. (40/40 = 100%). i. Apply to government assistance programs when available. (3/3 = 100%) We were successful in our PPE applications and 2 HHS grants.
PROJECT IMPACT	We were successful in all of the plans that we instituted to try and mitigate the spread of the virus. We followed all of the recommended guidelines. The plan evolved day by day as we tried to do what we could to protect the staff, patients and doctors. Everyone was glued to their televisions for the daily briefings from the CORONA virus task force. Hysteria was rampant. In retrospect, I'm not unhappy that we did what we did. However, it is becoming increasingly clear that the economic and social consequences of our country's draconian response may have been worse than a less severe response. Our business, even with the Paycheck Protection Program and HHS assistance is in severe financial trouble. If our business and economy can't recover quickly, the implications for us individually and for the country collectively will be severe. In the coming months and years, we need to develop a better public policy approach to pandemics. The cure (closing down the economy, increased suicides and substance abuses, loss of liberties, and constitutional challenges to the restrictions) can't be worse than the disease.
PROJECT REFLECTION	This was a very difficult project. Our plans, thoughts, anxieties, etc were changing daily. Our current practices evolved over time. It is difficult to answer a qualitative process in the quantitative way required. WOW. Just continue developing, implementing, and then reevaluating the plan. Adjust the plan as needed for the best outcomes