



Suggested Clinical Protocols for Preventing and Controlling COVID-19 in Eye Hospitals

Drafted by **AIER Clinical Medical Quality Control Department**

Translated by **AIER Global Strategy and Business Department**

Version 4 (as of April 20th, 2020)

DISCLAIMER

All efforts have been made to ensure the clinical advices for COVID-19 prevention and control provided below is accurate and reliable. However, we do not assume any responsibility or obligation or give any representation or warranty for the accuracy, authenticity, completeness, legality or reliability of the information contained and shared in the manual, nor will we be liable for any potential use or application of such information by anyone.

Notes

Watching and considering outbreak and epidemics of COVID-19, Aier Eye Hospital Group will update this Suggested Clinical Protocols timely and keep you in the loop of the latest sharing.

Hereby, we would like to highlight the updates among different versions.

V5.0 Updates (as of 23 Apr, 2020)

1. Reception and Preliminary Screening on **page 5**.

V4.0 Updates (as of 20 Apr, 2020)

1. Generals on **page 3**;
2. Suspended checkup and treatment items on **page 3**;
3. Emergency surgery items for service on **page 4**;
4. Set-ups of departments and office on **page 6**;
5. Protocol for IPD on **page 7**;
6. Protocol for OR on **page 7**;
and
7. Resumption of clinical work on **page 8 and 9**.

V3.0 Updates (as of 10 Apr, 2020)

1. Attentions of intravitreal injection on **page 4**;
2. COVID-19 PCR test result as precondition for emergency surgery on **page 4**;
3. Procedure for mask takeoff in clinic area on **page 7**;
4. Updated with guideline for intravitreal injection procedure on **page 9 and 10**;
5. Change contact lens into glasses for infection risk reduction on **page 11**;
and
6. Safeguard procedures and levels targeting medical personnel on **page 14**.

V2.0 Updates (as of 3 Apr, 2020)

1. Attentions of intravitreal injection on **page 4**;
2. Updated with guideline for intravitreal injection procedure on **page 9 and 10**;
and
3. Safeguard procedures and levels targeting medical personnel on **page 14**.

For more information, please contact Joyo Zhao via zhaoyao@aierchina.com.

A. General

1. Set up a COVID-19 prevention and control unit at top administration.
2. OPD visit control: asking for appointments of non-urgent patients.
3. Provide info. on website or platform: daily limit of OPD appointments and visit, the identification of emergent and non-emergent eye conditions, guidance for treating non-urgent problems, personal protection before hospital visit, guidance of chronic eye diseases during the epidemic
4. Activate "Internet hospital" for online-consultation and telemedicine
5. Suspend certain non-urgent care and treatment as well as scheduled surgery.

B. Business

In order to avoid cross infection and prevent COVID-19 spreading, hospital shall suspend certain non-urgent eye checkup and treatment as well as scheduled surgery. Only emergency surgery and treatment is offered.

1. Suspended Checkup and Treatment Items

No.	Item Name	Remarks
1	Irrigation of Conjunctival Sac	Except for Requirement of Emergency surgery
2	Lacrimal Syringing	
3	Meibomian glands massage	
4	Goldmann Applanation Tonometry (inc. 24 hours IOP Measuring)	Tonopen and Icare are recommended to replace Goldmann . NCT if in use, should be placed in a well-ventilated area and interval between each check-up be prolonged.
5	Conjunctival Concretion Removal	
6	Dry eye checkup and treatment	
7	Subconjunctival injection	Except for Emergency
8	Anterior Chamber Paracentesis	Except for Emergency
9	Suture Removal in OPD	Except for Emergency
10	Laser Treatment	Except for acute glaucoma and retinal tear. Contact lens shall be disinfected accordingly
11	UBM	
12	Confocal Microscopy	
13	Electrophysiological examination (ERG, ERG, VEP, EOG)	
14	A-Scan Ocular Ultrasound	
15	Fundus angiography	
16	3-Mirror Lens, laser mirrors	Instruments requiring direct contact with patient shall be used cautiously. Disinfection shall be done: Liquid soap shall be used to wash-Rinse it under running water for 3 to 5 minutes-Rub it by cotton balls with 75% alcohol or 3% hydrogen peroxide- Dry up.

