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# COMPREHENSIVE GUIDELINES FOR OPD/ IPD SERVICES IN OPHTHALMOLOGY HOSPITALS/ CLINICS UNDER NEW NORMAL: LIVING WITH COVID-19

A Document Produced Under  
SAFE (Staying Away From Exposures)  
A Joint Initiative of QAI and Orbis



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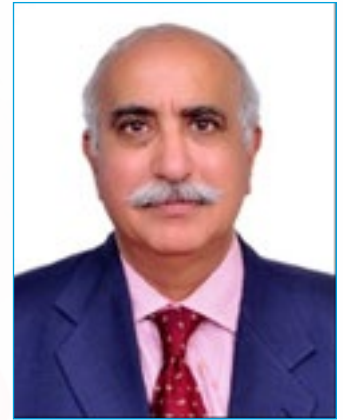
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## DISCLAIMER

This document has been developed with the information and resources that are available from published literature, guidelines and advisories by national and international agencies (references given), available best practices and knowledge of domain experts. In absence of complete know-how about the coronavirus SARS-Cov-2 responsible for causing COVID-19 disease as well as on-going development in the field of drugs and vaccines, these guidelines are set to be dynamic and would be subjected to continuous review and revision, kindly refer to the latest national, international and government guidelines. These guidelines are meant to support ophthalmology hospitals and clinics by complementing their existing protocols in their preparedness towards such emergency/ disaster and are not meant to replace them.

## FOREWORD

The SARS-CoV-2 responsible for COVID-19 pandemic has been around for over six months and impacted most lives in every nation. It has brought the world to a complete halt, closing international borders and unprecedented lockdowns. Public health systems around the world were challenged with new set of requirements and had to rapidly respond to the new norms. Practices which were restricted to highly contained spaces became the norm of all time. Healthcare workers also needed to adapt and change their behaviours. As healthcare facilities have started opening up with caution, it is high time that healthcare facilities implement guidelines to break the chain of infection and any possible spread of infection amongst patients, staff and attendants/family members.



The Ophthalmologists and eye health care workers need to understand the gravity of the situation and be able to protect themselves, colleagues and patients from infection with SARS-CoV-2. Thus, they need to have clear instructions as well as institutional support.

This document titled “Comprehensive Guidelines For OPD/ IPD Services in Ophthalmology Hospitals/ Clinics Under New Normal: Living With Covid-19” is an excellent compilation of best practices to contain the spread of COVID-19 in a healthcare facility in general and eye care facility in particular. These comprehensive set of guidelines, based on several references from across different national and international Organisations including WHO, would support Ophthalmology hospital and clinic including outreach clinics/ vision centres in their functioning in a safer manner.

I am hopeful that Ophthalmology Hospitals and Clinics would find these guidelines helpful in opening up their operations and continue meeting healthcare needs of citizens. I congratulate QAI and Orbis for taking this important initiative of developing these guidelines under project SAFE (Staying Away From Exposures).

### **Dr. Patanjali Dev Nayar**

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## FOREWORD



**Dr. Bhupendra  
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The COVID-19 pandemic, which has engulfed the entire world, has resulted in an unprecedented situation of great magnitude not experienced in over a decade. This pandemic has disrupted normal life and the fear of spread has brought the entire world to a complete lockdown. It has also affected the normal functions of a hospital to treat patients with other ailments. Even patients requiring a regular follow up and review were unable to visit the hospital/ clinic.

Several groups of scientists studying the virus are not sure about when we would have a vaccine and/ or treatment of COVID-19. In essence, this virus is going to stay with us for an indefinite time and, therefore, we need to learn the art of living with this virus. Till this virus is wiped out globally, all specific precautions that have been implemented during the pandemic have to be continued to survive. The standard precautions to deal with any infectious agent will, however, have to be adhered to as usual.



**Dr. Rishi Raj Borah**

Country Director,  
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This document titled “Comprehensive Guidelines For OPD/ IPD Services in Ophthalmology Hospitals/ Clinics Under New Normal: Living with Covid-19” provides a comprehensive set of guidelines, advise and action plans to be followed in different areas of an Ophthalmology hospital and clinic including outreach clinics/ vision centres in order to function effectively by containing the transmission of SARS-CoV-2, cause of COVID-19 disease. It is expected that by following these guidelines, hospitals/ clinics can ensure continuity of their services while also ensuring safety for everyone i.e. patients, visitors and healthcare workers. These guidelines were developed under project SAFE (Staying Away From Exposures), a joint initiative of QAI and Orbis.



## ACKNOWLEDGEMENT

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	<p>Established in 1987, L V Prasad Eye Institute (LVPEI), a World Health Organization Collaborating Centre for Prevention of Blindness, is a comprehensive eye health facility. The Institute has ten active arms to its areas of operations: Clinical Services, Education, Research, Vision Rehabilitation, Rural and Community Eye Health, Eye Banking, Advocacy and Policy Planning, Capacity Building, Innovation and Product Development.</p>
	<p>Dr. Rajendra Prasad Centre for Ophthalmic Sciences has been recognized as the Apex Organisation by the Government of India under the National Programme for the Control of Blindness. The Centre also assists the Ministry of Health in short term and long-term planning and evaluation of the program. It undertakes and plans epidemiological investigations and provides technical leadership to the entire nation. The Centre is a WHO Collaborating Centre for the Prevention of Blindness</p>
	<p>A pioneer in community ophthalmology in the country, Aravind Eye Care System is a WHO Collaborating Centre for the Prevention of Blindness. Aravind's eye care facilities include 7 tertiary centres, 6 secondary centres, 6 community eye clinics and 75 vision centres and eye banks.</p>
	<p>Sankara Nethralaya is a leader in research, clinical care, academics and community care centre in Ophthalmology. Sankara Nethralaya has its services running at five locations in Chennai as well as Kolkata, Rameshwaram and Tirupati. The hospital also runs The Elite School of Optometry (ESO), the first institution in India to offer a four-year professional degree - B. Optometry.</p>





# INTRODUCTION

“Remain careful and not lower their guard against the pandemic on the assumption that it will not affect them.”

**Sh. Narendra Modi, Prime Minister, Republic of India**

This coronavirus is going to stay for the time we even don't know. What we know is that it is highly contagious, do not differentiate between people with their socio-economic status, and hence do not spare anyone. It is therefore critical that all necessary actions and precautions need to be taken to save numerous lives.

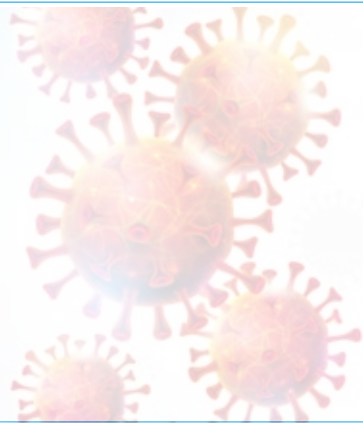
This requires commitment from the leaders of the country and healthcare Organisations. Our healthcare workers require special skills and tough mind to deal with this coronavirus.

“While this is the first pandemic caused as a result of a coronavirus, it also is the first pandemic that can be controlled”

**Dr. Tedros Adhanom Ghebreyesus, Director General, World Health Organization**

## ABBREVIATIONS

AHU	Air Handling Unit
BMW	Biomedical Waste
CDC	Centre for Disease Control
CPCB	Central Pollution Control Board
FFA	Fundus Fluorescein Angiography
HEPA	High-Efficiency Particulate Air
HCQ	Hydroxychloroquine
HCW	Healthcare Workers
HVAC	Heating, Ventilation, and Air Conditioning
ICMR	Indian Council of Medical Research
IPD	In-Patient Department
MCI	Indian Medical Council (Medical Council of India)
MoHFW	Ministry of Health and Family Welfare
NCT	Non-contact Tonometer
NOAA	National Oceanic and Atmospheric Administration
OCT	Optical Coherence Tomography
OPD	Out-Patient Department
PPE	Personal Protective Kit
RMP	Registered Medical Practitioner
ROP	Retinopathy of Prematurity
UVGI	Ultraviolet Germicidal Irradiation
WHO	World Health Organization
SARS	Severe Acute Respiratory Syndrome
GoI	Government of India



## Role of Leadership

1. To implement any policy and procedure, role of leadership is critical. In this time of COVID-19 crisis it becomes more relevant that the Organisation is specifically committed to ensure adequate measures are taken and resources are provided to prevent transmission of infection of COVID-19.
2. Leadership makes management empowered and accountable to take necessary steps to implement these guidelines across the Organisation.
3. Organisation takes the ownership and responsibility of all processes needed to implement these guidelines.
4. In this context of COVID-19, specific responsibilities of Organisation related to infrastructural facilities and resources include but not limited to:
  - providing adequate hand hygiene facilities, waste disposal bins and PPE,
  - proper engineering controls in operating rooms,
  - social distancing,
  - modification in the movement of patients, visitors and staff,
  - and training and facilities for staff, and
  - any other structural changes required in the premises



# General Guidelines on Prevention of Infection Transmission of COVID-19



1. Make sure that the premises are clean and hygienic and conform to the standards for preventing COVID. Hospital management is committed to ensure availability of necessary resources and facilities.
2. Practice good hand hygiene and wash your hands frequently, especially before and after examining the patients, before eating, after you use the restroom, blow your nose or cough or before you touch your face. If you can't wash your hands, use an alcohol-based sanitizer with more than 70% alcohol. Refer to Annexure 1.
3. Wash your hands before you wear your mask. Only touch the ear loops and ties.
4. Surfaces (e.g. desks and tables) and objects (e.g. telephones, keyboards) need to be wiped with disinfectant regularly.
5. Put sanitising hand rub dispensers in prominent places around the workplace. Make sure these dispensers are regularly refilled. Display posters promoting hand-washing, ask your local public health authority for these or look on [www.who.int](http://www.who.int).
6. Encourage staff/ patients to cover their face with the bend of their elbow or a tissue if they cough or sneeze. Supply tissues and closed bins to dispose them of in.
7. Leave your home only for essential reasons, such as buying food or medications. If you have to go out, protect yourself and your family members from close contact (stay more than 6-8 feet away). Don't share water or utensils with family members. (This is not applicable to HCW). Refer to Annexure 2
8. Strengthen your immune system by getting your vaccinations, eating a balanced diet, avoiding too much alcohol, getting enough sleep, exercising and maintaining a healthy life-style.
9. Provide contact details or a health hotline number that staff/ patients can call for advice or to give information.
10. An attempt is to be made to minimise the use of paper as they are known to harbour the virus longer.
11. Do not touch discharge summary or other documents brought by patient. Ask him/ her to show from a distance-Photograph attached.
12. If you are using electronic medical records, ensure hand sanitisation or sanitising the gloves before touching the keyboard or mouse.
13. All cleaning of surfaces and equipment to be done with gloved hand.
14. Remember to wipe your phone with disinfectant wipes or 70% isopropyl alcohol as it touches your hands and your face often.
15. Receive the patient records with gloved hands and give them back after reviewing, do not place them on your tables.
16. Look for red flags, like shortness of breath, fever >100°F and worsening symptoms. Do seek medical care if you develop any of these symptoms at any time.
17. Stay informed of the situation as events and advisories are rapidly evolving. Credible resources include the MoHFW (Ministry of Health and Family Welfare), Centres for Disease Control, Atlanta, USA and the World Health Organization (WHO).



