Thai J Ophthalmol 2022;36(2):59-67.

Original Article/นิพนธ์ต้นฉบับ

A Survey of Ophthalmological Practices in Thailand During the First Wave of the Coronavirus Disease 2019 Pandemic

แบบสอบถามเวชปฏิบัติทางจักษุวิทยาในประเทศไทยในช่วงการระบาดของโรคโควิด-19

Parin Jirawongsy, MD
ปริญญ์ จิรวงศ์ศรี, พ.บ.

Pitipol Choopong, MD
ปิติพล ชูพงศ์, พ.บ.

Department of Ophthalmology, Siriraj Hospital, Bangkok, Thailand
ภาควิชาจักษุวิทยา คณะแพทยศาสตร์ศิริราชพยาบาล มหาวิทยาลัยมหิดล

Abstract

Purpose: To explore changes in ophthalmological practices during the first wave of the coronavirus disease 2019 (COVID-19) pandemic in Thailand.

Design: Descriptive Study

Methods: An internet-based survey was distributed to Thai ophthalmologists in June 2020. The survey consisted of 28 questions, focusing on ophthalmological practices before, during, and after the first COVID-19 pandemic wave in Thailand.

Results: 215 responses were obtained, representing 15.59% of the 1379 ophthalmologists in the RCOPT database. The mean age of the respondents was 40 ± 8 years, and most were women (72.1%). 90.7% of the respondents were aware of the RCOPT recommendations on ophthalmological practices related to the COVID epidemic. Most ophthalmology clinics had implemented COVID-19 prevention measures, such as limiting the number of patients, using a slit-lamp protective barrier (99.1%), wearing a surgical mask (96.7%), and implementing social distancing (98.6%). Only 42.7% of the respondents sanitized their slit-lamp biomicroscopes after each patient visit. A total of 42.9% responded that they cleaned their hands after examining each patient.

Conclusions: Most Thai ophthalmologists took action to limit COVID-19 transmission in outpatient settings. The measures included using a slit-lamp protective barrier, wearing a surgical mask, and implementing social distancing. These practices aligned with the recommendations of the RCOPT.

Keywords: Ophthalmology, COVID-19, Epidemiology

(แสดงข้อมูลเป็นค่าเฉลี่ย ส่วนเบี่ยงเบนมาตรฐาน)

บทคัดย่อ:

วัตถุประสงค์: เพื่อสำรวจความเปลี่ยนแปลงในการปฏิบัติงานทางจักษุวิทยาในช่วงการระบาดระลอกแรกของโรคโควิด-19 ในประเทศไทย

วัสดุและวิธีการ: ทำการศึกษาโดยการส่งแบบสอบถามออนไลน์ เรื่องการปฏิบัติงานทางจักษุวิทยา ช่วงก่อน ระหว่าง และหลังการระบาดของโรคโควิด-19 ระลอกแรกในประเทศไทย จำนวน 28 คำถาม ให้จักษุแพทย์ ในเดือนมิถุนายน พ.ศ. 2563

ผลการศึกษา: จักษุแพทย์ในฐานข้อมูลของราชวิทยาลัยจักษุแพทย์แห่งประเทศไทย จำนวน 215 คน จากจำนวน ทั้งหมด 1,379 คน ตอบแบบสอบถามคิดเป็นร้อยละ 15.59 ร้อยละ 72.1 เป็นเพศหญิง มีอายุเฉลี่ย 40 ± 8 ปี และกว่าร้อยละ 90 ทราบว่า ราชวิทยาลัยจักษุแพทย์ฯได้ออกประกาศข้อแนะนำการปฏิบัติงานทางจักษุวิทยาในช่วงการระบาดของโรคโควิด-19 คลินิกจักษุวิทยาส่วนใหญ่ มีมาตรการป้องกันการแพร่ระบาดของโรคโควิด-19 ได้แก่ การจำกัดจำนวนผู้ใช้บริการต่อวัน การติดตั้งแผ่นกั้นที่กล้องจุลทรรศน์ตรวจตาชนิดลำแสงแคบ (slit-lamp barrier) (ร้อยละ 99.1) การใส่หน้ากากอนามัย (ร้อยละ 96.7) และมาตรการ social distancing (ร้อยละ 98.6) อย่างไรก็ตามมีจักษุแพทย์เพียงร้อยละ 42.7 ที่ทำความสะอาดกล้องจุลทรรศน์ตรวจตาชนิดลำแสงแคบ (slit-lamp biomicroscope) หลังการตรวจผู้ป่วยทุกคน แพทย์ที่ล้างมือหลังตรวจผู้ป่วยทุกคน มีสัดส่วนเป็นร้อยละ 42.9