2. Emergency Surgery Items for Service

No.	Emergency Surgery
1	Open Globe Injury
2	Acute glaucoma (with condition that medication fails to control)
3	Perforation of Cornea
4	Infectious endophthalmitis
5	Macula-on rhegmatogenous retinal detachment

- Since intubation will increase the risk of virus transmission, the use of intubator or general anesthesia shall be avoided.

3. Preconditions for Emergency Surgery

- COVID-19 Inquiry Form for Inpatient or Surgical Patient.
Please see [Appendix 1 COVID-19 Inquiry Form for Inpatient or Surgical Patient](#).
- Lung CT scan results of recent 3 days.
- Blood routine and SaO₂. IgM and IgG testing if necessary.
- COVID-19 PCR test result of recent 3 days shall be provided to hospital in severe epidemic area.

4. Intravitreal Injection

- Intravitreal injection shall be postponed in hospitals located at areas with great epidemic severity, patients shall be asked to stay home and monitor their vision with Amsler Grid daily.
- while in non-severe places, intravitreal injection shall be carried out with extra cautions.
Please see [Appendix 2 Guideline for Intravitreal Injection Procedure During COVID-19 Epidemics](#)

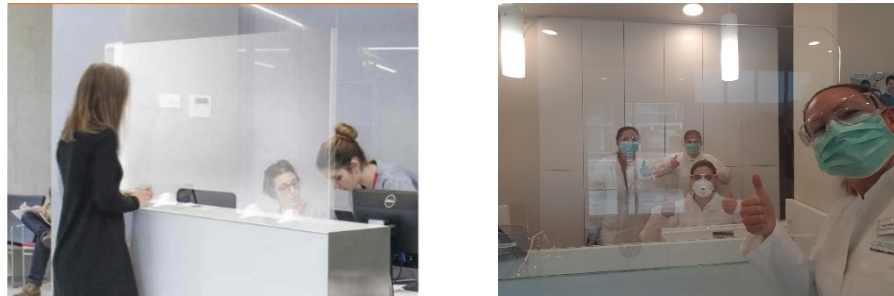
C. Process for hospital in regular service

1. Reception and Preliminary Screening

A 2-channel entry shall be set up at the main entrance, one exclusively for patients, the other for staff only. A primary triage is set outside both entrance and masks shall be provided for those who visit without it. Procedures of temperature taking, inquiry of exposure history in areas with known outbreak or contact with people coming back from epidemic areas are done, personal information, way of contact and place of residence are kept in record. Notification and commitment letter on COVID-19 prevention and control is handed out to patient for thorough reading and signature. See [Appendix 3 Notification and commitment letter on COVID-19 prevention and control](#). An isolation zone/room is set up near the triage, identified or suspicious COVID-19 cases are put into immediate quarantine before transferring to COVID-19 designated hospitals.



We suggest that hospitals/clinics set up the primary triage outside the institute entrance. For those having no condition to set up the triage and screening outside, it is recommended to add a baffle at your reception/triage table that is set inside.



Example set up in Clinica Baviera S.A

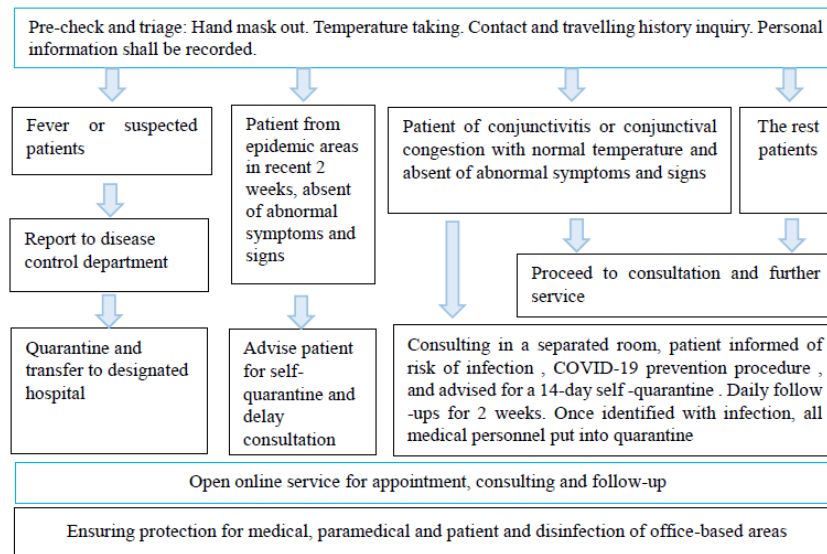
2. Handling Process on categorized patients

