

**COVID-19 INFECTION CONTROL AND PREVENTION IN OPHTHALMOLOGY OFFICES**  
**PRE- APPROVED TEMPLATE**

**Title:** COVID-19 Impact Mitigation at Rockwood Eye Center

**Author:** [Holly Hindman, MD](#)

<b>Project Description</b>	The goal of the project is to develop a comprehensive approach for reducing exposure to and transmission of COVID-19 within a community-based multi-subspecialty eye care office setting.
<b>Background Information</b>	We provide general and subspecialty eye care to rural communities in upstate New York. We are a private practice office that usually functions out of 4 separate buildings that are geographically located to allow for improved access to care. We partner with the three major health systems in our area - both to cover emergency room and urgent care related eye care as well as to perform surgeries within their operating rooms. Our providers include 4 full time MD providers (retina, general, cornea, and oculoplastic) and 6 OD providers.
<b>Project Setting</b>	Group Practice
<b>Study Population</b>	<p>Providers and staff working employed by our group.</p> <p>Process Changes:</p> <ol style="list-style-type: none"> <li>1. Identification of medically urgent/emergent cases to bring into the office (providers).</li> <li>2. Identification of particularly high-risk patients to minimize need to come to office - e.g set up telemedicine visits where appropriate (providers)</li> <li>3. Rescheduling of patients and bringing in only medically urgent/emergent cases (phones).</li> <li>4. Spacing of appointments to minimize number of people in office at one time (phones)</li> <li>5. Change in check in/check out process to minimize congregation (front desk)</li> <li>6. Change in arrival notification process where patients call on arrival, we open door for them, check them in and take directly to the cleaned exam room (front desk).</li> <li>7. Change in layout of furniture to prevent congregating (management)</li> <li>8. Instituting pre-visit screening measures to detect those at high risk for COVID 19 (phones)</li> <li>9. Working with health care systems to bring in concerning patients to their facilities where we will go to see patient and also have access to proper PPE (management)</li> <li>10. Cancelling all elective and non-medically urgent emergent surgeries and development of processes for emergent surgeries (staff and providers working with health systems)</li> <li>11. Instituting new disinfection standards following each patient contact and items used within the exam lanes.</li> </ol>

	<ul style="list-style-type: none"><li>12. Instituting standard times for disinfecting all common spaces regardless of individual contact (e.g bathrooms, waiting areas, door handles)</li><li>13. Use of regular facemask by all in office (all)</li><li>14. Minimizing staff in office to just mean patient care needs (management)</li><li>15. Use of telemedicine visits whenever visit cannot be safely postponed</li><li>16. Continuous education about hand hygiene practices before and after each patient contact, before and after eating, and frequently throughout the day with soap for 20 seconds or appropriate hand sanitizer(all)</li><li>17. Education to patients about importance of social distancing measures (all).</li></ul>
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<p><b>Quality Measures</b></p>	<p>I will report on the next two weeks and compare our current activities retrospectively to those prior to COVID 19. Wherever possible we will try to interpret as quantitative measures; however, we are also finding that qualitative assessments are proving to be very useful as we look to continue to provide continuous improvement.</p>
<p><b>Project Interventions and Improvement Period</b></p>	<p>The interventions are as outlined above under the study population and included below as well</p> <p><b>PROCESS CHANGES</b></p> <ol style="list-style-type: none"> <li>1. Identification of medically urgent/emergent cases to bring into the office (providers)</li> <li>2. Identification of particularly high-risk patients to minimize need to come to office - e.g set up telemedicine visits where appropriate (providers)</li> <li>3. Rescheduling of patients and bringing in only medically urgent/emergent cases (phones)</li> <li>4. Spacing of appointments to minimize number of people in office at one time (phones)</li> <li>5. Change in check in/check out process to minimize congregation (front desk)</li> <li>6. Change in arrival notification process where patients call on arrival, we open door for them, check them in and take directly to the cleaned exam room (front desk)</li> <li>7. Change in layout of furniture to prevent congregating (management)</li> <li>8. Instituting previsit screening measures to detect those at high risk for COVID 19 (phones)</li> <li>9. Working with health care systems to bring in concerning patients to their facilities where we will go to see patient and also have access to proper PPE (management)</li> <li>10. Cancelling all elective and non-medically urgent emergent surgeries and development of processes for emergent surgeries (staff and providers working with health systems)</li> <li>11. Instituting new disinfection standards following each patient contact and items used within the exam lanes</li> <li>12. Instituting standard times for disinfecting all common spaces regardless of individual contact (e.g bathrooms, waiting areas, door handles)</li> <li>13. Use of regular facemask by all in office (all)</li> <li>14. Minimizing staff in office to just mean patient care needs (management)</li> <li>15. Use of telemedicine visits whenever visit cannot be safely postponed</li> <li>16. Continuous education about hand hygiene practices before and after each patient contact, before and after eating, and frequently throughout the day with soap for 20 seconds or appropriate hand sanitizer (all)</li> </ol>