สรุป: จักษุแพทย์เกือบทั้งหมดมีมาตรการในการป้องกันการติดต่อโรคโควิด-19 ที่ดีได้แก่ การติดตั้ง slit-lamp barrier การใส่หน้ากากอนามัย และมาตรการ social distancing โดยมาตรการเหล่านี้สอดคล้องกับข้อแนะนำของราชวิทยาลัยจักษุแพทย์ฯ

(Data expresses as mean ± SD)

Background

In the first wave of the COVID-19 pandemic in Thailand, in early 2020, the Thai government response was declaring a state of emergency[1] and imposing curfews and a lockdown of the Bangkok metropolitan region. Healthcare institutions and professional organizations also introduced new protocols. For instance, the Royal College of Ophthalmologists of Thailand (RCOPT) issued recommendations for managing and seeing patients during the pandemic.[2]

The recommendations were as follows:

1. encourage the use of slit-lamp barriers
2. suspend the use of air-puff tonometers
3. avoid using immersion A-scan biometry
4. reduce the number of patients in outpatient clinics.

As a result of national efforts to mitigate the spread of the virus, the average number of new cases plummeted. It went from a peak exceeding 100 per day in April 2020 to less than 10 per day in the following months.

Surveys on ophthalmological practices during the pandemic have been conducted in several countries,[6,7] but data for Thailand are lacking. The present survey explored the ophthalmological practices and measures taken to prevent disease transmission during the first wave of the COVID-19 pandemic in Thailand. It also investigated how Thai ophthalmologists adapted their practices after the first wave of the pandemic.

Methods

This survey was conducted using the Google Form platform (Google LLC, Mountain View, CA, USA) between June and July 2020. A web link to the survey was distributed to Thai ophthalmologists in mid-June 2020 via the official RCOPT account for the mobile messenger application LINE (Naver Company, Tokyo, Japan). Emails were also sent to Thai ophthalmologists recorded in the RCOPT database. The survey consisted of 28 questions. (Supplement 1) They focused on ophthalmological practices before, during, and after the first COVID-19 pandemic wave in Thailand (March–May 2020). The respondents' data were anonymized at the time of entry and analysis. Before this research began, its protocol was approved by the Siriraj Institutional Review Board (approval number Si 516/2020).

Results

After eliminating duplicate data, 215 responses were obtained, representing 15.59% of the 1379 ophthalmologists in the RCOPT database. The mean age of the respondents was 40 ± 8 years, and most were women (72.1%). The 3 most prevalent subspecialties were general ophthalmologists (36.7%), vitreoretinal specialists (23.3%), and glaucoma specialists (15.3%). A total of 37.2% of the respondents had 0 to 5 years of work experience. Most worked in tertiary government hospitals (58.1%) and the Bangkok metropolitan area (45.1%; Table 1). In addition, the RCOPT recommendations on ophthalmological practices related to the COVID epidemic were known by 195 (90.7%).

Most ophthalmology services, both private and public (91.6%), had implemented COVID-19 prevention measures, such as limiting the number of patients. A total of 96.7% of ophthalmologists always wear surgical masks while seeing patients. However,

Table 1 Demographic Data

	n = 215 (%)
Sex	
Female	155 (72.1)
Male	60 (27.9)
Mean Age (years) ± Standard Deviation	**40 ± 8** –
Specialty*	
General ophthalmology	79 (36.7)
Retina	50 (23.3)
Glaucoma	33 (15.3)
Uveitis	1 9 (8.8)
Pediatrics	9 (4.2)
Oculoplastic	8 (3.7)
Other	33 (14.2)
Work Experience, years	
0–5	80 (37.2)
6–10	58 (27)
11–20	51 (23.7)
> 20	26 (12.1)
Workplace Setting	
Tertiary government hospital	
With residency training	46 (21.4)
With medical student program	53 (24.7)
With no training/program	26 (12.1)
Secondary government hospital	33 (15.3)
Primary government hospital	2 (0.9)
Private hospital	42 (19.5)
Private clinic	13 (6)
Workplace Region	
Bangkok Metropolitan	97 (45.1)
Central Thailand	20 (9.3)
Northern Thailand	17 (7.9)
Northeastern Thailand	28 (13)
Eastern Thailand	14 (6.5)
Western Thailand	3 (1.4)
Southern Thailand	36 (16.7)