- 1) Febrile and suspected cases
Patient with fever or suspected of infection identified at the triage shall be quarantined, reported to the prevention and control unit and must contact designated hospital to transfer for treatment. Terminal disinfection of all patient-contaminated areas and objects shall be executed immediately according to Technical Standard For Disinfection of Medical Institutions.
- 2) Patients having contact with COVID-19 patients or travel history of epidemic area though absent of any abnormal symptoms and signs shall be delayed for medical consultation and advised to be quarantined.
- 3) Patient with red eye or diagnosed condition of conjunctivitis
The consultation room closest to the primary triage shall be set-up for patients of red eye exclusively. Patient shall be informed of risk of infection, COVID-19 prevention procedure, and advised for a 14-day self-quarantine. Daily follow-ups shall be conducted from hospitals for the next 2 weeks. Once identified with infection, all medical personnel having been contacted with him/her shall be quarantined.
- 4) Patients excluded of the above conditions
Those patients with normal body temperature and are negative of exposure history in epidemic area or abnormal symptoms such as cough, headache and diarrhea can be guided for consultation and further service.

3. Patient Arrangement in OPD

A secondary triage table at OPD shall be prepared at the waiting area to ensure orderly operation. Marked distance of 1m between each patient is required at the waiting lounge. Spacious consulting rooms with windows are prioritized for service. 1 patient at a time in the room is allowed to avoid crowding. Under circumstances of the old, the weak, the disabled, the pregnant and the children, not more than 1 companion shall enter. Both doctors and patients should wear masks.

D. OPD Flowchart

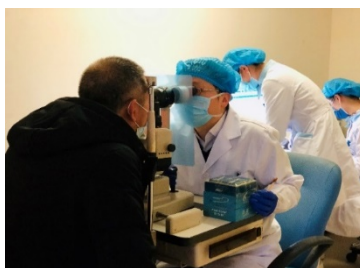


E. Set-ups of Departments and Office

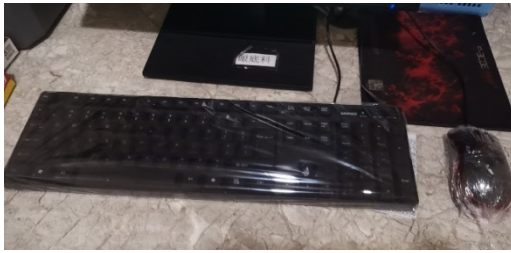
1. Consultation room and imaging department

Slit lamp/imaging devices and office table shall be placed properly for access. Doctor's seat is suggested to be in upwind location. Slit lamp/image devices can be placed near entrance if necessary. Patient shall be instructed in advance not to talk during examination. Doctor-patients distance shall be no less than 1m during consultation.

Window shall be opened for ventilation at least twice per day and each time lasts more than 30 minutes. Protective shields should be installed on slit lamps and equipment requiring close doctor-patient contact. Suspend the use of UBM, Confocal Microscopy, ERG, VEP, Optomap, 3-Mirror Lens etc., in non-urgent condition. Tonopen and Icare are recommended to replace Goldmann. NCT if in use, should be placed in a well-ventilated area and interval between each check-up be prolonged. Use 75% alcohol to disinfect all equipment surfaces: slit lamp, auto-refractor and imaging devices etc.



Suggested Protections



Preservation Covers for Keyboard, Mouse etc. It shall be changed on daily basis

2. Cleaning and Disinfection Requirements for different areas.

Please see [Appendix 4 Guideline for Eye Hospital Environment Cleaning and Disinfection against COVID-19 Epidemics.3.](#)

F. Protocol During Treatment

Actions must be taken when any treatment (intravenous infusion and topical application of eye drop) is being done in OPD treatment room:

- 1) Hands hygiene must be strictly implemented before and after all operations (put on latex gloves if necessary). Disposal surgical mask/N95 mask and protective cap shall be put on. Goggles and face shield could be put on if necessary. Standard operational procedures shall be strictly enforced so as to avoid occupational exposure.
- 2) Reusable instruments shall be firstly disinfected in 75% alcohol for 30 minutes after each usage, and proceed with cleaning, disinfection, drying, packaging and sterilization.
- 3) Bed sheet in treatment room shall be changed on a daily basis. Disposable pillow towel shall be used and changed for each patient.