	17. education to patients about importance of social distancing measures (all)
<b>Project Team</b>	Partners/Providers Management Staff (phone & front desk) Each as outlined under study population above

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

<p><b>PROJECT SUMMARY</b></p>	<p>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.</p>
<p><b>BASELINE DATA</b></p>	<p><b>BASELINE DATA</b></p> <ol style="list-style-type: none"> <li>1. Identification of medically urgent/emergent cases to bring into the office (providers)  <b>Baseline:</b> This was not previously performed. On average, our practice sees 850 patient visits weekly across 3 locations and 10 providers</li> <li>2. Identification of particularly high-risk patients to minimize need to come to office - e.g set up telemedicine visits where appropriate (providers)  <b>Baseline:</b> This was not performed, and we did not have telemedicine capabilities</li> <li>3. Rescheduling of patients and bringing in only medically urgent/emergent cases (phones)  <b>Baseline:</b> This was not performed</li> <li>4. Spacing of appointments to minimize number of people in office at one time (phones)  <b>Baseline:</b> This was not performed. Scheduling was by appointment needs, personnel, space, and efficiency</li> <li>5. Change in check in/check out process to minimize congregation (front desk)  <b>Baseline:</b> This was not done. Staff was added as needed to facilitate patient flow in and out of office</li> <li>6. Change in arrival notification process where patients call on arrival, we open door for them, check them in and take directly to the cleaned exam room (front desk)  <b>Baseline:</b> This was not done</li> <li>7. Change in layout of furniture to prevent congregating (management)  <b>Baseline:</b> This was not done. There were large central waiting rooms usually full of people</li> <li>8. Instituting pre-visit screening measures to detect those at high risk for COVID 19 (phones)  <b>Baseline:</b> this was not done.</li> <li>9. Working with health care systems to bring in concerning patients to their facilities where we will go to see patient and also have access to proper PPE (management)  <b>Baseline:</b> This was not done</li> <li>10. Cancelling all elective and non-medically urgent emergent surgeries</li> </ol>

	<p>and development of processes for emergent surgeries (staff and providers working with health systems)</p> <p><b>Baseline:</b> not done. On average our practice performs 75 surgeries per week across 4 different MD providers</p> <p>11. Instituting new disinfection standards following each patient contact and items used within the exam lanes</p> <p><b>Baseline:</b> there was cleaning of slit lamps, phoropters, and occluders, and any items that contact the patients ocular surface</p> <p>12. Instituting standard times for disinfecting all common spaces regardless of individual contact (e.g bathrooms, waiting areas, door handles)</p> <p><b>Baseline:</b> This was done only at the end of each workday.</p> <p>13. Use of regular facemask by all in office (all)</p> <p><b>Baseline:</b> this was done only during medical procedures</p> <p>14. Minimizing staff in office to just meet patient care needs (management)</p> <p><b>Baseline:</b> staffing was done on a basis of needs and efficiency</p> <p>15. Use of telemedicine visits whenever visit cannot be safely postponed</p> <p><b>Baseline:</b> we had no telemedicine capabilities</p> <p>16. Continuous education about hand hygiene practices before and after each patient contact, before and after eating, and frequently throughout the day with soap for 20 seconds or appropriate hand sanitizer(all)</p> <p><b>Baseline:</b> hand washing/sanitizing was expected before and after each patient care encounter and before and after eating.</p> <p>17. Education to patients about importance of social distancing measures (all)</p> <p><b>Baseline:</b> This was not a consideration.</p>
<p><b>FOLLOW-UP DATA</b></p>	<p><b>FOLLOW UP DATA</b></p> <p>1. Identification of medically urgent/emergent cases to bring into the office (providers)</p> <p><b>Baseline:</b> This was not previously performed. On our average our practice has 850 patient visits per week across 10 eye providers (6 OD, 4 MD) and 3 office locations</p> <p><b>Prepandemic:</b> 850 office visits/week (all types)</p> <p><b>Follow Up:</b> All providers reviewed their scheduled patient lists for all upcoming weeks through the end of the month of April. Providers were asked to determine which of these patients had problems that required emergent attention. These patients were considered "follow ups" for scheduling purposes, and on average there were X number of patients/weeks that fit these criteria. We also identified patients who were receiving intravitreal injections and on average there were X/week. We closed 2 of our office and kept open only our central office. To coordinate and minimize patients in the office at one time, we did retina injections Monday, Wednesday, and Friday, and scheduled our other visits when possible on Tuesdays and Thursdays. We had only 1-2 providers daily scheduled to see patients. Additionally, triage was performed to determine if acute emergencies (from our patients or the local</p>