# Guidelines on Prevention of Infection Transmission of COVID 19

# AMONGST HEALTHCARE WORKERS

## 1. Sensitise HCWs and other support staff

- To create awareness
- To follow the suggested protocols strictly
- Alleviate myths
- Build up morale and confidence

## 2. Educate HCWs on optimal PPE donning and doffing techniques.

### References:

Demonstration of Donning (Putting On) Personal Protective Equipment (PPE):

Click here to see Donning of PPE : <https://www.youtube.com/watch?v=of73FN086E8>

Demonstration of Doffing (Taking Off) Personal Protective Equipment (PPE):

Click here to see Doffing of PPE : <https://www.youtube.com/watch?v=POxOc13DxvQ>

## 3. Online information:

- All Healthcare workers should inform the hospital authorities about their being unfit for work.
- Before reporting for work, HCWs should inform the authorities if they have any symptoms related to Covid-19 such as cold, fever and cough or they have visited any containment areas. They should also inform before reporting for work if they are residing in or near a containment zone.
- All HCWs should download Arogya Setu app. The safety of the HCWs who is joining after a break or coming from a containment zone needs to be ensured by using Arogya Setu App/ COVID related questionnaire.
- Thermal screening of all HCWs to be done on daily basis.
- PPE to be regularly worn at work, as recommended.
- Organisation can take appropriate steps to protect the health of vulnerable staff who are prone to get severe infections.

#### 4. Mask:

- Before putting the mask on, wash hands with soap and water. Refer to Annexure 3.
- Make sure it covers your nose and mouth without any gap.
- Avoid touching your face “M-E-N- Mouth-Eyes-Nose are the entry ports for the virus”.
- Disposable three-ply masks/ N95 masks for all HCW who come in direct contact with patients and the patients’ attendant. Masks should be changed every 6 hours or immediately when suspected to be contaminated or wet.
- Do not allow the mask to hang on the dress.
- Dispose off the mask after use in the yellow bin that is provided for the purpose as per biomedical waste management rules.

#### 5. Commute to Work:

- Preferable to use own transport/ but if commuting by public transport as authorised by Govt. to take all suggested preventive measures (appropriate use of PPEs and maintaining social distancing and hand hygiene) strictly.
- Depending on the work load of the Organisations, the Head of the Organisation would prepare a policy about staggered duty roster of all HCWs so as to avoid exposure of all the staff and to facilitate contact tracing and tracking at the same time and taking into consideration the guidelines provided by Local Government from time to time.
- Movement of Employees (nurses, nursing assistants, physiotherapists, doctors, lab technicians etc.) across state and district borders, only with ID cards or company letter.
- If any HCW or fellow has any travel history to international/ national visit in areas that bring high risk, or has developed symptoms, or has a family member with symptoms, they should inform HR/ hospital authority and they should join/follow isolation guidelines and further managed as per the then applicable Government Guidelines.

#### 6. Hand Hygiene Practices:

- All the staff should sanitise their hands with soap and water (preferably with liquid soap) for a minimum 40 seconds or alcohol-based hand sanitiser (at least 70 %) for a minimum 20 seconds before entering the hospital.
- Organisation should display hand hygiene posters near the hand washing facilities and ensure adequate hand hygiene supplies.
- Undertake hand hygiene procedure before examination of every patient either with alcohol-based hand sanitiser or washing hands with soap and water.
- However, in case of visibly soiled hands, it is mandatory to wash hands with soap and water.
- Avoid wearing watches/ jewellery items/ belts at work.

## 7. Home Rules:

- Avoid visiting areas that are declared containment zones by the Government. Avoid inviting guests at home and unnecessary visits outside to prevent any infection being picked up.
- Frequent Hand Hygiene with Soap & Water to be practised.
- On return from Hospital, ask the door to be kept open/ sanitise the door after opening. Leave your shoes outside and sanitise your hands and belongings. Put your clothes for washing separately.
- Have a bath on return from hospital and disinfect your mask.
- Do not carry your white coat (if using), pen and other reading materials from hospital/ clinic to home.
- Do not meet and get in touch with any family members till you have had a bath.
- Wash your clothes immediately or keep separately in a plastic bag for washing later on. .
- Avoid carrying big bags/large purse etc. to office to ensure minimal contamination.

## 8. Screening of Health Care Workers:

- All the staff should be screened at the point of entry for fever and explicitly asked for symptoms, international travel, COVID-19 patient/suspect contact or clustering.
- Point of entry screening includes:
  - a. Travel Screening:** Direct questioning for international travel/ hotspots/ containment zones <2 weeks
  - b. Occupational Screening:** Unprotected occupational contact with COVID-19 patients and/or their contacts
  - c. Contact Screening:** Contact with a COVID-19 patient or a suspected COVID-19 patient and/ or their contacts.
  - d. Cluster Screening:** Cluster with individuals with international travel/ hotspots/ containment zones <2 weeks or contacts of a COVID-19 patient or a suspected COVID-19 patient or their contacts.



# WITHIN HOSPITAL/ CLINIC

## 1. Point of Entry Screening and Check-In in Hospital/ Clinic:

- Organisation maximises its efforts to carry out the needed reengineering in the premises like separate entries for patients/ visitors and staff and barriers to restricted areas.
- Everyone entering the hospital/centre would be considered as a potential case of COVID 19 and needs to be screened for temperature using a non-contact thermal gun (infrared thermometer) and all due precautions are taken to handle the patients. Refer to the flowchart in Annexure 4 (Staff/ Patient Flow in a Hospital for Triaging).
- COVID 19 declaration form and consent to be filled by all patients and accompanied person at pre-registration desk. Refer to the Annexure 5A and 5B for Declaration Form and Consent Form.
- Organisation should make an effort to promote online appointments and screenings. Preferably all patients should be asked to book prior online appointments.
- Telephonic triaging to be done to define whether the patient will be seen in Isolation OPD/ Emergency/ Routine. Emergency patients should be handled as per the protocol. All vulnerable (like >65 years, persons with co-morbidities, pregnant women and children below the age of 10 years) patients will be given preference to fast track them in the system and all vulnerable people who came as an attendant will be discouraged to come to the hospital.
- Appointment-based visits should be encouraged over walk-in, to avoid gathering outside hospital as well as within hospital corridors.
- Segregate and stagger patients to avoid overcrowding in various areas.
- Preferably, those with appointment to enter through separate lane than used by the walk-in patients.
- Finger print biometry login and staff check-in should be replaced with non-touch modes.
- All patients need to be educated to download the Government of India's Arogya Setu COVID-19 tracking App on their cell phone to help contact tracing if required. They must register at the hospital reception with their cell phone number.
- Preferably, Organisation should allocate separate entry point and a different exit point from the OPD. Organisation should display appropriate signages for restricted entry in Isolation OPD and Emergency areas etc.
- The unnecessary movements of the staff and patients should be restricted.
- Wearing a mask/ covering mouth is mandatory for all entering the Organisation.

## General Norms to be Followed in Hospital/ Clinic:

- Considering the staff and patient safety, Organisation may take appropriate measures to utilise their existing infrastructure capacity to the fullest to function in the different shift/ unit based on available man power or resources to meet the continuity of patient care. With increasing workload over a period of time, it is advisable to have extended working hours for optimal utilisation of man power, infrastructure and to avoid overcrowding (resources).
- 2-4 patients per lift and preferably, separate corridor and preferably, separate lift for Healthcare workers.
- Adequate marking to be done in all lifts keeping minimum one metre distance. Although it's advisable to use the staircase by the HCW to prevent exposure in the lift. Educational signages can be displayed inside the lift like cough/sneezing etiquette etc and lift etiquette (standing at least one metre away, keeping face to wall side).
- Disinfection of the lifts should be done as per protocols.
- Use of copper alloy (minimum 63% Cu) as bacterial resistance material in doorknobs/handles/railings etc is desirable.
- Existing service area should use natural resources like lighting and ventilation wherever possible.
- Proper air-conditioning and ventilation (Refer to Air-conditioning and ventilation guidelines in chapter 12. If feasible, exhaust fans can be used for creating negative pressure.

## 2. Waiting Hall in Hospital/ Clinic:

- Maintain at least minimum six feet distance in the waiting areas and at points where a queue is likely to form – the screening desk, the front office/ registration counter, the billing counter, the pharmacy, etc. Specific markings may be made with sufficient distance to manage the queue and ensure social distancing in the premises.
- Keep the waiting time minimum in the hospital premises.
- Discourage cash handling at the reception/ billing; instead rely on digital modes of payment. Cotton buds can be used while entering the numbers on the credit/ debit card swipe machine. If cash is accepted it should be handled only with disposable gloves. Sanitisation of cash in a UV box is not yet proven to be effective and cash handling with disposable gloves is sufficient and effective.
- Seating to be arranged in a manner that patients should remain at least six feet from each other and preventing use of sofa sets. Any surface which cannot be cleaned using appropriate disinfectant for that area should be removed to avoid transmission.
- Maintain the unidirectional flow of patients, i.e., entry and exit must be different if there are two doors. Place partitions to separate the movement of patients going in and out of the waiting area.
- Preferably there should be plastic/glass shields in front of counters for reception, pharmacy, billing to maintain distance and block aerosol spread. Opening for operation shall be in the bottom of the shield and must be of reduced size. Regular cleaning of shields shall be organised during the day.

- For opticals refer to the Optometry Guidelines {Corona Virus Disease 2019 (COVID-19) Guidelines for Optical Stores & Optometry Practices in India BY Indian Optometric Association (IOA) & Optometry Council of India (OCI: ASCO & IOF)}.
- Linen masks for all the patients and their attendants. If needed to be provided one at cost.
- Provision of hand sanitisers in the waiting hall.
- Keep open as many doors as possible to avoid touching of doorknobs. Try to follow an open-door and no-AC policy if possible. If AC is needed then doors and windows to be kept open. If feasible, exhaust fans can be used to create negative pressure.
- Disposable glasses for drinking water for patients and ensure their proper disposal.
- No magazines, newspapers, display stands, toys for children, handbills or take-home material should be placed in the patient waiting area or OPD because they act as fomites.
- Patients with red eye or frank conjunctivitis should be identified at the reception and isolated in a special room designated as a “Isolation OPD” room and not allowed to mingle with other OPD patients. The “Isolation OPD” room should ideally be away from main OPD and OT complex. These patients must be treated as COVID suspects and they should be examined after donning a Hazmat suit.
- Educational signages in bilingual language (hand hygiene, wearing mask cough/ sneezing etiquette, social distancing etc) could be displayed in the waiting areas as a visual alert.
- Proper air-conditioning and ventilation (Refer to Air-conditioning and ventilation guidelines in chapter 12).

### 3. Hygiene and Sanitation in Hospital/ Clinic:

- All staff would use the hand sanitiser on entry and sanitiser bottles to be stationed at the reception and in OPD for patients to use. Staff shall regularly use sanitising solutions to wash hands in public spaces to demonstrate to patients the good hygiene practices.
- Keep your masks on throughout your stay in the hospital.
- Avoid crowds and if meeting any person maintain social distancing and avoid handshakes.
- Before drinking water ensure use of hand sanitiser.
- To reduce transmission by contact: use of sensors for doors, washbasin taps, flush systems in toilets/ urinals are desirable.