G. Protocol for IPD

1. A secondary triage table shall be set in IPD.
2. Patient's temperature and query of history shall be checked 4 time a day.
3. One ward for one patient only and no visit is allowed among patients.
4. Daily disinfection of rooms shall be implemented as regular practice.
5. Inquiry Form for Inpatient or Surgical Patient: As commanded by local governments, chest CT, NAT test, blood routine, SaO₂, antibody test shall be done. Specialized hospitals do not operate on patients suspected of COVID-19 infection.



H. Protocol for OR

All preoperative examinations and COVID-19 screening results should be confirmed prior to surgery. Patients with positive PCR test will be referred to a qualified hospital.

- 1) General anesthesia should be avoided.
- 2) One OR is used at a time. Sufficient time interval should be left between the two operations.
- 3) Laminar flow shall be turned off if more than one OR is being used at the same time.



Protections in the area of non severe outbreak



Protections in the area of severe outbreak



I. On-line Reservation and Consultation

Hospitals shall provide on-line consultation, re-consultation and appointment if possible.

J. Prevention Guideline for Medical Personnel

- 1) All medical personnel shall put on disposable cap, surgical mask/N95 mask/medical mask and latex gloves. Disposable mask shall be changed with new one every 4 consecutive hours and shall be changed immediately when contaminated or wet. Goggles are suggested as well. If in shortage, other types of glasses can be used such as eye mask for dry eye, swimming glasses etc. All slit lamps shall be put with a baffle (eg. X-ray film). 75% alcohol shall be applied on equipments such as slit lamp, auto-refractor and imaging devices etc. esp. possible contact spots with patients after each checkup.

Please see [**Appendix 5 COVID-19 Prevention Guideline for Medical Personnel at Different Positions.**](#)

- 2) Any medical personnel who contacted with people from epidemic area in the recent 2 weeks have symptoms of fever, cough, headache, diarrhea, red eye etc. shall be self-quarantined not less than 14 days and resort to hospital if necessary. Those, who contacted people absent of signs of infection but from the epidemic area, without abnormal physical signs or discomforts, can provide regular medical practice but shall be monitored closely and taken temperature on a daily basis.
- 3) All medical personnel shall wear mask in hospital.
- 4) Procedure for mask takeoff in clinic area: hand washing-Take off mask-hand washing-Put on new mask.

K. Disinfection

Clinic object surface, floor and air disinfection on a daily basis:

- 1) 1000-2000mg/L chlorine-based disinfectant or peracetic acid disinfectant shall be used on object surface and floor. Keep a record of daily disinfection.
- 2) Open clinic window for ventilation twice per day, and 30 minutes above per time. Turn on UV room disinfection device once or twice per day and no less than 2 hours per time for air disinfection. Keep a record of daily disinfection.

Please see *Appendix 6 Disinfection Process for Eye Hospital during COVID-19 Epidemics.*

L. Emergency

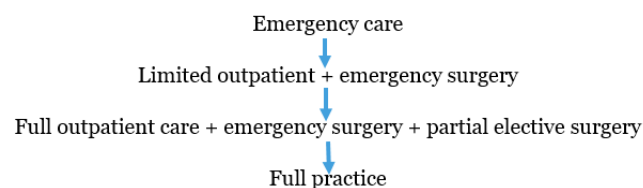
Any transmission of droplet, body fluid, eye secretion from high risk people to eyes of medical personnel shall be reported to top administration. Self-quarantine shall be conducted with daily monitoring. Immediate eye wash with large amount of saline or aciclovir eye drops (no evidence based) is suggested.