*An ophthalmologist may have more than 1 subspecialty, eg, a retina and uveitis specialist

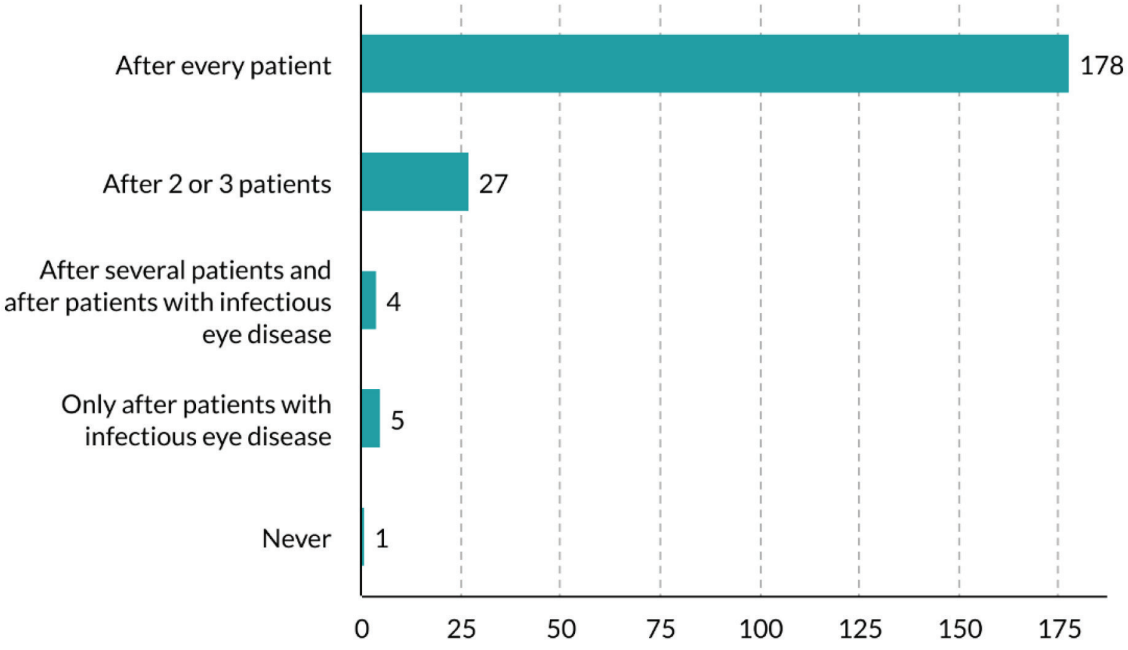

Figure 1 Frequency of slit-lamp disinfection

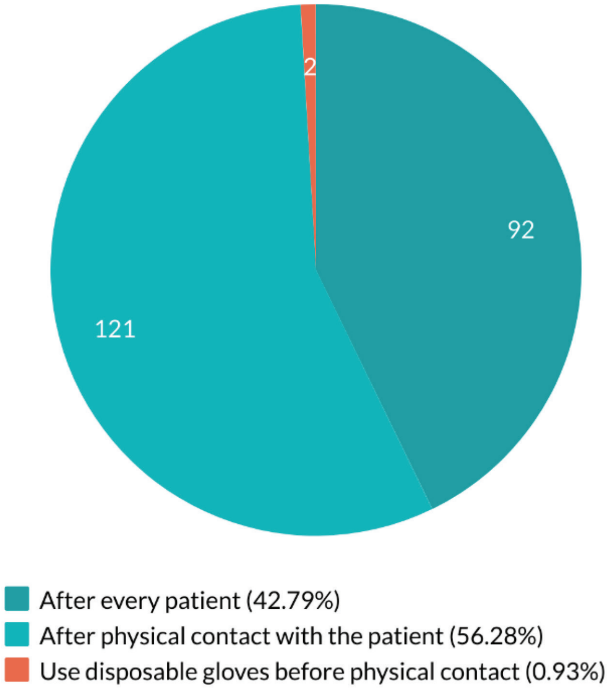

Figure 2 Frequency of hand washing

only 42.7% of the respondents sanitized their slit-lamp biomicroscopes after each patient visit (Fig. 1). A total of 42.9% responded that they cleaned their hands after examining each patient (Fig. 2; Table 2).