# AMONGST PATIENTS IN OPD

1. Single Entry for Patients & attendants. A separate exit point, if feasible.
2. Only one attendant per patient. Additional attendants are discouraged and if accompanied are requested to wait outside the premises.
3. All patients including attendants to have temperature screened by dedicated staff.
4. Tele-Counselling/ Tele-Consulting services should be encouraged to avoid unnecessary hospital visit and follow-up visit.
5. Emergency cases listed below should be given priority:
  - Injury to the eye (chemical, thermal, mechanical)
  - Sudden loss of vision
  - Acute pain in the eye
  - Acute red eye
  - Acute onset of eyelid lesions
  - Acute onset of double vision or sudden onset of drooping of the eyelid
  - Acute onset of coloured halos, photophobia, floaters or flashes of light
  - Acute onset of discharge from the eye/eyes
  - Acute or subacute (days to weeks) onset of bulging of the eye
  - Retinal Detachment, Retinal Tear, Fresh CNVM, Viral Retinitis, intraocular Infection, Non traumatic perforation of Eyeball even in absence of vision loss.
6. Only attendant to be allowed to the pharmacy while patient waits. If a chronic condition, encourage them to minimise return by stocking adequately for. Some kind of barriers can be kept in between on the counter and the patient to address it.
7. Patients and attendants advised not to lean on the pharmacy and optical counter with their elbows/hands.
8. Complete all tests and examinations if possible, on the same day to prevent repeated exposure.
9. Only essential Healthcare personnel should be available in the clinical/ diagnostic areas. Organisation should make and implement staffing policies and Organisation should keep a log of all persons who care for or enter the rooms or care area of these patients.

## Preventions in OPD

### 1. Reducing Patient Numbers at One Given Time

To minimise risk of infection exposure and manage outpatient numbers, following measures may be taken to reduce patients gathering at one time:

- Provision for large area in OPD to maintain physical distance
  - Patients who must visit healthcare facilities should make an appointment through other means, including internet portals, which provides necessary guidance in transportation, parking, arrival time, protective measures, triage information, indoor navigation, etc. Collect comprehensive information online by patients in advance to improve the efficiency of diagnosis and treatment and limit the duration of the patient's visit.
  - Encourage patients to take full advantage of telehealth services and digital self-service devices to avoid contact with others so as to lower the risk of cross infections.
2. Ophthalmologists should make use of telemedicine facilities for their patients wherever possible.
  3. Avoid all aerosol-based procedures including noncontact tonometer (NCT) and auto refractometer. Use of Rebound Tonometer/ Tonopen with a disposable tip or Goldmann applanation tonometry is recommended (with the cleaning of the applanation cone after every patient).
  4. Wear face mask, latex gloves and goggles/ face shields.
  5. Avoid shaking hands, or any other patient contact, as much as possible.
  6. Use slit lamp barriers (breath guards or breath shields). These may be available commercially or they can be made from materials such acetate sheets (used for overhead projectors), clear plastic or Perspex. Cut holes for the slit lamp eye pieces; it may help to use a cardboard template.
  7. Perform visual fields only if necessary and visual fields preferably be performed in the well-ventilated room the patient should be provided with the three-ply masks while undergoing for the investigation. There should be an appropriate gap between the two patients for disinfection procedures.
  8. All other investigations may be done with due precautions. Refer Manufacturer's Guidelines for cleaning and disinfection to be performed in the facility.
  9. Disinfection of hands using a hand rub/ hand wash in between patients.
  10. Refraction can be performed using a streak retinoscope with breath shield where mandated. Trial frame and the metal rim of the lenses used should be cleaned with alcohol-based sanitiser after use.
  11. Avoid contact lens trial unless therapeutic. Use disposable soft contact lens for trial.
  12. Disinfect (using standard protocols) all instruments, and probes used in direct contact to the patient's tear film and ocular surface before re-use as per Manufacturer's Guidelines.
  13. Avoid direct ophthalmoscopy.
  14. Infants undergoing ROP screening must be placed on a designated crib with a plastic or polythene sheet, by the mother who uncovers the face of the infant and steps away more than two metres. The screener



walks to the baby and screens (using indirect ophthalmoscopy or a retinal camera). The barrier sheet is replaced or sanitised between successive infants and the tables should be sanitised using appropriate disinfectants.

15. Avoid unnecessary conversation with the patient while examining them.
16. Do not touch patients or patients' articles with bare hands.
17. Eye drops should be put in the patient's eye by a nursing/paramedical staff with a no touch technique (ask the patient to pull down his/her lower lid or pull it down with a swab stick).

## Telemedicine

- The ophthalmologists should follow the telemedicine practice guidelines for Registered Medical Practitioners published by the Government of India and make sure they are aware of all the procedures to be followed when dealing with patients using telemedicine such as informed consent, prescription, sharing of photographs, and other aspects.
- Telemedicine practice should be widely advertised on social media and other platforms so that it reaches to peers and patients.
- Advice through telemedicine should be considered for the following conditions:
  - ▶ Refraction / Amblyopia follow up
  - ▶ Conjunctivitis management
  - ▶ Post op squint
  - ▶ Paediatric oculoplastic/adnexal cases
  - ▶ Non-specific headache, mild to moderate
  - ▶ Orbicularis myokymia
  - ▶ Asthenopia
  - ▶ Vernal keratoconjunctivitis
  - ▶ Post op cataract in older children
  - ▶ Resolving cranial nerve palsies
  - ▶ Review of all the reports
  - ▶ Follow up of old optic neuritis or optic atrophy cases
  - ▶ Follow up cases of pituitary adenoma with no new complaints
- The Registered Medical Practitioners should exercise their professional judgment to decide whether a telemedicine consultation is appropriate in a given situation or an in-person consultation is needed in the interest of the patient. They should consider the mode/technologies available and their adequacy for a diagnosis before choosing to proceed with any health education or counselling or

medication. They should be reasonably comfortable that telemedicine is in the patient's interest after taking a holistic view of the given situation.

## Identification of the Registered Medical Practitioner and the Patient is Required:

- An RMP should verify and confirm patient's identity by name, age, address, email ID, phone number, registered ID or any other identification as may be deemed to be appropriate. The RMP should ensure that there is a *mechanism for a patient to verify* the credentials and contact details of the RMP.
- For issuing a prescription, the RMP needs to explicitly ask the age of the patient, and if there is any doubt, seek age proof. Where the patient is a minor, after confirming the age, tele consultation would be allowed only if the minor is consulting along-with an adult whose identity needs to be ascertained.

## Mode of Telemedicine:

- Multiple technologies can be used to deliver telemedicine consultations. All these technology systems have their respective strengths, weaknesses and contexts in which they may be appropriate or inadequate in order to deliver proper care.
- Primarily there are 3 modes: Video, Audio or Text (chat, images, messaging, email, fax etc.). Their strengths, limitations and appropriateness as detailed in Telemedicine Guidelines of MCI need to be considered by the RMP.

## Patient Consent:

- Patient consent is necessary for any telemedicine consultation. The consent can be Implied or explicit. If, the patient initiates the telemedicine consultation, then the consent is **implied**. **When a Health worker, RMP or a Caregiver** initiates a Telemedicine consultation, then the consent is explicit consent.

## Exchange of Information for Patient Evaluation:

- An RMP would use his/her professional discretion to gather the type **and extent of patient information** (history/examination findings/Investigation reports/past records etc.) required to be able to exercise proper clinical judgement.
- This information can be **supplemented** through conversation with a healthcare worker/provider and by any information supported by **technology-based tools**.
- **If a physical examination is critical information for consultation, RMP should not proceed until a physical examination can be arranged through an in-person consult.** Wherever necessary, depending on professional judgement of the RMP, he/she shall recommend:
  - Video consultation
  - Examination by another RMP/ Health Worker
  - In-person consultation

## Patient Management: Health Education, Counselling & Medication:

- If the condition can be appropriately managed via telemedicine, based on the type of consultation, then the RMP may proceed with a professional judgement to:
  - Provide Health Education as appropriate in the case; and/or
  - Provide Counselling related to specific clinical condition; and/or
  - Prescribe Medicines

## Medical Ethics, Data Privacy & Confidentiality:

- Registered Medical Practitioner would be required to fully abide by Indian Medical Council (Professional conduct, Etiquette and Ethics) Regulations, 2002 and with the relevant provisions of the IT Act, Data protection and privacy laws or any applicable rules notified from time to time for protecting patient privacy and confidentiality and regarding the handling and transfer of such personal information regarding the patient. This shall be binding and must be upheld and practiced.
- It is specifically noted that in addition to all general requirements under the MCI Act for professional conduct, ethics etc., while using telemedicine all actions that willfully compromise patient care or privacy and confidentiality, or violate any prevailing law are explicitly not permissible.

## Maintain Digital Trail/ Documentation of Consultation:

- Log or record of Telemedicine interaction (e.g. Phone logs, email records, chat/ text record, video interaction logs etc.).
- Patient records, reports, documents, images, diagnostics, data etc. (Digital or non-Digital) utilised in the telemedicine consultation should be retained by the RMP.
- Specifically, in case a prescription is shared with the patient, the RMP is required to maintain the prescription records as required for in-person consultations.
- Telemedicine consultations should be treated the same way as in-person consultations from a fee perspective: RMP may charge an appropriate fee for the Telemedicine consultation provided.
- An RMP should also give a receipt/invoice for the fee charged for providing telemedicine- based consultation.

**Please refer MCI Telemedicine Practice Guidelines notified through Gazette Notification No. 174 of 14 May 2020 for more information.**

# DURING DIAGNOSTIC PROCEDURE

1. All investigations should be carried out with due precautions.
2. Schedule appointments such that minimum number of patients are waiting at any given time and social distancing to be maintained.
3. Use disinfectant solution to disinfect probes/ body of equipment as per the guidelines of manufacturer / Ministry of Health/ WHO/ Any other authorised Governmental agency.
4. Avoid 1 % Sodium Hypochlorite on Metallic surfaces and alcohol on lenses as Sodium hypochlorite corrodes metal and alcohol damages coating of lenses.
5. All healthcare workers to use appropriate PPE. All patients are required to wear appropriate mask during investigations (for visual field examination).
6. **General instructions for non-contact equipment (Refer to biomedical and non-biomedical list from CDC)**
  - Chin rest, forehead rest, handles, table and surface touched by patient: cleaned with 70% isopropyl alcohol. Allowed to dry before taking up the next patient.
  - Computer key board and monitor: wiped with a tissue soaked in isopropyl alcohol, taking care not to let moisture enter them.
  - External body of equipment: wiped with 70% isopropyl alcohol, alternately Lysol may be used. Wipe leaving lens cap.
  - Visual field analyser - Trigger/ buzzer held by patient and occluder used on eye should be cleaned with 70% isopropyl alcohol. Bowl of the perimeter CANNOT be disinfected. It is wiped with a soft cloth/tissue. Hence, wearing of mask by the patient is mandatory. Allow 20-30 minutes between patients. Keep the door open. Defer repeat test in the same visit in case patient is unable to give reliable readings. Visual field room should have adequate ventilation and an exhaust fan facility. Refer to the Manufacturer Guidelines for cleaning/ disinfecting of perimeter.
  - OCT /LASER- Cover the objective lens area with cling wrap. 45-gauge Polyolefin or POE cling wrap (crosslinked or non-crosslinked) should be used, as this provides high tensile strength and clarity. Clean the cling wrap with 70% isopropyl alcohol after each use. In case slit lamp, delivery is required ensure breath shield and surgeon can consider using N95 mask.
  - Corneal Topography - Protocol similar to Visual Field Analyser

- FFA- To be done only if unavoidable. Appropriate precautions to be taken as taken in case of invasive procedures while injecting the dye. Body may be wiped with 70% isopropyl alcohol & lens may be cleaned with 99.9% isopropyl alcohol.
- Other equipment: as per the manufacturer's instruction.