M. Resumption of Clinical Work

Preparation before re-opening:

- 1) Management objectives: scientific prevention and control, orderly diagnosis and treatment, ensuring safety of staff and patients, meeting patients' medical needs.
- 2) Issuing guidelines for clinical re-opening.
- 3) Setting up a COVID-19 prevention and control unit at top administration, to formulate hospital's prevention and control procedures and emergency protocols under governmental command.
- 4) Preparation of PPE: Aier assists all our operating hospitals for PPE resources in no less than 8 weeks; The hospital unified management of protective equipment, according to different positions as determined by the level of protection.
- 5) Training of all staff for COVID-19 protocol and protection.
- 6) Submit an re-opening application to the local health authority.

Carry out the following service and care in an orderly manner:



Appendix 1

COVID-19 Inquiry Form for Inpatient or Surgical Patient.

To avoid cross infection during COVID-19 outbreak period, patient shall be inquired of the following questions :

- ☐1. Whereabouts in recent 14 days: Travel, stopover or residence history in epidemic areas with continuous spreading of indigenous cases.
- ☐2. Whether contact with patient with fever or respiratory symptoms from areas with continuous spreading of indigenous cases.
- ☐3. Any relevance to clustering cases of COVID-19 or epidemiological association with infected person.
- ☐4. Patients with one or more of the above conditions and with respiratory symptoms or other possible symptoms associated with COVID-19 shall be transferred to designated hospital for treatment.
- ☐5. Patient without the above condition yet with fever shall be quarantined.
- ☐6. None of Above
- ☐7. Patient is hospitalized for emergency surgery.
- ☐8. COVID-19 infection is ruled out through fever screening in OPD.
- ☐9. PCR test result.
- ☐10. Patient's lung CT scan result: _____
- ☐11. Blood routine: _____
- ☐12. SaO2: _____
- ☐13. Temperature: _____
- ☐14. Other checkup results: _____

Patient Signature :

Date :

Doctor Signature :

Date :

Appendix 2

Guideline for Intravitreal Injection Procedure During COVID-19 Epidemics

A. Appointment

1. No. of appointment per day shall not be more than 20.
2. Notification to Patient for Intravitreal Injection during COVID-19 Epidemics shall be signed by patient.
3. Patient shall be informed of :
 - 1) Applying antibiotic eye drops for 3 days prior to surgery (Referring to doctor for detailed instruction)
 - 2) Patient shall put on disposable mask with no valve on the surgery day.
 - 3) No more than 1 company is allowed. Every of the present people shall put on mask as well.
 - 4) Any patient with recent onset of fever, respiratory symptoms such as cough shall go to designated hospital and his/her injection shall be cancelled.
4. Time of treatment: All 20 appointments shall be divided into 5 batches with no more than 4 patients per batch, there shall be a 30-minute interval between treatment of each batch starting from 8am every morning.

B. Treatment Procedure

1. Patient shall be taken temperature and go through all screening procedure in triage and temperature shall be rechecked before entering the operation room. Notification letter shall be signed.
2. Total no. of treatment is limited to 20 per day. Keep an orderly practice of one patient waiting, one patient for disinfection in prep. room and one for treatment. Treatment shall be at a halt for a 15- minute disinfection after every 10 injections are done.
3. Patient shall put on mask. Anyone who put on disqualified mask (cotton mask) shall be replaced with qualified one.
4. Surgical instruments shall not be put on instrument trolley all at once but to be covered by sterilized towel or packed in small packaging.
5. Two mobile disinfection machine shall be equipped for operation room and preparation room respectively.
6. Treatment shall be terminated immediately if any symptom such as red eye, fever, cough or sore throat occurs.
7. Visitors waiting outside the operation room shall sit 2 or 3 seats away from each other.
8. Patient shall try not to bring any company as possible .

C. Post-treatment procedure

1. Patient shall continue to apply antibiotic drops for 3 days (Referring to doctor for detailed instruction).
2. Patient or his/her company having the onset of red eye, increased ocular secretion, photophobia, tearing, or fever, cough and sore throat shall be isolated and taken to designated hospital. Terminal disinfection of the environment shall be conducted.
3. Patient shall be asked to make regular online appointment according to the outpatient epidemic prevention protocol.

