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The Impact of COVID-19 on Ophthalmology Clinic and Surgical Volume

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Dear Editor,

The COVID-19 pandemic drastically altered how medicine is delivered around the world and variable but sometimes severe government and institutional access and care restrictions were implemented globally to reduce the potential transmission of SARS-CoV-2. In comparison with other medical specialties, ophthalmology poses a much higher risk of viral transmission due to the extended period of proximity and contact time that ophthalmologists must maintain often in close quarters and in high patient volume, non-medically filtered or ventilated office environments. In this study, we bring international perspectives from ophthalmologists across 4 different continents, to examine the impacts of COVID-19 on patient and surgical volume.
Approval for this study was obtained from the University of Nevada, Reno Institutional Review Board (IRB). A 10-question survey was distributed to ophthalmologists with a specialized survey program. The survey was opened on August 26, 2021 and closed on October 9, 2021 for a total

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period of 68 days. In our survey, 52 ophthalmologists responded from 4 different continents and 5 different countries. The ophthalmic subspecialty breakdown for our survey including 30 neuro-ophthalmology, 7 comprehensive ophthalmology, 6 retina, 3 cornea, 3 pediatric, 1 glaucoma, 1 uveitis, and 1 resident.

In total, 52 ophthalmologists responded to our survey. Respondents included ophthalmologists across the world including: Canada, United States, United Kingdom, Korea, New Zealand, and Mexico. The majority of ophthalmologists in our survey worked in public or university hospitals (56%), while the remainder worked either in group or solo practices (44%). Average age of a survey respondent was 51 years. Our survey initially found a significant decrease in ophthalmic patient volume during the first 2 months after the start of the pandemic. Patient volume tended to normalize at 6 months and 1 year after the start of the pandemic. In contrast with ophthalmic clinic volume, ophthalmic non-elective and elective surgical volume significantly decreased for the 6 months after the start of the pandemic. This level mostly recovered after one year.

The COVID-19 pandemic led to an unprecedented period where delivering ophthalmic care became extremely challenging, due to fears of SARS-CoV-2 virus transmission.[1] The results of our survey confirm the significant declines in ophthalmic clinic and surgical volume at the start of the pandemic. The decrease in non-elective and elective surgical volume remained low for longer than clinical volume, which began to return to normal levels after 6 months. For future pandemics, it will be important to consider weighing the pros and cons of various ophthalmic procedures to determine if the benefits of potential sight-restoring or maintaining procedures and treatments outweigh the increased risk of viral transmission. To aid in maintaining vision during future pandemics and in remote communities, further investments into teleophthalmology technology should be considered.[2] For example, utilization of self-operated home monitoring systems for age-related macular degeneration has been seen to increase early detection of neovascular AMD. Head-mounted technology may also be useful low-cost way to screen terrestrial populations for visual loss. The Apple Vision Pro represents another example of improvements in extended reality technology that will likely revolutionize vision screening.[3] Further research to improve the test-test reliability of this technology prior to clinical implementation will be essential.[4]

Ophthalmologists worldwide reported a significant decrease in patient volume during the first 2 months of the COVID-19 pandemic. After 6 months, ophthalmic clinic volume returned to pre-pandemic levels. In contrast, ophthalmic surgical volume for both elective and non-elective

procedures significantly decreased for the first 6 months of the pandemic, only returning to pre-pandemic levels after one year.

Declarations of Conflicts of Interest:
None declared.

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