Cautionary Note: Optics Cleaning can damage optics. Hence clean gently. Do not apply pressure. Do not use cotton/buds,use lint free cloth or chamois leather. Special care is taken while cleaning optics of instruments like OCT, FFA and LASERS.



# DURING COUNSELLING & PRE-OPERATIVE EVALUATION

## 1. Counselling:

- Only one attendant, if necessary is allowed with the Patient, both to wear mask.
- Counsellor to wear Face Shield, Mask and Gloves and counselling to be done in a well-ventilated room.
- Name of the patient, attendant and the counsellor attending the patient to be recorded in register for possible contact tracing.
- Pre-surgical Covid-19 test on patients is not mandatory, but a thorough history taking & examination must be done to ensure that patient has minimal probability of having COVID infection.
- Advise patient to not travel, and consider for cancellation, if symptoms or history of contact noted on day of surgery.
- The fitness for the procedure can be done in house or patient can get it done outside and may send the report by email or by any other electronic means and/or bring a copy on the day of surgery. Attempt should be made by the hospital to ensure that the patient electronically transmit the report to the hospital and a clearance/ appropriate advice is given before patient arrive into the hospital. This will minimise unnecessary patient visit in case patient is not fit for procedure. Patient bringing paper copy of the report and any other document should be discouraged.

## 2. Preoperative Investigations as per Organisation Policy:

- Should be completed on same day whenever possible.
- Investigation to be done for one patient at a time.
- Attendant not to be present in investigation room.
- Prefer non-contact procedure like optical biometry.
- Syringing should be avoided.

## 3. Self-Declaration to be Made again on the Day of Surgery:

- No History of fever, cough and respiratory difficulty to be confirmed for patient and any member in the family.
- No travel history or residence in any containment zone in last 3 weeks.
- History of any medication to be recorded.

- Surgery schedule to be made to ensure that a minimum of 20 minutes gap is given between two patients undergoing procedure.

#### 4. On Admission in Ward:

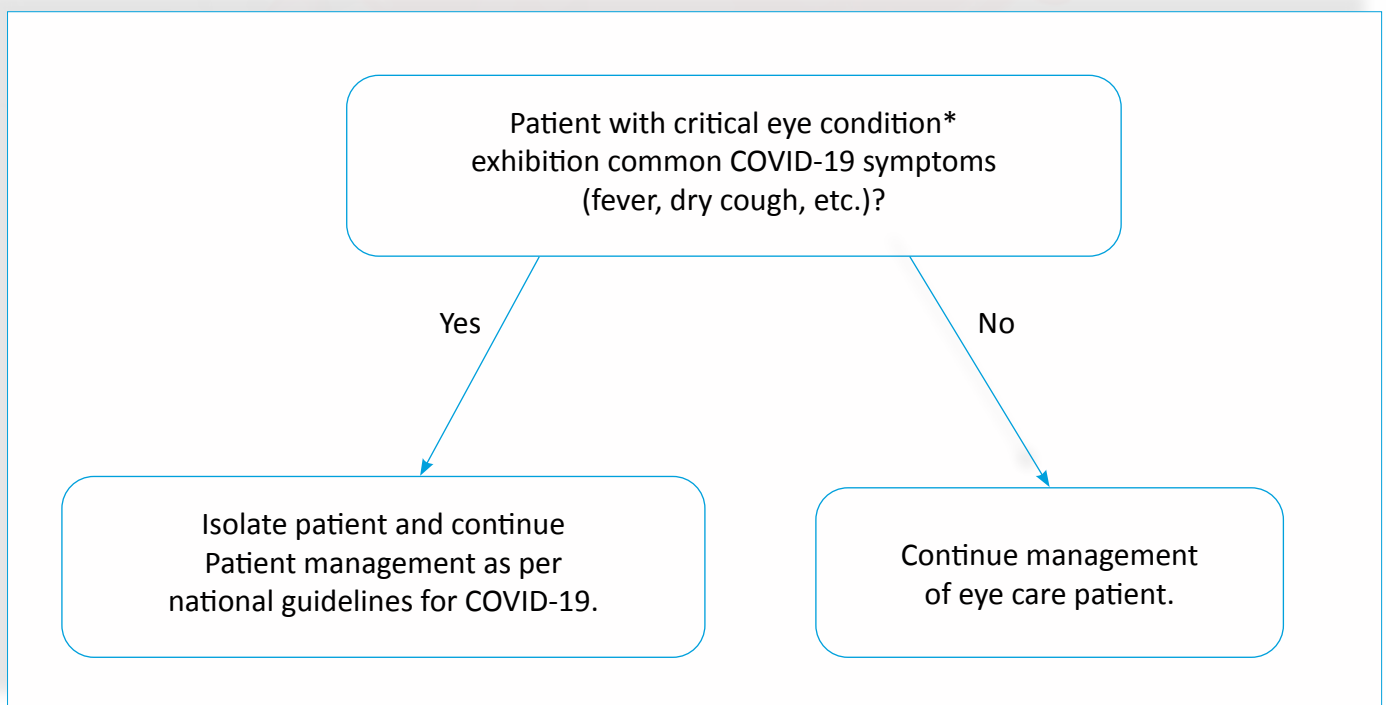
- Staggered admissions with patients coming from a distance be taken up later in the day as they may not be able to report on time.
- One patient per room, with doors and windows open to facilitate ventilation.
- Patients can be admitted in wards while maintaining minimum distance of one metre between beds.
- Patient to change from street clothes to operation theatre attire including fresh mask, cap and foot cover.
- Preoperative evaluation of the patient to be done by the surgeon/ anaesthetist to find out the development of any new symptoms or detect any abnormality.

# AMONGST PATIENTS IN IPD

## Precautions in IPD – OT

### 1. Isolation and Protection:

The following flow chart depicts one of the possible measures of isolating and protecting staff and patients in the outpatients as well as inpatient clinics.



Patient Management in Outpatient and Inpatient Areas

*\*-Critical eye condition implies any sight-threatening condition.*

- It is recommended to arrange regular test on priority basis for clinical staff given their exposure (only if it is high risk-without PPE for more than 10 minutes) to patients suspected of COVID-19, or if they exhibit some of the symptoms themselves.
- If patient is having symptoms suggestive COVID 19 so patient should undergo for COVID 19 test before performing the surgery/ procedure.

### 2. Block Room:

- Maintain physical distancing in the block room and patient should wear a triple layer medical mask before entering the block room.

- Keep minimal vocalisation and when communication needed speak from at least distance of 6 feet.
- The couch to be disinfected after every patient with 70% alcohol swab or freshly prepared 1% sodium hypochlorite solution/ any other suitable disinfectant as per Organisational policy.
- Change gloves after every patient.

### 3. In the Operating Room:

- Operating room (OR) should have minimum essential staff and should document names of entire personnel present in the operating room.
- OR to be cleaned in between every patient (change bed sheet, clean head end and floor with appropriate disinfectant).
- Clean Microscope caps after every case with 70 % Alcohol wipes Change PHACO Tip, Sleeve after every case.
- A gap of at least 20 minutes is to be maintained between two procedures in the same OT. Refer to the guideline of All India Ophthalmological Society.
- Separate dedicated GA OT-Surgeon and assistant to enter OT after intubation and leave before extubation in GA cases.
- Preferably there should be separate changing rooms for male and female health care workers. Preferably there should be a provision for opening the doors with feet or elbow without touching the handles in the changing rooms
- Dedicated doffing area should be provided adjacent to the scrub room, if feasible. All OR health care professionals (HCF) should wear appropriate PPE including anaesthesiologists, surgeons, nurses, technician and house-keeping staff etc. Refer to Annexure 6.
- Taps in the scrub area should be hands free i.e. elbow or foot operated or preferably electronically controlled, activated by infrared sensor.
- Only essential items should be kept inside the OR. They should be easy to clean and do not conceal or retain dirt or moisture within or around it.
- Only single patient to be present in one OR at a given time.
- Separate linen and all disposal items shall be used separately for all individual patient.
- End of day deep cleaning of entire OR to be performed.
- Any linen used to be carried to laundry in a closed trolley and disinfected with dilute sodium hypochlorite before wash.
- Air Handling Units (AHU) with increased fresh air exchange are available. If possible, consider retrofitting dynamic UV and ultrafilters to HEPA, reduce turbulence in OR e.g., minimise opening and closing doors and moving machines.
- Discard BMW strictly as per protocol.

4. All surgeries preferably be day-care unless the medical conditions or situation demands.
5. No eye ball retrieval from homes to be undertaken, only Hospital Cornea Retrieval Programme can be continued in non-Covid-19 cadavers, for utilization of corneas for therapeutic purposes only.
6. In the event of a COVID positive patient presenting for surgery then the surgery will be deferred and patient will be referred to multispecialty hospital approved by the Government of India (GOI)/ State Government for COVID-19 treatment for further management.

# POST-OPERATIVE CARE


## 1. Recovery and Post-Operative Instructions:

- Patients and attendants should be educated about the proper hand hygiene practices and social distancing.
- Educate attendant who is going to apply medication to ensure hand hygiene.
- Patients should be discharged as soon as possible.
- Post-operative counselling should be done separately and strict maintenance of physical distancing. Avoid group counselling.
- Sharing of eye drops between patients should be avoided.
- Limiting post-operative follow ups and try to manage postoperative care through telemedicine / local health workers/ volunteers/ vision centres.
- Tele-consultancy can be provided when necessary.
- Patient to be placed on a bed with guard rails and social distancing to be maintained.
- Monitor probes to be cleaned with 70% alcohol.
- Bed sheet and pillow covers to be removed after each use and sent to laundry in closed bins or trolleys.
- Clean high touch areas like door handle, taps, bed rails and floor as per protocols.
- Wheel chairs/ stretchers to be cleaned after every patient as per the protocol.

## 2. Post-Operative Review:

- Routine queries on post-operative care could be cleared through informational videos for the patient.
- Advise patient to stock up the entire course of post-operative medication considering possibility of the patient going in for a quarantine or supply chain concerns.
- In person consultation to be planned in the afternoon during lean hours and on a lean day to ensure minimal waiting and interaction with other patients.





## **Guidelines on using Personal Protective Equipment (PPE) to Prevent Infection Transmission of COVID -19**

## Personal Protective Equipment (PPEs): Please refer Annexure 7 for specific details for the type and use.

1. **Respirators:** These masks protect the wearer from inhaling small particle aerosols and large drops. Based on the country of origin they would be called N95/ FFP2. Here 95 implies that it filters at least 95% of airborne particles.
2. **Three-layer surgical masks:** They have outer layer which is waterproof against droplet spray (usually coloured), middle layer has particle filter to block pathogens and inner layer is water absorbent to absorb moisture.