EDs or urgent care centers), and those whose problems could not be addressed over the phone were brought in.

**Pandemic:** 56 emergent follow up visits/week, 65 injections/week, 29 acute emergency visits/week = 150 total visits/week

2. Identification of particularly high-risk patients to minimize need to come to office - e.g reschedule office visits vs set up telemedicine visits where appropriate (providers)

**Baseline:** This was not performed, and we did not have telemedicine capabilities

**Prepandemic:** 0 phone visits/week, 0 video visits/week

**Follow Up:** Providers were asked to review their schedules. Where patients were high risk and there was need for the patient to have interaction with their provider to monitor an ongoing or evaluate a new problem without the need to come to the office. Our optometrist providers researched the telemedicine options and together with our billing staff, created new protocols for instituting the telemedicine features within our schedule. To keep patients moving in the office, we found that it was easiest to schedule patients in the morning and perform scheduled telemedicine visits in the afternoon. One challenge that we faced in our rural community, is that many patients did not have access to video capabilities in that they lacked either a smartphone or internet connection.

**Pandemic:** 10 video visits/week, 10 phone visits/week

3. Rescheduling of patients and bringing in only medically urgent/emergent cases (phones) **Baseline:** This was not performed

**Prepandemic:** Rare additional calls to reschedule visits

**Follow Up:** Our phone staff needed to create all new templates for scheduling purposes to space patients out and accommodate the reduced volume. All patients seen at our smaller offices required their appointments to be canceled due to pandemic closure or our smaller offices. Phone staff needed to contact every patient that had been previously scheduled (850/week), to either reschedule their appointment into the future, create a telemedicine visit, or move them by location and time. This resulted in a large increase in responsibilities for our scheduling staff.

**Pandemic:** 850 calls/week were made to reschedule visits according to urgency, changes in offices, and appointment spacing

4. Spacing of appointments to minimize number of people in office at one time (phones)

**Baseline:** This was not performed. Scheduling was by appointment needs, personnel, space, and efficiency

**Prepandemic:** Depending on staffing and space providers saw between 20 and 65 patients/day

**Follow Up:** Our phone staff worked together with our management team to create new templates and then to staff them accordingly in light of our reduced staffing. Patient templates were created so that patients were seen no more frequently than every 20 minutes to prevent any congregating in any areas.

This allowed patients to be loaded directly into one exam room that was cleaned prior and then designated for their use. No more than 2 providers saw patients on any one given day.

**Pandemic:** average of 150 patients/week, average of 15 visits/provider per day, in person visits spaced by at least 20 minutes

**5. Change in check in/check out process to minimize congregation (front desk)**

**Baseline:** This was not done. Staff was added as needed to facilitate patient flow in and out of office.

**Follow Up:**

**Pandemic Check In/Out:** This was largely facilitated by changing the schedule templates to address patient spacing and by the reduction in providers.

