Resident Perspectives on COVID-19: Three Takeaways

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WE HAD NEVER FELT A GREATER LOSS OF CONtrol. As the novel coronavirus permeated our daily news, our neighborhoods, and our bodies, the world around us changed. Social distancing, shields, and masks became the new normal. Our governments and businesses shut down, and ophthalmology programs grappled, similarly, with the difficult task of balancing workplace obligations with self-protection. Our institution, like many others, swiftly moved to a siloed schedule, separating residents into clinic-based and inpatient teams to minimize potential spread of the virus. Our clinics were scaled down to urgent cases only, and all elective procedures were canceled. Modifying our schedules dampened our anxiety, but this was only a temporary respite. We feared that we would be pulled to internal medicine floors or intensive care units, as we saw happen to colleagues in larger cities. We feared we would not see our colleagues in person for the foreseeable future. We feared that what was already a grueling period of our lives would only worsen.

When our leadership announced ophthalmology residents would not be called to manage inpatients, our fear lessened, but feelings of guilt surfaced. We suddenly had time to care for ourselves; any compounded feelings of burnout vaporized. We slowly recovered the sleep debt we had accumulated 2 years into residency. We began cooking and exercising regularly. We reconnected with family and friends. After several weeks, we commiserated with our co-residents—we shared our feelings of shame that this terrifying global pandemic had restored balance to our life at a time when so many around us were suffering. They hesitantly agreed.

The full weight of the quarantine set in, and our face-to-face interactions dwindled. Although we had finally prioritized self-care, we realized that this, again, was only a temporary relief. We felt isolated. We needed the sense of purpose derived from work, and we craved the human interactions with our co-residents and attendings.

As we navigated these changes in our personal lives, our residency program also adapted to meet our new educational challenges. We took advantage of this time to hone our surgical skills using simulators. Our faculty utilized e-learning not only as a way to teach, but as a way to regularly connect. Finally, we took time to reflect on how our physical interactions with patients, as ophthalmologists, would be changed.

Owing to clinic restrictions, we began investing more time in surgical simulation. Our faculty proactively scheduled simulation training individualized to each resident at their level of training. We took advantage of vacant operating rooms as a means to preserve an authentic surgical experience. Our senior residents practiced several techniques, including iris suturing, glued intraocular lenses, iris cerclage, the lasso fixation technique, the Yamane technique, and placement of capsular tension segments. Residents earlier in training used simulation eyes to cement the motions of cataract surgery and corneal wound structuring, in addition to honing suture technique with synthetic skin models.

It is well known that simulator training positively impacts resident surgical outcomes. In 1 study, residents who had previously used a surgical simulator demonstrated shorter phacoemulsification times and used less phacoemulsification power.[1] In addition, residents with simulation exposure are reported to have significantly lower complication rates.[2] Training senior residents may also have a residual effect on junior trainees: in a study on internal medicine residents performing central venous catheter insertion, increased resident passing rates on a simulated curriculum was thought to be associated with higher rates of senior resident simulator training completion.[3] Although our surgical experience during the coronavirus pandemic was limited, our quick transition to a simulation curriculum allowed us to maintain progress in surgical training and to continue resident-faculty interaction.

For many of the residents using modified schedules, although work hours decreased, social supports thinned. Feelings of loneliness increased, as occurred in the general population.[4] Loneliness among residents is significantly associated with personal and work-related burnout[5] and, counterintuitively, may perpetuate burnout even as work hours are reduced. In a recent survey of ophthalmology program directors, 26% of respondents had dealt with resident depression, burnout, or suicide in the prior year, while only half reported an established wellness program.[6] Personal and environmental factors influence rates of burnout, but

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institution-level factors, such as program culture and faculty interest, also play an important role. Thematic analyses of medical interns have shown that depressed residents cite higher rates of lacking faculty interest and malignant program culture than their nondepressed counterparts. Conversely, nondepressed residents reported higher rates of supportive work environments compared to depressed residents. We believe similar conclusions may be drawn to increased faculty attentiveness during the pandemic, although there are no published studies on this issue.

Our program is one of several that conducts daily morning rounds, where we present educational topics or cases to the department. These sessions became more important than ever, not only as an educational outlet but as a way to continue communication within our department. Our program was also fortunate to host lectures by ophthalmologists from both national and international institutions, and ones who had recently found their schedules cleared. In addition to teaching during rounds, our supervising physicians hosted live lectures in smaller groups, which helped us stay connected to one another.

The pandemic not only changed our interactions with others but changed our approach to patient care. The closeness required by the ophthalmic examination is unfortunately highlighted by previous studies. For example, in a meta-analysis of postintravitreal infections, investigators found that *Streptococcus*, a common oropharyngeal organism, is a frequent cause of endophthalmitis following intravitreal injections.[7] The close proximity of our examination is not easily compatible with masks, face shields, or other barriers. With personal protective equipment as a pillar of the healthcare response to preventing nosocomial transmission,[8] we balanced the quality of our examination with limiting exposure to our patients and ourselves. We wore face shields as often as possible and used goggles while using the slit lamp and indirect ophthalmoscopy. We implemented best practices on how to reduce spread in ophthalmic clinics, published by a group of ophthalmologists in Hong Kong,[9] which involved careful triage of patients with symptoms suggestive of contagious disease, minimizing micro-aerosolizing procedures, and installing protective shields on slit lamps. Although there are no data to confirm whether these practices have reduced clinic staff exposure or patient cross-exposure, such practices have been widely implemented.[10] We have also seen the role of telehealth expand in ophthalmic practice, with the Centers for Medicare and Medicaid Services broadening access to telehealth resources and modifying reimbursement procedures, in addition to the Department of Health and Human Services allowing physician discretion to guide use of various online video communication platforms.[11] As projections for development of a vaccine for COVID-19 are many months away, this may be the new normal for many practices.

The pandemic shook the healthcare community and swift changes occurred in a matter of weeks, both personally and professionally. We have described 3 major takeaways from our experiences and have found that despite our initial uneasiness, we persisted in achieving our educational goals and are prepared to continue our frontline work.

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