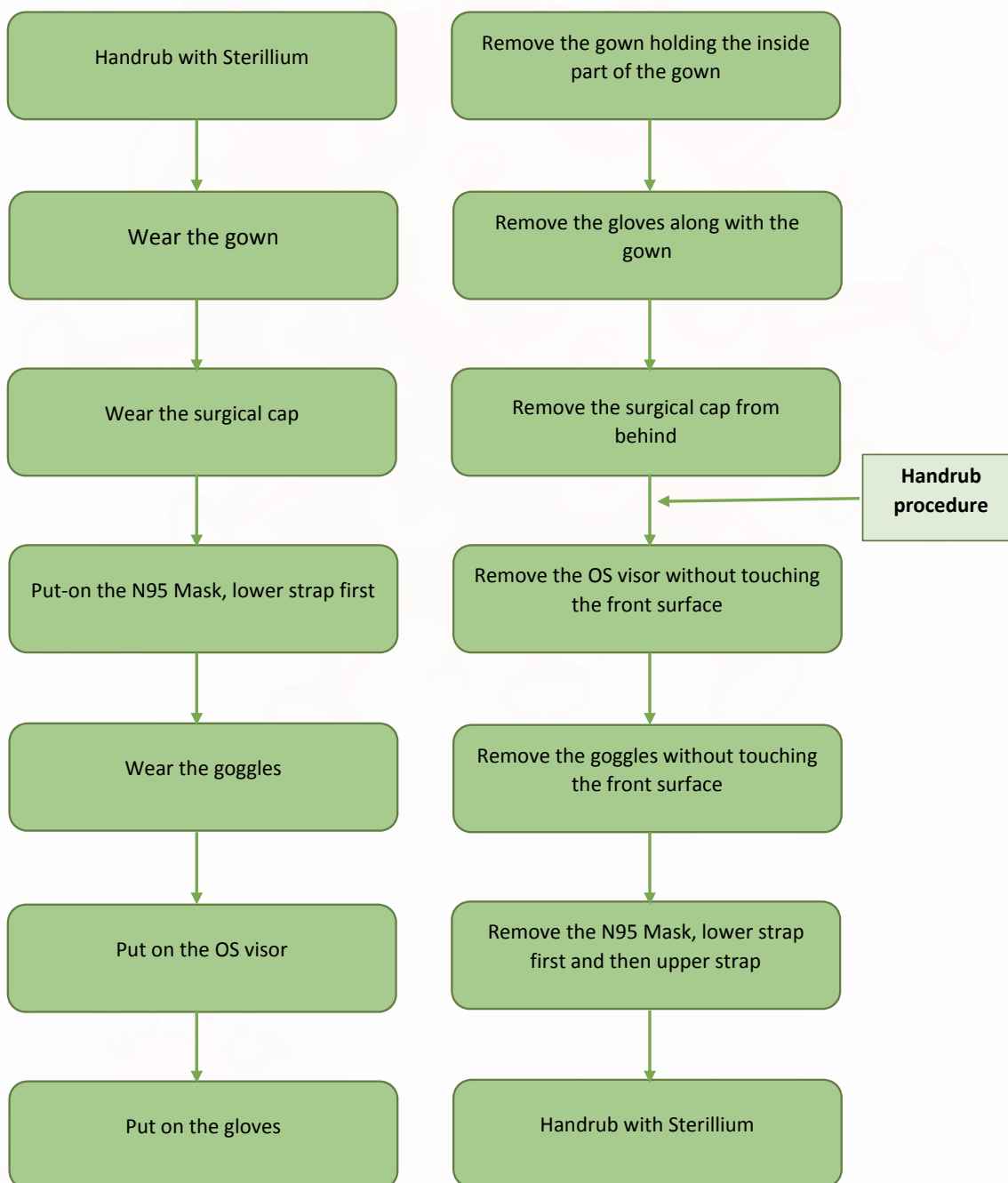
### Correct procedure of wearing triple layer surgical mask:

- Clean your hands.
  - Unfold the pleats; ensure they are facing down.
  - Place over nose, mouth and chin to fit flexible nose piece over nose bridge.
  - Secure with tie strings (upper string tied on top of head above the ears lower string at the back of the neck.). Ensure there are no gaps on either side of the mask, adjust to fit.
  - Change the mask after six hours or as soon as they become wet. To remove mask first untie the string below and then the string above and handle the mask using the upper strings.
3. **Surgical Gowns:** Sterile linen/ disposable gowns (disposable water proof gowns are preferable in OR) worn by HCW during surgical procedures to protect both the patient and health care personnel from the transfer of microorganisms, body fluids, and particulate matter.
  4. **Surgical Isolation Gown:** Complete PPE should be worn (Cap, N95 mask, face shield, impermeable gowns, gloves, and shoe covers) used when there is a medium to high risk of contamination and a need for larger critical zones.
  5. **Goggles:** Protect eyes and should fit snugly over and around eyes. Anti-fog feature and scratch resistant improves clarity. Personal glasses are not a substitute for goggles.
  6. **Face shields:** Should cover forehead, extend below chin and wrap around side of the face.
  7. **Gloves:** Nitrile, Non-Sterile, Powder Free Outer gloves preferably reach mid-forearm (minimum 280 mm total length).
  8. **Shoe Cover:** Shoe covers should be made up of impermeable fabric. To be used over shoes to facilitate personal protection and decontamination. Should cover the entire shoe and reach above ankles.
  9. **Head Cover:** Coveralls usually cover the head. Those using gowns, should use a head cover that covers the head and neck while providing clinical care to patients. Hair and hair extensions should fit inside the head cover.

## Protocol for Donning PPE:

Clean hands → Put on special work clothes and work shoes → Clean hands → Put on disposable surgical cap → Put on medical protective mask (N95) → Put on inner disposable nitrile/latex gloves → Put on goggles and protective clothing (note: if wearing protective clothing without foot covers, please also put on separate waterproof boot covers), put on a disposable isolation gown (if required in the specific work zone) and face shield/powerd air-purifying respirator(if required in the specific work zone) → Put on outer disposable latex gloves.

### Donning and Doffing the Personal Protective Equipment - Sequence



Adapted from Centres for Disease Control and Preventive (CDC) Handout:

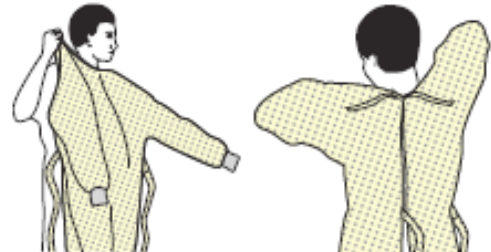
<https://www.cdc.gov/hai/pdfs/ppe/ppe-sequence.pdf>

## SEQUENCE FOR PUTTING ON PERSONAL PROTECTIVE EQUIPMENT (PPE)

The type of PPE used will vary based on the level of precautions required, such as standard and contact, droplet or airborne infection isolation precautions. The procedure for putting on and removing PPE should be tailored to the specific type of PPE.

### 1. GOWN

- Fully cover torso from neck to knees, arms to end of wrists, and wrap around the back
- Fasten in back of neck and waist



### 2. MASK OR RESPIRATOR

- Secure ties or elastic bands at middle of head and neck
- Fit flexible band to nose bridge
- Fit snug to face and below chin
- Fit-check respirator



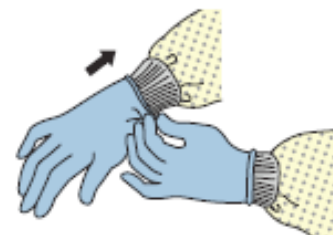
### 3. GOGGLES OR FACE SHIELD

- Place over face and eyes and adjust to fit



### 4. GLOVES

- Extend to cover wrist of isolation gown



## USE SAFE WORK PRACTICES TO PROTECT YOURSELF AND LIMIT THE SPREAD OF CONTAMINATION

- Keep hands away from face
- Limit surfaces touched
- Change gloves when torn or heavily contaminated
- Perform hand hygiene



## Protocol for Doffing PPE:

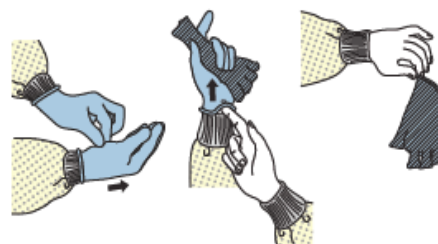
Disinfect outer gloves→ Remove outer apron if any→ Disinfect outer gloves→ Remove and discard outer gloves→ Inspect and disinfect inner gloves→ Remove the face shield→ Disinfect inner gloves→ Remove the surgical hood→ Disinfect inner gloves→ Remove the coverall→ Disinfect inner gloves→ Remove boot covers→ change inner gloves→ Remove the N95 respirator (protocol for reuse of N95 masks before final disposal, where applicable)→ Disinfect the new inner gloves→ Disinfect your shoes→ Disinfect inner gloves→ Remove and discard inner gloves→ Perform hand hygiene→ Review body contaminants→ Exit doffing area.  
**Please refer AIIMS, New Delhi guidelines for N95 reuse guidelines.**

### HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE) EXAMPLE 1

There are a variety of ways to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. Here is one example. **Remove all PPE before exiting the patient room except a respirator, if worn.** Remove the respirator after leaving the patient room and closing the door. Remove PPE in the following sequence:

#### 1. GLOVES

- Outside of gloves are contaminated!
- If your hands get contaminated during glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Using a gloved hand, grasp the palm area of the other gloved hand and peel off first glove
- Hold removed glove in gloved hand
- Slide fingers of ungloved hand under remaining glove at wrist and peel off second glove over first glove
- Discard gloves in a waste container



#### 2. GOGGLES OR FACE SHIELD

- Outside of goggles or face shield are contaminated!
- If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Remove goggles or face shield from the back by lifting head band or ear pieces
- If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in a waste container



#### 3. GOWN

- Gown front and sleeves are contaminated!
- If your hands get contaminated during gown removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Unfasten gown ties, taking care that sleeves don't contact your body when reaching for ties
- Pull gown away from neck and shoulders, touching inside of gown only
- Turn gown inside out
- Fold or roll into a bundle and discard in a waste container

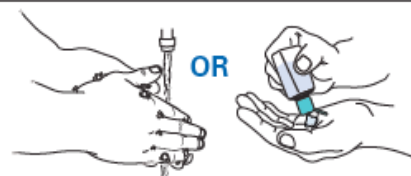


#### 4. MASK OR RESPIRATOR

- Front of mask/respirator is contaminated — DO NOT TOUCH!
- If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front
- Discard in a waste container