D. Every suspected case shall be reported to CDC.



Appendix 3

Notification and Commitment Letter to Patients on COVID-19 Prevention and Control

Notification

Dear potential patient and companions,

Concerning continual spreading of COVID-19 and the urgency of disease control and cross infection prevention , We hereby issue you a notification for your compliance:

1. Please ensure mask wearing before entering hospital(OPD, IPD etc.).
- 2.Any person with COVID-19 epidemiological history, suspected infection or confirmed infection shall not be allowed to enter hospital. One patient is only allowed to be accompanied not more than 1 companion.
- 3.You are requested to take temperature before enter OPD. Person with normal temperature is allowed to enter while anyone with fever shall be guided by specific person to designated hospital for further treatment.
4. If you are wearing contact lenses, please change it to glasses to lower down risk of infection

Temperature Taken:

Name:

Commitment Letter

Attention: In accordance with related Chinese laws and regulations, anyone with confirmed COVID-19 or suspected infection who causes serious consequences due to disease concealment, deliberate virus spreading and quarantine and treatment refusal shall constitute a crime.

Name		ID. No.		Sex		Age	
Address				Phone No.			
History of epidemiology	Recent 14 days travelling or residence in Wuhan and environs or any epidemic areas.				Y <input type="checkbox"/>	N <input type="checkbox"/>	
	Any contact in recent 14 days with people from Wuhan and environs or people with fever or respiratory symptoms from epidemic areas.				Y <input type="checkbox"/>	N <input type="checkbox"/>	
	Any clustering cases among family and friends				Y <input type="checkbox"/>	N <input type="checkbox"/>	
	Any contact with COVID-19 patient				Y <input type="checkbox"/>	N <input type="checkbox"/>	
Patient's Commitment	<p>I hereby affirm that my historical epidemiology, name, ID number, address and contact as above are reliable and valid. I am willing to bear all legal consequences and responsibilities if there is any intentional concealment of above information.</p> <p>Patient's signature: _____</p> <p>Companion: _____ Relation with the patient: _____</p> <p>Date: _____</p>						

Appendix 4

Guideline for Eye Hospital Environment Cleaning and Disinfection against COVID-19 Epidemics

Area		Object Surface（Rubbing）							Floor				Air					
Method		Frequency			Way of Disinfection	Concentration of chlorine-based disinfectant			Frequency		Concentration of chlorine-based disinfectant		Way of Disinfection			Frequency	Time Duration	
Department with Risk		≥2 Times/Day	≥4 Times/Day	Immediate Disinfection when suspected COVID-19 cases is found	Chlorine-based disinfectant	500mg/L	1000 mg/L	2000 mg/L	≥2 Times/Day	≥4 Times/Day	500mg/L	1000mg/L	Open window for ventilation	UV light	Air disinfecting machine(Device on site when staff present)	≥2 Times/Day	≥30m	1 Hour
High Risk Area	Triage		▲	▲	▲	▲	△	△		▲	▲	△	▲					▲
	Public area in O.R		▲	▲	▲		▲	△		▲	▲				△			▲
	Elevator		▲	▲	▲	▲		▲		▲		▲						▲
	Stretcher Trolley		▲	▲	▲	▲	△			▲	▲							
Moderate Risk Area	Consultation room	▲		▲	▲	▲	△	△	▲		▲	△	▲	▲	▲	▲	▲	
	Paramedical room	▲		▲	▲	▲	△	△	▲		▲	△	▲	▲	▲	▲	▲	
	Outpatient pharmacy	▲		▲	▲	▲	△	△	▲		▲	△	▲	▲		▲	▲	
	Clinical lab	▲		▲	▲	▲	△	△	▲		▲	△	▲	▲	△	▲	▲	
	Ward	▲		▲	▲	▲	△	△	▲		▲	△	▲	▲	△	▲	▲	
	L.V. room	▲		▲	▲	▲	△	△	▲		▲	△	▲	△	△	▲	▲	
	Lavatory		▲	▲	▲	▲	△	△	▲		▲	△	△			▲		
Low Risk Area	Office	▲		▲	▲	▲			▲		▲		▲			▲	▲	△
	Meeting room	▲		▲	▲	▲			▲		▲		▲			▲	▲	△
	Medical records room	▲		▲	▲	▲			▲		▲		△			▲	▲	△
	Central pharmacy	▲		▲	▲	▲			▲		▲		▲			▲	▲	△
	Administration Area	▲		▲	▲	▲			▲		▲		▲			▲	▲	△
	Staff Lounge	▲		▲	▲	▲			▲		▲		▲		△	▲	▲	△
Terminal cleaning and disinfection		Cleaning and disinfection of the whole environment and object surfaces=Move all movable indoor devices and furnitures+ Lavatory+ Effective disinfection method+Waste Clearing+ Tidying up stuffs=Qualified cleaning and disinfection																