Patients were informed that we were limiting companions in the office and we asked that if able, their companions waited in the care. Additionally, we kept one of the optical staff in house to assist with any emergent glasses repairs. When there was more than one person at the front desk, the optical personnel assisted with spacing of patients in this area. Many patients were notified at the end of the exam that we would bill them by mail and that our scheduling personnel would be contacting them by phone to schedule their return visit when necessary.

**6. Change in arrival notification process where patients call on arrival, we open door for them, check them in and take directly to the cleaned exam room (front desk)**

**Baseline:** This was not done

**Follow Up:** Patients were asked upon arrival to wait in their car until the door was opened for their entry. Patients would then enter one at a time. They were given face masks and screened for illness. A plexiglass shield was hung in front of the main desk to provide a barrier. Instead of using tech lanes, prior to provider exam lanes, we changed our workflows. Patients were taken directly to an exam lane where the entirety of their care (except diagnostic testing when required) was performed. These rooms were thoroughly cleaned between each patient encounter.

**7. Change in layout of furniture to prevent congregating (management)**

**Baseline:** This was not done. There were large central waiting rooms usually full of people

**Prepandemic:** Room for 40 people in waiting room - often full

**Follow Up:** Our furniture was spread out so that each available seat was >6 feet from the one next to this. However, our finding was that there was rarely one, and at most 2 (very rare), people ever in the waiting room on accord of the changes we instituted in our workflows.

**Pandemic:** Most commonly 0-1 person in the waiting room. Extremely rarely 2 people

8. Instituting pre-visit screening measures to detect those at high risk for COVID 19 (phones) Baseline: this was not done.

**Follow Up:** Our phone staff was provided a copy of COVID-19 screening questions to ask patients prior to scheduling them for an office visit. These questions were then implemented again at the front desk prior to having the patient come in for their eye exam. Our offices are located in 2 rural communities in upstate New York and at the time of writing the follow up there had been only 69 confirmed positive cases of COVID-19 in Ontario County and 46 confirmed positive cases in Wayne County.

**Pandemic:** Our screening questions identified only 1 person who was COVID-19 positive

9. Working with health care systems to bring in concerning patients to their facilities where we will go to see patient and also have access to proper PPE (management)

**Baseline:** This was not done. We have provided a resource to the emergency and urgent care facilities in our region whereby once they have determined that the patient is systemically/medically stable, the patient is referred to our office for evaluation and management of their ocular condition.

**Follow Up:** Throughout this period, we did not identify any COVID-19 positive/suspicious patients. Therefore, we were not required to address this problem. However, one health care system in our region was very proactive about reaching out to partner private practices in the community to help them meet PPE needs. During the period of the study, I retrieved face masks and shields from one of the health care systems twice.

10. Cancelling all elective and non-medically urgent emergent surgeries and development of processes for emergent surgeries (staff and providers working with health systems)

**Baseline:**

**Prepandemic:** On average our practice performs 75 surgeries/week

**Follow Up:** Initially elective surgeries were cancelled for 2 weeks. This was subsequently extended another 4 weeks at occurred at all of the facilities where we operate (all are health system owned). Our surgery scheduling staff came in to cancel surgeries and notify patients

**Pandemic:** 2 emergency surgeries/week. 75 surgeries/week cancelled.

11. Instituting new disinfection standards following each patient contact and items used within the exam lanes

**Baseline:** there was cleaning of slit lamps, phoropters, and occluders, and any items that contact the patients ocular surface

**Follow Up:** All staff and providers were responsible for cleaning all surfaces as above and including chairs and counter surfaces after each encounter using approved antimicrobial wipes. We changed our flagging system on the door to indicate status of room disinfection to ensure this process was completed every time instead of using the flags to indicate

12. Instituting standard times for disinfecting all common spaces regardless of individual contact (e.g bathrooms, waiting areas, door handles)

**Baseline:** This was done only at the end of each workday.

**Prepandemic:** Done at day end

**Follow Up:** This duty was assigned to various staff members/available personnel to do throughout the day.

**Pandemic:** This was done three times daily

13. Use of regular facemask by all in office (all) Baseline: this was done only during medical procedures

**Prepandemic:** Providers and assisting staff wore facemasks during in-office ophthalmic procedures only Follow Up: This was instituted for all patients/personnel within the office

**Pandemic:** Upon entry, patients were provided a disposable facemask if they did not come with their own facemask (cloth or otherwise). All other personnel were provided with masks to where while in office. Those without patient contact (e.g billing and phones) received reusable cloth facemasks.