#### 5. WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITIZER IMMEDIATELY AFTER REMOVING ALL PPE



**PERFORM HAND HYGIENE BETWEEN STEPS IF HANDS BECOME CONTAMINATED AND IMMEDIATELY AFTER REMOVING ALL PPE**



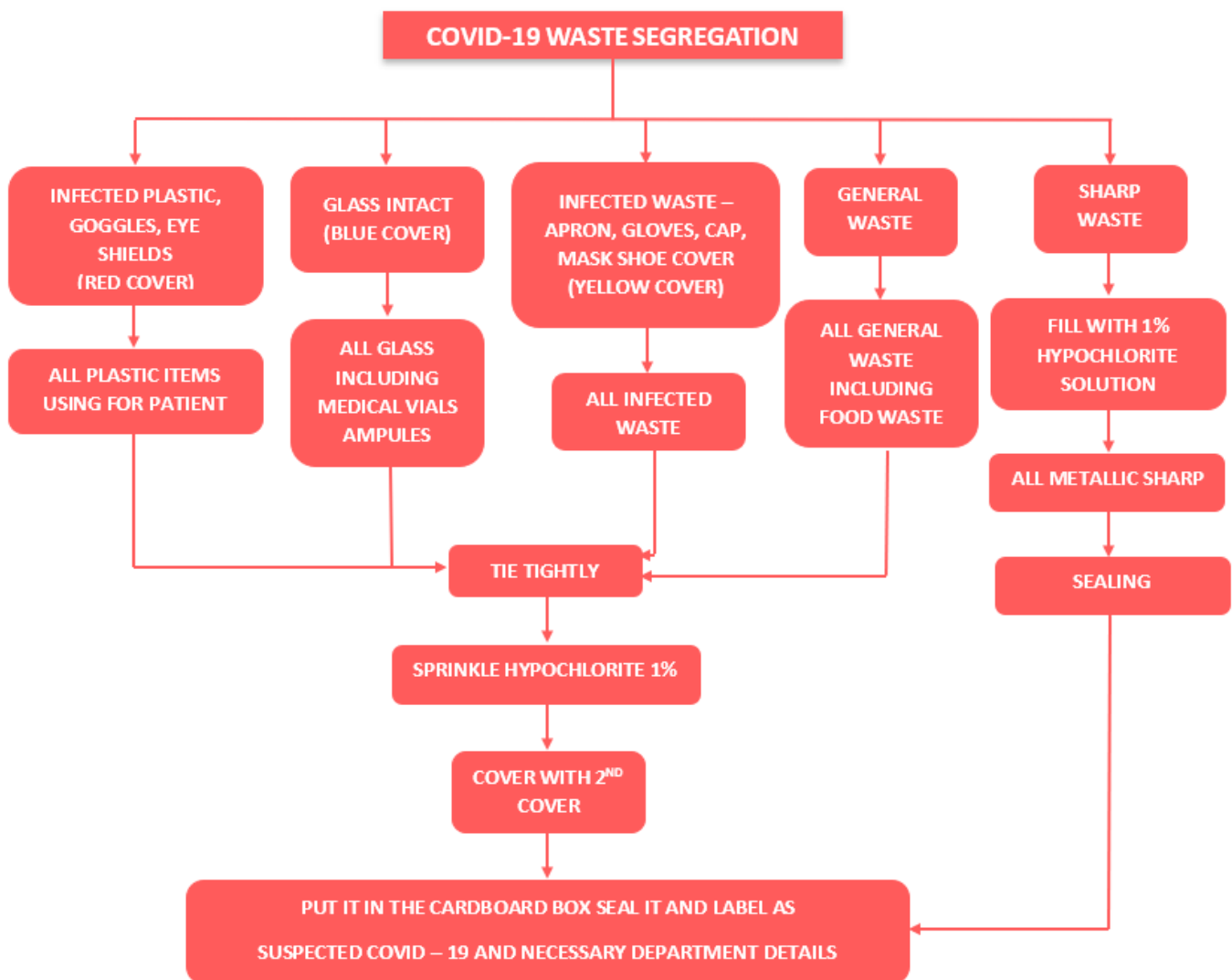
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To verify authenticity of PPE certificates, refer Annexure 8.

Click here to download the image: [visit: https://www.cdc.gov/hai/pdfs/ppe/ppe-sequence.pdf](https://www.cdc.gov/hai/pdfs/ppe/ppe-sequence.pdf)



## COVID 19 BMW Waste Segregation:



Manage biomedical waste as per the existing Biomedical Waste Management Rules. However, for COVID 19 waste, following guideline may be referred:

1. Collect used PPE such as goggles, face-shield, splash-proof apron, Plastic Coverall, Hazmat suit, nitrile gloves into Red bag.
2. Collect used masks (including triple-layer mask, N95 mask, etc.), head cover/ cap, shoe-cover, disposable linen Gown, non-plastic or semi-plastic coverall in Yellow bag.
3. Collect used masks (including triple-layer mask, N95 mask, etc.), head cover/ cap, shoe-cover, disposable linen Gown, non-plastic or semi-plastic coverall in Yellow bag. Treat BMW immediately.

These Red bags and Yellow bags are needed to be treated and disposed of as per Part 1 of Schedule I of Bio-medical Waste Management Rules, 2016.



- Treatment of Red Bag - Autoclaving/ Microwaving/ Chemical Treatment
- Treatment of Yellow Bag - Incineration/deep burial

Note: Waste collection bags for waste types needing incineration shall not be made of chlorinated plastics.

As per CPCB **Guidelines-Revision 2 dated 18/04/2020**, used masks and gloves generated **from home quarantine or other households** should be kept in a paper bag for a minimum of 72 hours prior to disposal of the same as general waste. It is advisable to cut the masks prior to disposal to prevent reuse.



## **Guidelines on Disinfection to Prevent Transmission of Infection of COVID -19 in Hospital/ Clinics**

It is useful to categorise different areas of the hospital based on the possibility of transmission of infection. Following guidelines for disinfection may be adapted by Organisations. The cleaning regimen based on this classification is also mentioned.

## For Housekeeping:

High Risk Area	Moderate risk areas	Low risk areas
OR CSSD Registration Counter OPD Counselling room Consultation room Patient waiting areas Lifts Washrooms	Meeting halls Lounges Cabins Canteen	NONE

Risk Category	Frequency of cleaning	Level of cleaning/ disinfection	Method cleaning/ disinfection
High Risk Area	Once in two hours and spot cleaning as required	Cleaning and intermediate level disinfection	Cleaning with soap & detergent plus disinfection with alcoholic compound, hydrogen peroxide and phenolics
Moderate Risk Area	Once in four hours and spot cleaning as required	Cleaning and low level disinfection	Cleaning with soap and detergent plus disinfection with phenolics
Low Risk Area	Areas working round the clock once in a shift & areas having general shift twice in the shift and spot cleaning	Only cleaning	Physical removal of soil, dust or foreign material followed by cleaning with water and detergent

Area/item*	Process for Disinfection	Method
Floors	Lysol (Ethanol/Sd Alcohol, 40 1-3%, Isopropyl alcohol 1-2%, <i>p</i> -Chloro- <i>o</i> -benzylphenol 5-6%, <i>O</i> -Phenylphenol 0.1%, Potassium Hydroxide 3-4%, Alkyl (C12-C18), Dimethylbenzylammonium Chloride 0.08%, Lactic acid & Hydrogen peroxide) or 1% Sodium Hypochlorite	Every 2 to 3 hourly and Moderate risk areas 3 times a day.  Two buckets, one with plain water and one with detergent solution Three Bucket system to be adapted  Cleaning with Aldasan 2000 once a week. Daily fumigation with Bacillool Extra/D 125/Korsolex.

Area/item*	Process for Disinfection	Method
Ceiling and Walls	Lysol or 1% Sodium Hypochlorite	Damp dusting should be done in straight lines that overlap one another
Disinfection of Object Surfaces	1000 mg/L chlorine – containing disinfectant	Wipe cleaner regions first, then more contaminated regions: first wipe areas that are not frequently touched. (Once an object surface is wiped clean, replace the used wipe with a new one).
Air Disinfection	Plasma air steriliser run for air disinfection / UV lamps	UV lamps for 1 hour each time
Doors and Door Knobs	Surgical spirit or 70% alcohol	Should be wiped with alcohol-based rub/spirit swab before each patient contact
Laboratories etc where spill care is required	1% Sodium Hypochlorite	As per spill management protocol. At the end, Wash mop with detergent and hot water and allow it to dry.
Stethoscope	70% alcohol or surgical spirit	Should be wiped with alcohol-based rub/spirit swab before each patient contact
BP Cuffs and Covers	70% alcohol	Should be wiped with alcohol-based rub/spirit swab before each patient contact
Thermometer	70% alcohol	Should be wiped with alcohol-based rub/spirit swab before each patient contact
Injection & Dressing Trolley	Lysol & 70% alcohol	Clean Daily with detergent and water After each use, should be infected with 70% alcohol-based reagent
Refrigerators	Lysol & water	Empty the fridge and store things appropriate. Inside cleaning: Weekly. Dry it properly and replace the things. Surface cleaning: As for High touch surfaces
Equipment	All external surfaces with Lysol and water, sensitive probes (except UBM) and optics with isopropyl alcohol	
Railings	Surgical spirit or 70% alcohol	Should be wiped with alcohol-based rub/ spirit swab

- Furniture: can be cleaned with water and detergent, except areas in direct contact with patient wherein either 70% alcohol, surgical spirit or 1% Sodium Hypochlorite could be used.

- Toilets: for the floor & the closet use 1% sodium hypochlorite or commercial cleaner (Harpic).
- Mops: Immerse in 0.5% sodium hypochlorite solution for 30 minutes & rinse with plain water
- Buckets: Rinse with 0.5% sodium hypochlorite solution/ for 1 minute. Rinse with plain water
- Trolley: Wipe down the trolley body with 0.5% sodium hypochlorite solution. Rinse with plain water.

**Note:** Wear heavy duty/disposable gloves, disposable long-sleeved gowns, eye goggles or a face shield, and a medical mask. Hands should be washed with soap and water/alcohol-based hand rub immediately after each piece of PPE is removed.

## Disinfection Procedure of Fabrics:

### a. Fabrics

- Fabric linen/ cloth items like door or window curtains sofa set chairs with cushions, carpets etc. to be avoided in the high risk and moderate risk areas.

### b. Collection methods

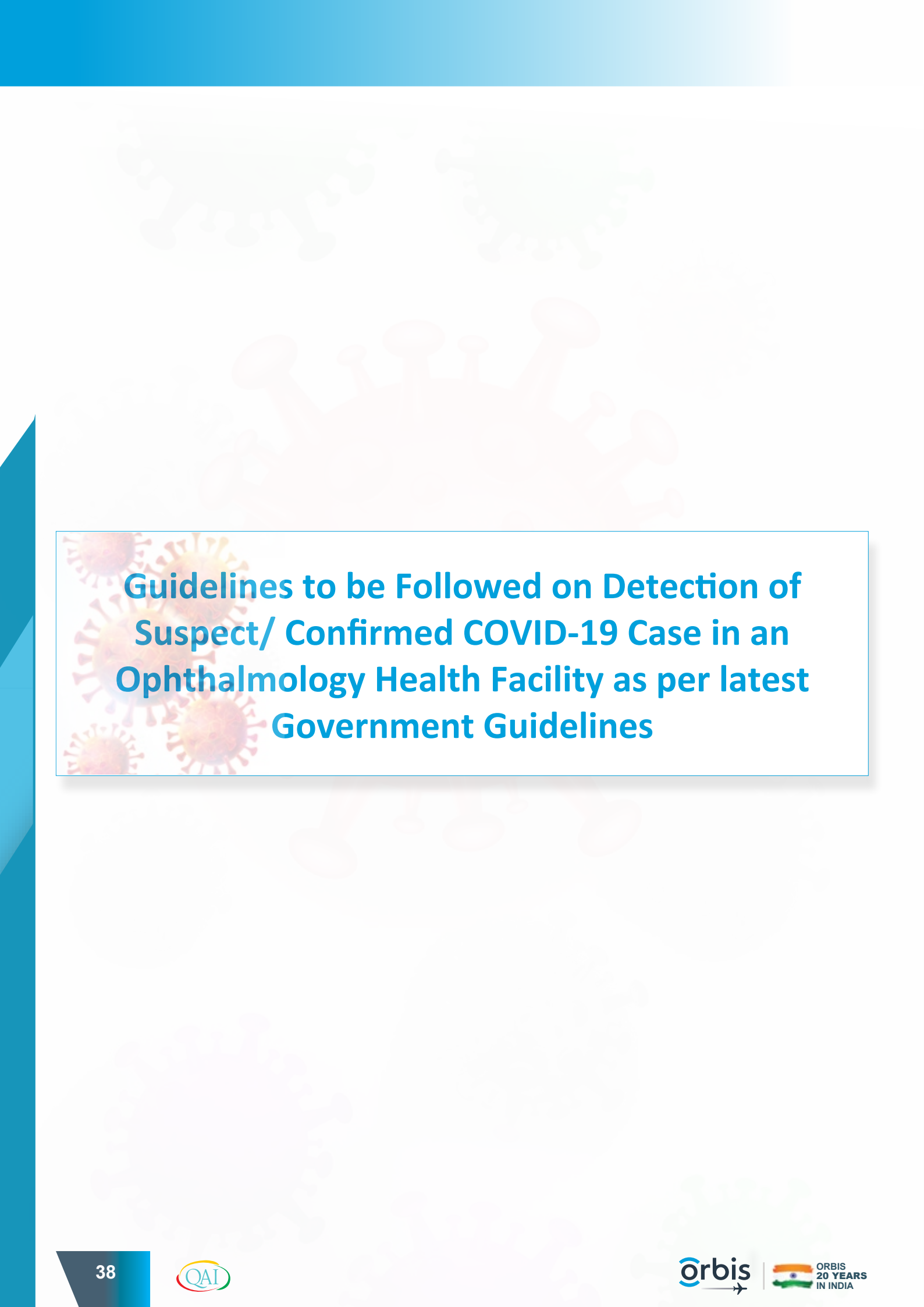
- First, pack the fabrics into a disposable water-soluble plastic bag and seal the bag with matching cable ties. Then, pack this bag into another plastic bag, seal the bag with cable ties in a gooseneck fashion. Finally, pack the plastic bag into a yellow fabric bag and seal the bag with cable ties. Attach a special label indicating the infected items and the department name. Send the bag to the laundry.