Remarks: 1. ▲ Compulsory step. △ Optional step. 2. Concentration of disinfectant depends on degree of contamination and shall be raised in case of blood, body fluid and excreta caused contamination. 3. Abide by the principle of one patient one turn of cleaning and disinfection during COVID-19 epidemics. Daily disinfection frequency shall be increased in light of patient volume and their exposure and contact history. 4. Both regular disinfectant and recommended disinfectant are applicable unless evidence-based medicine proves that certain disinfectant or concentration is non-effective to eliminate SARS-CoV-2. 5. Concentration of chemical disinfectant refers to GB27953-2011 request in epidemic focus or manufacturer specification.

Appendix 5

COVID-19 Prevention Guideline for Medical Personnel at Different Positions.

COVID-19 Prevention Guideline for Medical Personnel at Different Positions										
Dressing Sequence (From Left to Right)	hand hygiene	Medical cap	Medical surgical masks	Medical Respirators (N95)	Work Suit	Protection Gown (Hazmat suits)	Gloves	Isolation Gown	Faceshield /Goggles	Shoe Cover /Boot Cover
Position										
Triage	●	●		●	●	●	●	○	●	●
Regular Departments (Outpatient+Ward)	●	●	●	○	●	○	●	●	●	●
Surgery	●	●	(2 masks and change outer one for new operation)	○	●	○	(Double Layer)	●	●	○
Possible Splash-caused operations (intubate or sputum suction etc.)	●	●		●	●	●	●	●	●	●
Laboratory	●	●		●	●	●	●	●	●	●
Registration, Checkout,Reception, hospital pharmacy, Medical record room, Spectacle Counter, Glass Processing and Warehouse	●	●	●	○	●	○	●	●	○	○
Administration	●		●		○					
Environment cleaning and disinfection	●	●		●	●	●	Plus Long Sleeve	○	●	○
							Plus Thick Rubber Glove			
Remarks: 1. ●Compulsory ○Optional depending on exposure risk; 2. Respiratory protection—Powered air-purifying respirator is advised to use for high risk exposure when conditions permit.										

Appendix 6 Disinfection Process for Eye Hospital during COVID-19 Epidemics

1.Ventilation	<ol style="list-style-type: none"> 1. Open window for ventilation 2 to 4 times per day, and more than 30 minutes per time. Air shall be disinfected periodically. 2. UV light can be used for air disinfection twice per day and 2 hours per time with absence of personnel. 3. Circulating air disinfectant and static electrostatic adsorption ultraviolet disinfectant can be used for air disinfection twice per day and not less than 2 hours per time when any personnel present. Disinfection shall be recorded timely. 4. Change of consultation room is suggested in half day turns.
2. Object Surface	<ol style="list-style-type: none"> 1. Chlorine-based disinfectant, 75% alcohol, disposable wet tissue can be used to wipe, spray and soak on object surface. Object surface can be disinfected not less than twice per day by 1000mg/L Chlorine-based disinfectant. 2. Immediate decontamination, cleaning and disinfection shall be done in case of obvious contamination. 3. Surface of object non-resistant to corrosion can be wiped twice by 75% alcohol. 4. Sphygmomanometer and other commonly-used instrument shall be cleaned with 1000mg/L Chlorine-based disinfectant after each usage. Cuff of Sphygmomanometer shall be washed and disinfected 2 to 4 times per week. 5. Thermometer shall be soaked in 1000mg/L Chlorine-based disinfectant for 30 minutes after each usage. Then it shall be dried for next usage. 6. All devices and desktops shall be disinfected related personnel.
3.Wall Surface and Floor	<p>1000mg/L chlorine-based disinfectant or alcohol spray can be used if no visible contamination. Disinfectant shall be sprayed until the surface is moist. Timing for disinfection shall be no less than 30 minutes and 3 times per day.</p> <ol style="list-style-type: none"> 1. Daily disinfection sequence: treatment room, office, duty room, ward or consultation room, corridor, then lavatory i.e. contaminated area. 2. The floor contaminated by blood, excreta or vomitus shall be cleaned first then disinfected with 1000mg/L chlorine-based disinfectant. Floor disinfection starts from outdoor to indoor then repeat it the other way around.
4.Daily Cleaning and Disinfection	<ol style="list-style-type: none"> 1. Object surface which is frequented touched by patients and medical staff such as doorknob, desk top, switch shall be disinfected 4 times per day by 1000mg/L chlorine-based disinfectant. 2. Spots of slit lamp, auto refractor, non-contact tonometer and other devices where patients may contact such as chin rest, forehead strap shall be cleaned by alcohol. 3. Landline telephone shall be cleaned 2 to 4 times per day by alcohol. General cleaning and disinfection for all areas shall be done every Friday. 4. Devices on the table shall be cleaned and disinfected by related personnel.
5.Terminal disinfection in the ward	<p>Spray with 1000 to 2000mg/L chlorine-based disinfectant—Wipe of objects surface—A 2nd time spray—Ventilation.</p>