14. Minimizing staff in office to just meet patient care needs (management)

**Baseline:** staffing was done on a basis of needs and efficiency

Prepandemic: 75 full-time employees

**Follow Up:** We dramatically reduced our work force to meet the needs of the office/patients

**Pandemic:** 16 employees each working on a part-time basis

15. Use of telemedicine visits whenever visit cannot be safely postponed

Baseline: we had no telemedicine capabilities

**Prepandemic:** no telemedicine visits

**Follow Up:** We began implementing telemedicine (phone and video) visits with the pandemic. We were limited in our ability to video conference by technology capabilities of the patients in our region. We developed a new triage system whereby we assigned a daily provider to check the incoming messages, address needs where able, evaluate by telemedicine, and only if needed, bring in a patient. Patients did seem to appreciate this service, but our ability to evaluate the eye is rather limited so patients were brought in if concerning symptoms or signs were identified for better evaluation.

**Pandemic:** Development of COVID-19 telemedicine triage. Telemedicine phone (10/week) and video (10/week) follow ups for patients needing follow up with provider

16. Continuous education about hand hygiene practices before and after each patient contact, before and after eating, and frequently throughout the day with soap for 20 seconds or appropriate hand sanitizer(all)

**Baseline:** hand washing/sanitizing was expected before and after each patient care encounter and before and after eating.

	<p><b>Follow Up:</b> Our region ended up with a hand-sanitizer shortage for a period of time and washing was required. However, a local distillery soon began making and distributing hand sand-sanitizer.</p> <p><b>Pandemic:</b> We enforced hand sanitation for all upon arrival (including patients) to the facility and s before and after each patient contact, before and after eating, and frequently throughout the day. Hand sanitizer pumps were distributed throughout the facility to promote frequent use.</p> <p>17. Education to patients about importance of social distancing measures (all) Baseline: This was not a consideration.</p> <p><b>Follow Up:</b> We serve an elderly population and the demographics of our counties also show an elderly population. However, in light of the rural setting, social distancing is more a part of normal life than in urban communities, and therefore sometimes is not an active consideration.</p> <p><b>Pandemic:</b> At each phone, telemedicine, and in-person encounter, patients were reminded of the importance of social distancing to support their health and the health of their communities. All were very receptive to the message.</p>
<p><b>PROJECT IMPACT</b></p>	<p>Overall, we were quite successful in implementing the changes we had outlined. A lot of changes were implemented rapidly and by individuals for whom the jobs weren't necessarily customary in light of the staffing changes that were required in light of the government directives. As we worked to develop and streamline new processes, we found that we each had a different experience that could contribute to the whole. We found that a daily debriefing allowed us to pool all of our experiences to create new systems, processes, and workflows to meet the changes and the challenges. We found that we all developed a greater appreciation for the efforts of our entire staff and how individual work responsibilities contribute to the whole. Teamwork became more critical as we worked to support and backstop each other. Our patients have continued to be appreciative of the care they have received. Most likely a large part of our experience and lack of significant COVID-19 exposure to date reflects the more rural communities that we serve and the lower rates of COVID-19 in these areas.</p>
<p><b>PROJECT REFLECTION</b></p>	<ul style="list-style-type: none"> <li>• <b>Do you feel that the project was worthwhile, effective?</b> Yes</li> <li>• <b>How might you have performed the project differently?</b> Not a reflection on the project, but rather on the pandemic -- it would have been a lot easier to have planned for it and then implemented the changes accordingly. Unfortunately, the way it unfolded for us was an almost overnight government shut down that affected our staffing, workflows, and processes making the implementation more of a scramble as job responsibilities were shifted.</li> </ul>

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|  | <ul style="list-style-type: none"><li>• <b>Please offer suggestions for other ophthalmologists undertaking a similar project.</b></li></ul> |
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I think we are all learning as we go and evolving with the recommendations as they change. Planning helps, but flexibility is needed too.