Table 2 Outpatient Clinic Practices

Measures Employed	n = 215 (%)
Reduce the number of patients seen	197 (91.6)
Patient-screening measures	
Body temperature check	198 (92.1)
Risk and symptoms inquiry	201 (93.5)
No screening	3 (1.4)
Social distancing measure	212 (98.6)
Suspend usage of air-puff tonometer	160 (74.4)
Use of surgical mask by an ophthalmologist (self)	
Always	208 (96.7)
75% of the time	4 (1.9)
Half the time	3 (1.4)
25% of the time	0 (0)
Never	0 (0)
Use of face mask by patient	
Every patient	178 (82.8)
Three-quarters of the patients	27 (12.6)
Half the patients	4 (1.9)
One-quarter of the patients	3 (1.4)
None of the patients	3 (1.4)
Use of slit-lamp barrier	213 (99.1)
Disinfecting of slit-lamp	
After every patient	178 (82.8)
After 2 or 3 patients	27 (12.6)
After several patients and after patients with infectious eye diseases	4 (1.9)
Only after patients with infectious eye diseases	5 (2.3)
Never	1 (0.5)
Washing hands/use of alcohol hand rub	
After every patient	92 42.7
After physical contact with a patient	121 56.3
Use disposable gloves before physical contact	2 0.9

There were reductions in the mean number of working hours and patients serviced before the pandemic compared to time during the pandemic. The average working hours dropped from 19.2 to 15.5 per week. The average number of patients seen weekly declined from 91.5 to 45.2 (Table 3).

Table 3 Working Hours and Patients Seen

	n = 215 (%)	
	Prior to the Pandemic	**During the Pandemic**
Working Hours (per week)		
2–10	57 (26.5)	106 (49.3)
11–20	90 (41.8)	59 (27.4)
21–30	25 (11.6)	16 (7.4)
31–40	23 (10.7)	20 (9.3)
41–50	17 (7.9)	11 (5.1)
> 50	3 (1.4)	3 (1.4)
Average	19.2 hrs./wk.	15.5 hrs./wk.
Patients Seen (per week)		
0–50	31 (12.4)	143 (66.5)
51–100	110 (51.1)	64 (29.7)
101–150	50 (23.2)	4 (1.9)
151–200	20 (9.3)	1 (0.4)
> 200	4 (1.9)	3 (1.4)
Average	91.5 patients/week	45.2 patients/week

A total of 52.6% of Thai ophthalmologists discontinued elective surgery, opting only for emergency cases. Only 20% of the respondents routinely screened patients undergoing ocular surgeries with nasopharyngeal swab tests (Table 4).

After the first wave of the COVID-19 pandemic in Thailand, 75.8% of Thai ophthalmologists used screening questionnaires to stratify the risk of COVID-19 infection in patients prior to ocular procedures. Only 3.3% of the ophthalmologists required the patients to undergo a nasopharyngeal swab test for SARS-CoV-2 before surgery (Table 5), as opposed to 20% during the first outbreak.

Table 4 Ocular Surgery Under Local Anesthesia

	n = 215 (%)
Surgery Done During COVID-19 Pandemic Lockdown	
No surgery performed	63 (29.3)
Only emergency cases	113 (52.6)
Urgent and emergency cases	9 (4.2)
Elective, urgent, and emergency cases	30 (14)
COVID-19 screening measures prior to ocular surgery under local anesthesia	
No screening measures	7 (3.3)
Body temperature check, COVID-19 risk factors questionnaire	164 (76.3)
Nasopharyngeal swab for SARS-CoV-2 for every patient prior to surgery	43 (20)
Nasopharyngeal swab for SARS-CoV-2 for high-risk patients (i.e., fever, contact history)	46 (21.4)