6. Disinfection on medical waste	Disposable stuff including mask, gloves, cap and shoe covers shall be thrown into yellow medical waste container which shall be sprayed with 75% alcohol and taken away with double-layer bags twice per day.
7. Object surface and air disinfection in operation room	Current disinfection method shall be adopted. Fresh air filter shall be disinfected.
8. Cleaning, disinfection and sterilization process on surgical instruments and disinfected items (Non emergency surgery shall be suspended. Central laminar flow shall be stopped when 2 or more than 2 operation rooms for emergency surgery is used. If laminar flow is used for 1 operation room only, terminal disinfection shall be done on all laminar flow shared operation rooms.)	1. Disinfection and cleaning process for surgical instruments of consecutive use: Brush with running water—Rinse with purified water—Disinfect with 75% alcohol—Sterilize with autoclave.
	2. Disinfection and cleaning process for handpiece of consecutive use: Rinse needle under running water—Flush the cannula with a water jet (purified water) —Flush the cannula with a 20ml syringe (purified water) —Dry up with high pressure air gun or a 20ml syringe —Disinfect the cannula and surface with 75% alcohol—Dry up again with high pressure air gun or a 20ml syringe—Sterilize with autoclave.
	3. Terminal cleaning and disinfection process on surgical instruments: Brush under running water—Ultrasonic cleaning with enzyme or manual wash under water—Rinse under running water for enzymes removal—Terminal rinsing with purified water—Sterilization through boiling with purified water—Drying in cabinet—Storage in cleaning area (No more usage of medical lubricant)
	4. Terminal Disinfection and cleaning process of handpiece: Rinse the needle under running water and brush the surface—Flush the cannula with a water-jet—Dry up with an air-jet—Disinfect with 75% alcohol—Dry up with an air-jet—Disengage needle and clean joint part—Dry up in drying cabinet—Storage in cleaning area.
	5. Cleaning and disinfection process for FMS and tubing: Rinse with running water—Flush inside with a water-jet—Dry up with an air-jet—Disinfect with 75% alcohol—Dry up with an air-jet—Flush with absolute ethyl alcohol or 95% alcohol—Dry up in dry cabinet at 30℃ for 4 to 6 hours—Bagged and sealed—Sterilize with ethylene oxide. Caution: Natural drying is not be done concerning secondary contamination.
	Note: Terminal instrument, handle, brush, clothe, basket, basin, water faucet shall be soaked in and rubbed by 500mg/L chlorine-based disinfectant and then stored in dry place. Syringe shall be changed every day and not be recycled. Brush, clothe, injector and basket shall be prepared in duplicate. One set for rinse and wash, another set for terminal rinse. They shall not be mixed for usage.
9. Cleaning and disinfection process on reusable medical instruments	Pack all used instruments and bring to instrument cleaning room for cleaning and disinfection.
	Rinse inside and outside under running water—Soak in 1000mg/L chlorine-based disinfectant for 30 minutes—Rinse under running water to remove chlorine—Rinse terminally under purified water—Dry up in cabinet—Put in disinfection box or sealed bag with marking disinfection date.
	The use of disposable medical consumables is highly recommended.