### c. Storage and washing

- Infectious fabrics should be separated from other infectious fabrics (non-COVID-19) and washed in a dedicated washing machine.
- Before washing disinfect these fabrics with 1% sodium hypochlorite solution for at least 30 minutes.

### d. Disinfection of transport tools

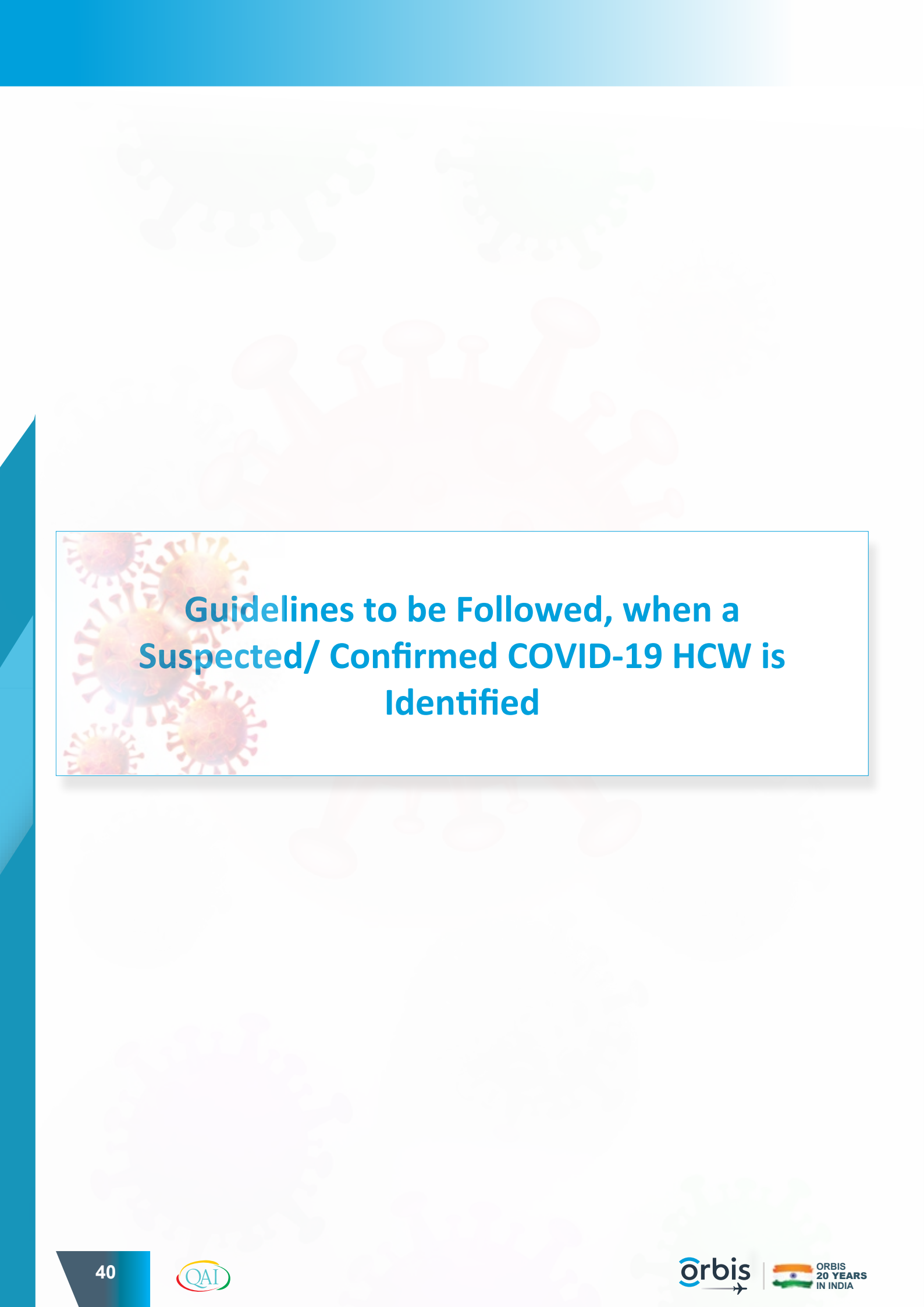
- Special transport tools should be used specifically for transporting infectious fabrics.
- The tools shall be disinfected immediately each time after being used for transporting infectious fabrics.
- The transport tools should be wiped with chlorine-containing disinfectant (with 1% sodium hypochlorite). Leave disinfectant for 30 minutes before wiping the tools clean with clean water.



**Guidelines to be Followed on Detection of  
Suspect/ Confirmed COVID-19 Case in an  
Ophthalmology Health Facility as per latest  
Government Guidelines**



1. Assess the clinical status of the patient prior to referral to a designated COVID facility.
2. The patient should be immediately isolated to another room (if currently being managed in a shared ward/ room). If the clinical condition permits, such patients should be masked and only a dedicated healthcare worker should attend this case, following due precautions.
3. If the clinical status of the case permits, transfer such case to a COVID-19 isolation facility (dedicated COVID Health Centre or dedicated COVID Hospital), informing the facility beforehand about the transfer, as per his/her clinical status, test results (if available), with information to local health authority. Complete case records of such patients must be made available to the receiving hospital.
4. Follow appropriate standard precautions while transporting the patient, if required.
5. This should be followed by disinfection procedures at the facility and the ambulance.
6. All contacts of this patient (other patients being managed in the same room or ward, healthcare workers who have attended to him/her, support staff who may have come in close contact, caretaker/ visitors etc.) should be quarantined according to MoHFW guidelines. Their details must also be shared with the local health authorities.
7. All close contacts (other HCWs and supportive staff) of the confirmed case should be put on Hydroxychloroquine chemoprophylaxis for a period of 7 weeks, keeping in mind the contraindications of HCQ or time to time notification issued by MoHFW in this regard.
8. Further action to be taken as per the direction of local health authorities.



**Guidelines to be Followed, when a Suspected/ Confirmed COVID-19 HCW is Identified**

1. HCWs developing respiratory symptoms (e.g. fever, cough, shortness of breath) should be considered suspected case of COVID-19.
2. There is a process to identify suspected/ confirmed case of COVID-19 amongst HCWs. He/ she should immediately inform his supervisor and HR. He/ she should be isolated and arrangement must be made to immediately to refer such an HCW to COVID-19 designated hospital for isolation and further management.
3. He/ she should be immediately taken off the roster.
4. Rapid risk assessment is carried out for other HCWs and other patients that might have been exposed to the suspect HCW and put them under quarantine and follow up for 14 days (or earlier if the test result of a suspect case turns out negative). Their details must also be shared with the local health authorities.
5. Hydroxychloroquine chemoprophylaxis can be given to all concerned (other HCW and supportive staff) as per the existing ICMR guidelines, keeping in mind the contradictions of the HCQ. Please follow updated guidelines on the use of HCQ.
6. All healthcare facilities (HCF) must have a staffing plan in place including a contingency plan for such an event to maintain continuity of operations.
7. Ensure that the disinfection procedures are strictly followed. Once a suspect/ confirmed case is detected in a healthcare facility, standard procedure of rapid isolation, contact listing and tracking will follow with no need to shut down the whole facility.
8. Matter should be informed to local health authorities and further action to be taken as per their direction.



## **Guidelines for Transportation of COVID - 19 Patients to Dedicated COVID Hospitals**

1. The condition of the patient will be assessed.
2. Patient will be transported to the designated COVID hospital in a safe manner.
3. Depending on the patient condition, appropriate ambulance will be arranged i.e. BLS or ACLS.
4. The HCW will wear the appropriate PPE.
5. Only one caregiver should be allowed to accompany the patient.
6. The patient and the caregiver will be provided with a triple layer medical mask.
7. The biomedical waste generated (including PPE) to be disposed of in a bio-hazard bag (yellow bag). Inside would be sprayed with Sodium Hypochlorite (1%) and after drying, the exterior will also be sprayed with the same. It would be disposed of at their destination hospital. This shall again be followed by hand washing.

### Rational use of PPE by Ambulance Staff

Activity	Risk	Recommended PPE	Remarks
Transporting patients not on any assisted ventilation	Moderate Risk	N-95 Mask Gloves	--
Management of Severe Acute Respiratory Infections (SARI) patient while transporting	High Risk	Full Complement of PPE	When aerosol generating procedures* are anticipated
Driving the ambulance	Low Risk	Triple layer medical mask Gloves	--

**\*Aerosol generating procedures:** Although there is no comprehensive list of aerosol-generating procedures, current data suggest that the following procedures can generate infectious aerosols:

- tracheal intubation
- non-invasive ventilation
- tracheotomy
- cardiopulmonary resuscitation
- manual ventilation before intubation
- sputum induction
- bronchoscopy
- autopsy procedures
- dental procedures that use spray-generating equipment

It is not yet known whether aerosols generated by nebulizer therapy or high-flow oxygen delivery are infectious, as data on this is still limited.



## Guidelines for Decontamination of Ambulance



1. Gloves and N-95 masks are recommended for sanitation staff cleaning the ambulance.
2. Disinfect (damp wipe) all horizontal, vertical and contact surfaces with a cotton cloth (or microfiber) saturated with 1% sodium hypochlorite solution.
3. These surfaces include, but are not limited to stretcher, bed rails, infusion pumps, IV poles/hanging IV poles, monitor cables, telephone, countertops and sharps container.
4. Clean dirty walls (when visually soiled) with disinfectant-detergent and windows with glass cleaner. Allow contact time of 30 minutes and allow air dry.
5. Damp mop floor with 1% sodium hypochlorite disinfectant.
6. Discard disposable items and infectious waste in a biohazard bag.
7. The interior is sprayed with 1% sodium hypochlorite.
8. The bag is tied and exterior is also decontaminated with 1% sodium hypochlorite and should be given to the hospitals to dispose of according to their policy.
9. Change cotton mop water containing disinfectant after each cleaning cycle.
10. Do not place cleaning cloth back into the disinfectant solution after using it to wipe a surface.
11. Remove gloves and wash hands.

Note: All hospitals vehicle or ambulances should be cleaned/ disinfected at least twice a day.



## Guidelines for Air Conditioning and Ventilation in Hospitals/ Clinics

## Effect of Environmental Conditions

Proper maintenance of Temperature and Relative Humidity as per need of the clinical area is important for the comfort of staff /patient as well as deterrent for infecting agents.

