


# The impact of COVID-19 on ophthalmology practice in Egypt



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**Background:** The emergence of coronavirus disease 2019 (COVID-19) affected medical practice all over the world including ophthalmology, especially elective procedures.

**Objectives:** Evaluation of the effect of COVID-19 on ophthalmology practice in Egypt.

**Method:** A cross-sectional study was done using an internet-based questionnaire including Egyptian ophthalmologists.

**Results:** A total of 1257 participants completed the questionnaires. A majority of the responders (79.9%) were working in private ophthalmic organisations. Out of (79.9%) responders, (57.5%) were seeing patients at the time of the survey. The majority of patients seen (32%) and operations done (21.1%) were both emergency and electives. Most of the responders (82%) did not try to use telemedicine. The majority of the participants (81.5%) thought that the lockdown had a detrimental effect on the progression and follow-up of chronic diseases (e.g. glaucoma).

**Conclusion:** COVID-19 affects elective ophthalmology practice; we need to activate the role of telemedicine according to ethics.

**Keywords:** COVID-19; lockdown; ophthalmology; ophthalmology practice; ophthalmology in Egypt.

## Introduction

Since the emergence of severe acute respiratory syndrome (SARS-CoV-2) and the mandatory lockdown all over the world with limitation of many activities to decrease transmission of the coronavirus disease 2019 (COVID-19) infection<sup>1,2</sup> medical practice has been affected; all facilities are directed to fight COVID-19 with cancellation or reduction of other medical services, especially elective ones.<sup>3</sup>

Ophthalmology is a medical discipline that is elective in most of its practice away from ocular trauma or other few emergency conditions, so many ophthalmology services are affected in the world. This was to concentrate efforts to fight COVID-19 at first and decrease infection amongst ophthalmologists as the virus could be transmitted by conjunctival secretions. Many studies proved that the virus ribonucleic acid (RNA) could be detected in tears and conjunctival secretions.<sup>4,5</sup>

In many countries, ophthalmology practice could be private or governmental, and the lockdown with fear of infection affected both. Many ophthalmologists have stopped their service either by law or self-decision.<sup>6</sup>

In some countries with well-established electronic infrastructure and clear laws for telemedicine,<sup>7</sup> some ophthalmology services remain especially for the follow-up of chronic diseases. When this service was absent, the patients were severely affected by deterioration in their conditions, especially in patients suffering from glaucoma or diabetic retinopathy.<sup>8</sup>

However, ophthalmologists are still practicing ophthalmology, but they are restricted to emergency situations with full infection control measures.<sup>9</sup> Surgical practice is restricted to those operations that threaten vision<sup>10</sup> such as trauma, acute congestive glaucoma or fresh retinal detachment with strict infection control precautions.

Telemedicine as a new technology needs special infrastructure with law regulations, so its usage was restricted<sup>11</sup>; we need to encourage it to avoid over crowdedness in hospitals and private practice. Doctors and patient awareness are both needed for telemedicine applications.<sup>12</sup>

During lockdown and lack of medical services, patients with chronic diseases who needed continuous follow-up were severely affected and deteriorated, such as glaucoma patients who needed continuous monitoring of intraocular pressure.<sup>13</sup>

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Patients with diabetic retinopathy were affected as emergent situations failed to find appropriate service because of stopping practice either by law or by self-decision and some ophthalmologists shared in guarantee services in guarantee hospitals.

## Aim of the study

To evaluate the effects of COVID-19 lockdown on ophthalmology practice in Egypt.

## Materials and methods

A cross-sectional study was conducted amongst Egyptian ophthalmologists in June 2020. The survey included ophthalmologists from both governmental and private ophthalmic organisations in Egypt. We designed an internet-based questionnaire survey (Figure 1) addressing the issue in six separate questions.

### Ethical consideration

The author confirms that ethical clearance was not required for the study. Ethical considerations were followed according to the Helsinki Declaration. A notification was in the questionnaire about accepting to participate in the questionnaire or refusing it, and this was considered as a providing consent.

## Results

The survey results are shown in Figure 1. A total of 1257 participants completed the questionnaires. A majority of the responders (79.9%) were working in private ophthalmic organisations. A total of 57.5% of the responders were seeing patients at the time of the survey. The majority of patients seen (32%) and operations done (21.1%) were both emergency and electives.

Most of the responders (82%) did not try to use telemedicine. The majority of the participants (81.5%) thought that the lockdown had a detrimental effect on the progression and follow-up of chronic diseases (e.g. glaucoma).

## Discussion

However, ophthalmology practice is affected but some still examine patients either in governmental or private practice; we think that examining patients in governmental practice, especially emergency cases was enforced by regulations and laws. This occurred in many countries.

Some ophthalmologists limited their practice to emergencies only, but others still examined elective patients with full infection control measures, including personal protective equipment (PPE) to avoid COVID-19 infection.<sup>9</sup> A large percentage of ophthalmologists limited their surgical practice to emergency situations that threaten vision only, such as trauma, fresh retinal detachment or acute congestive glaucoma. Elective eye problems or those who need close or frequent follow-up were severely affected.<sup>10</sup>

Telemedicine limitations such as lack of infrastructure, experience, patient awareness or doctor experience could explain the lack of its use in practice either before or during the lockdown.

Patients who require frequent follow-up, such with glaucoma or diabetic retinopathy, were severely affected with lack of self-examining tools and technologies.

According to the questionnaire, we should develop and enforce new technologies such as telemedicine and increase the awareness of this technology amongst health providers and the patients.<sup>11,12,13</sup>

## Conclusion

Ophthalmology practice was affected in Egypt during the COVID-19 pandemic and the need for telemedicine emerged as a possible solution. Patients with elective situations were severely affected, but those with emergent problems were still served. We are in need to apply new technologies such as telemedicine with awareness to enforce ophthalmology practice during pandemic or urgent situations.

1. Please specify the type of your ophthalmic organisation.	Governmental	Private		
	253 (20.1)	1004 (79.9)	-	-
2. Are you currently examining patients?	Yes	No	-	-
	723 (57.5)	534 (42.5)	-	-
3. What kind of patients do you currently examine?	Emergency only	Elective only	Both of them	None of them
	270 (21.5)	50 (4)	403 (32)	534 (42.5)
4. What kind of operations do you currently do?	Emergency only	Elective only	Both of them	None of them
	250 (19.9)	69 (5.5)	266 (21.1)	672 (53.5)
5. Have you tried using telemedicine?	Yes	No	-	-
	226 (18)	1031 (82)	-	-
6. What was the effect of lockdown on the progression of chronic diseases (e.g. glaucoma)?	Deteriorated	Improved	Did not change	-
	1024 (81.5)	9 (0.7)	224 (17.8)	-

Values are n (%).

FIGURE 1: Showing the internet-based questionnaire and its results.

## Limitations

Although there were a large number of participants for the questionnaire, we still need more to explore more data. The specified answers in the questionnaire limited the detailed information obtained from the participants.

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### Competing interests

The author has declared that no competing interests exists.

### Author's contributions

I declare that I am the sole author of this research article.

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### Data availability statement

Data sharing is not applicable to this article.

### Disclaimer

The views and opinions expressed in this article are those of the author and do not necessarily reflect the official policy or position of any affiliated agency of the author.

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