Table 5 Post-Crisis Practices

	n = 215 (%)
Changes in patient screening prior to ocular surgery under local anesthesia	
No change in practices	42 (19.5)
Use screening questionnaire to identify the COVID-19 risk	163 (75.8)
Nasopharyngeal swab for SARS-CoV-2 for every patient prior to surgery	7 (3.3)
Use of airborne PPE	1 (0.5)
Have patients wear a surgical mask	1 (0.5)
Retire from operating	1 (0.5)
Resumption of ophthalmology practice	
Had been practicing normally	22 (10.2)
Resumed in May 2020	70 (32.6)
Resumed in June 2020	105 (48.8)
Plan to resume after June 2020	4 (1.9)
Waiting for instructions from authorities	14 (6.5)

Discussion

Most Thai ophthalmologists took action to limit COVID-19 transmission in outpatient settings. The measures included using a slit-lamp protective barrier (99.1%), wearing a surgical mask (96.7%), and implementing social distancing (98.6%). These practices aligned with the recommendations of the RCOPT.

Nevertheless, some aspects need to be addressed. For example, hand washing after examining each

patient was performed by less than half the respondents and slit-lamp disinfection was not done regularly by 17.2%. Reinforcing the need to observe hygiene practices will likely reduce the risk of ophthalmologists and their patients contracting COVID-19.

The percentage of doctors requiring their patients to be tested for COVID-19 before surgery decreased from 20% to 3.3%. This could be due to the low infection rate among healthcare workers. As of April 13th, 2020, 102 healthcare providers had contracted COVID-198. Of those, only 10% were doctors, primarily emergency physicians and anesthesiologists. No ophthalmologists were infected.

A survey in India related to ocular surgery found similar results to our investigation.6 Most ophthalmologists in our study opted to perform surgery only in emergency or urgent cases. Some surgeons continued to carry out operations on elective cases during the COVID-19 pandemic. It is speculated that those surgeons practiced in areas where COVID-19 had not yet been epidemic when this survey was carried out.

The ophthalmological practices related to COVID-19 recommended by the RCOPT achieved a good reach, with 90.7% of the respondents aware of the guidelines. This finding indicates that future announcements and practice guidelines can be easily transmitted to Thai ophthalmologists via the RCOPT channels. However, this survey has a low response rate of 15.59%; thus, it may not reflect the entirety of Thai ophthalmology practice.

These survey results were presented at the 44th RCOPT Academic Conference in November 2020. A follow-up survey is underway to evaluate the dissemination of prevention measures.

References

1. Thai Government. State of Emergency Declaration. Royal Thai Government Gazette; 2020.
2. RCOPT. Recommendations for Ophthalmologic Medical Personnel on Outpatient and Procedural Patient Practice During COVID-19 Pandemic 2020 [Available from: http://www.rcopt.org/?r=arart010/detail&id=1842.]
3. World Health Organization. WHO statement on novel coronavirus in Thailand 2020 [Available from: https://www.who.int/news/item/13-01-2020-who-statement-on-novel-coronavirus-in-thailand.]
4. Leslie RA, Zhou SS, Macinga DR. Inactivation of SARS-CoV-2 by commercially available alcohol-based hand sanitizers. Am J Infect Control 2021;49:401–2.
5. Lee A, Sridhar S, Leung CKS, Ni MY. Patient Masking and Slit-Lamp Breath Shield for Prevention of Droplet Transmission During Slit-Lamp Examination. Asia Pac J Ophthalmol (Phila) 2020;10:121–3.
6. Nair AG, Gandhi RA, Natarajan S. Effect of COVID-19 related lockdown on ophthalmic practice and patient care in India: Results of a survey. Indian J Ophthalmol 2020;68:725–30.
7. European Society of Cataract and Refractive Surgery. ESCRS Survey on COVID-19 Practice Pattern of Ophthalmologists. [Available from: https://www.eurotimes.org/wp-content/uploads/2020/06/ET25-6_Covid19-Survey.pdf]
8. COVID-19 Situation Update of April 13th, 2020 [Available from: https://pr.moph.go.th/?url=pr/detail/all/06/141274/]

Footnotes and Financial Disclosures

Originally receive: 2/7/2022
Final revision: 3/1/2023
Accepted: 28/1/2023

Address correspondence and reprint requests to: Pitipol Choopong, MD, Department of Ophthalmology, Siriraj Hospital, 2 Wang Lang Road, Bangkok Noi, Bangkok 10700 Thailand.; Email: pitipol.cho@mahidol.edu

Financial Disclosure(s)
The authors have no conflicts of interest to declare.