**Ventilation:** It involves following four steps [for details of Heating, Ventilation and Air-conditioning (HVAC), refer to ISHRAE Guidelines and <https://www.who.int/news-room/q-a-detail/q-a-ventilation-and-air-conditioning-in-health-facilities-and-covid-19>]:

1. Pressurisation
2. Air changes per hours
3. Filtration
4. Purification of exhaust air

First three processes result in trapping and colonisation of microorganisms. Purification step is most essential and if this step is not taken care of adequately may result in the transmission of infection through HVAC system.

Various methods for purification like HEPA filtration, UVGI or ionisation can be used in combination. Operating Room should have a dedicated air handling unit and duct of this unit should not be near to any contaminated air quality zone.

WHO has published guidance on ventilation and air-conditioning systems in the context of COVID-19, available at <http://www.ghin.org/heat-and-covid-19/ac-and-ventilation>. WHO works closely with the World Meteorological Organisation Joint Office for Climate and Health and the United States National Oceanic and Atmospheric Administration (NOAA) through the Global Heat Health Information Network to develop and update this guidance.

## Conditions Pertaining to HVAC System

Hospitals would be served by a HVAC system that would be of a recirculatory type, wherein the air from the room is taken back to the AHU for thermal conditioning and brought back. The same HVAC system could also be connected to a few other areas of the hospital. In some cases, there might be no dedicated return air duct and it could be a ceiling return system. The outdoor air source for the AHU shall not be from within the building and all care shall be taken to avoid intake of outdoor contaminants, to the best possible extent. An independent exhaust blower shall be provided to extract the room air and exhaust out into the atmosphere, preferably, after suitable “exhaust air treatment”. It is advisable to install differential pressure metres to measure this metric. The supply air quantity shall be such that it will provide a minimum of 12 air changes per hour. The position of the extract air in the room shall be just above the head of the patient’s bed.

WHO recommended following air ventilation requirements for health facilities (Click here to see : <https://www.who.int/news-room/q-a-detail/q-a-ventilation-and-air-conditioning-in-health-facilities-and-covid-19>):

In health facilities, large quantities of fresh and clean outdoor air are required to control contaminants and odours. There are three basic criteria for ventilation:

- *ventilation rate:* the amount and quality of outdoor air provided into the space;
- *airflow direction:* the direction of airflow should be from clean to less-clean zones; and

- *air distribution or airflow pattern*: the supply of air to each part of the space to improve dilution and removal of pollutants from the space.

For health facilities in general, where aerosol generating procedures are not performed, ventilation of 60 litres/second per patient (L/s/patient) is adequate for naturally-ventilated areas, or 6 air changes per hour for mechanically-ventilated areas.

For areas where aerosol generating procedures are performed, recommended ventilation rates are as follows:

- Naturally ventilated facilities/areas: the recommended average natural ventilation rate is 160 L/s/patient. Use of natural ventilation depends on favourable climate conditions (e.g. no risk of heat stress, no air pollution). Contaminated air should exhaust directly to the outside, away from air-intake vents, clinical areas, and people.

Mechanically ventilated facilities/areas: where mechanical ventilation is available, negative pressure should be created to control the direction of airflow. The ventilation rate should be 6-12 air changes per hour, ideally 12 air changes per hour for new constructions, with a recommended negative pressure differential of  $\geq 2.5$  Pa (0.01-inch water gauge) to ensure that air flows from the corridor into the patient room.

For air-conditioning/ ventilation: the temperature setting of all air conditioning devices should be in the range of 24-30 °C, relative humidity should be in the range of 40- 70%, intake of fresh air should be as much as possible and cross ventilation should be adequate.

## Treatment of Exhaust Air

The exhaust air is most likely to contain particles carrying a viral load and hence a suitable technique should be deployed to prevent the spread of infections. Treatment of exhaust air can be done preferably by HEPA filtration (HEPA filters shall be tested and certified for performance in accordance to international standards like IEST, EN, ISO, IS etc.). These HEPA filters shall be a minimum of H13 (EN1822-1) filter class or equivalent. When not possible, treatment of exhaust air by Chemical disinfection is acceptable. When both the methods are not viable, the exhaust air shall be let off into the atmosphere through an upward plume at a height of 3 m above the tallest point of the building, thereby lowering the viral load concentrations to insignificant levels by dilution. This exhaust discharge shall be well away from other air intake points and populated places. When HEPA filters are used to treat the exhaust air, it is preferable to install them at the primary point of air extraction in the room and the exhaust blower shall be at the discharge end of the exhaust duct (where applicable).

Chemical disinfection of the exhaust air can be done by bubbling the exhaust air through a “Diffused air aerator tank” (preferably of non-metallic material) holding a 1% sodium hypochlorite solution. The concentration shall be checked on a regular basis and dosing undertaken based on need. The aeration tank shall be placed in an unpopulated outdoor area and not inside enclosed space. Suitable PPE shall be used while handling the hypochlorite solution and direct contact with skin and eyes shall be avoided. The above chemical inactivation procedure for treatment of exhaust air is suggested based on the available information at this time.

The other two options available for exhaust air treatment being UV irradiation and heating. MER Darnell et al. observed that, an exposure time of 45 min at a temperature of 75 °C resulted in complete inactivation of SARS-CoV. Similarly, an UVC (254 nm wavelength) irradiation with an exposure time of 15 minutes at irradiation intensity of 4016  $\mu$ W/Cm<sup>2</sup> resulted in complete inactivation of SARS-CoV.

## Operations and Maintenance

Most of the healthcare establishments have remained closed during the lockdown. These establishments will need maintenance for both Engineering and Health Safety perspective. OR cultures should be checked on three consecutive days after adequate cleaning and fumigation. The air-conditioned spaces of establishments under prolonged lockdown will pose health hazards due to fungus and moulds in the ducts and open spaces depending on the humidity and temperature prevailing within. Further there may be bird droppings, and excreta of rodents as well increased level of insects. The system to be redesigned for sufficient fresh air intake and ventilation. The following steps are recommended for the start-up of air conditioning system.

- The user or the owner should get the area sanitised
- Study the fresh air and exhaust system adequacy as per the guidelines and inform the user to modify the system if found inadequate.
- Carry the preventive maintenance on all the units as per manufacturer's guidelines. This should include disinfecting and cleaning of:
  - a. Filters, grilles, diffusers & internal surfaces: it is recommended to use 5% Cresol solution (containing 50% Cresol and 50% Liquid soap solution). Mix 1 litre of this solution in 9 litres of water. The surface shall be sprayed with this solution, left for 10 minutes and then washed/ wiped clean with water/ cloth. (the above methodology is only for washable filters)
  - b. Condensate drain pan: Disinfecting/ treatment of condensate drain pan is suggested using UV treatment or 1% sodium hypochlorite dosing. This will apply only if the HVAC equipment is working on a re-circulatory mode.
  - c. Coils: Follow standard recommendations of coil cleaning and then sanitise using the same protocol as that of the filters specified above.
- In case the area has ducted air distribution, it is advisable to clean the ducts by an appropriate method that may include sanitisation.
- The following process is recommended at start-up:
  - a. Open all the doors and windows of the space.
  - b. Ensure that all cleaning protocols as advised above are complete
  - c. Run the fresh air system at the maximum intake of air setting.
  - d. Start and run the exhaust systems if available.
  - e. Start the air conditioning system in fan mode only, without filters and run it for minimum of two to four hours with doors open and exhaust system operational.
  - f. Install the clean & sanitised filters
  - g. Start the AC in normal mode and run for two hours with doors open and then close the doors and windows.
- The fresh air and ventilation system should be kept on throughout the off cycle and on the weekend and holidays in air circulation mode.

## How to Disinfect Tools and Tackles:

- First, clean the surfaces, removing any contaminants, dust, or debris. This can be done by wiping them with soap water (or a cleaning spray) and a hand towel. Wash towel with soap and water.
- Then apply a surface-appropriate disinfectant. The quickest and easiest way to do this is with the following:
  - a. Disinfecting wipes
  - b. Disinfectant spray
  - c. Isopropyl alcohol
  - d. Hydrogen peroxide



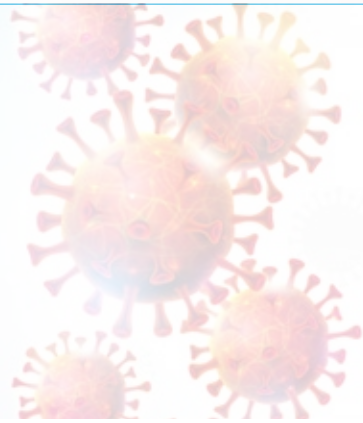


## **Do's and Don'ts for Staff and Patients**

Do's	Don'ts
Only one attendant is allowed for patients: 1. age > 60 years, 2. blind/ disabled patients 3. children less than 16 years	Don't overcrowd the room.
Wear mask and use appropriate PPEs. Cover face with elbow while sneezing.	Cough or Sneeze with open face.
Sanitise/ Wash hands at entrance and practice good hand hygiene frequently.	Avoid touching tabletops, door handles, lift buttons etc.
Follow 5 movement of hand hygiene: 1. Before touching the patient 2. After touching the patient 3. After touching the patient surrounding 4. Before aseptic procedure After body fluid exposure risk	Tie a mask around your chin or hanging around the neck or that can be loose fitting and need more adjustment.
Inform to the doctor or your superior, if you think you may have symptoms concerning for COVID-19.	Don't have food together in a group or share utensils or drinking glasses with others.
Maintain social distancing. Stand and Sit only in designated areas.	Don't shake hands or give hugs as greetings. Use an alternative greeting that maintains 6-8 feet of distance.
Maintain fresh air circulation by keeping doors and windows open.	Don't visit the centre if you are suffering from cold, cough, fever or feeling unwell.
Keep open as many doors as possible to avoid touching of doorknobs.	Don't touch your eyes, nose, mouth and face without washing your hands.
Try to follow an open-door and no-AC policy if possible	Do not spit in public.
Follow Organisational rules and guidelines	Don't panic, take all standard precautions including hand hygiene and maintaining social distancing.

### Disposal as per Bio-Medical Waste (BMW) Rules:


Do's	Don'ts
USED for OPD work only.	Never use OPD PPE for OR work (Applicable to all).
PPE should be discarded in an appropriate waste container after use, and hand hygiene should be performed before putting on and after taking off PPE.	Don't touch the outer surface of your PPE while working or doffing of the PPE.

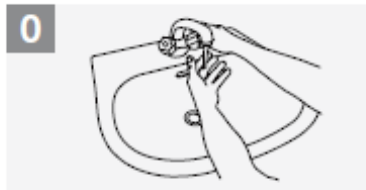


## Annexures

# How to Handwash?

WASH HANDS WHEN VISIBLY SOILED! OTHERWISE, USE HANDRUB

 Duration of the entire procedure: 40-60 seconds



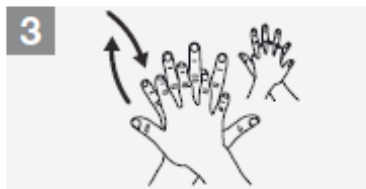
0 Wet hands with water;



1 Apply enough soap to cover all hand surfaces;



2 Rub hands palm to palm;



3 Right palm over left dorsum with interlaced fingers and vice versa;



4 Palm to palm with fingers interlaced;



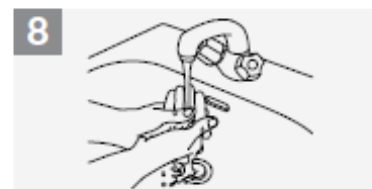
5 Backs of fingers to opposing palms with fingers interlocked;



6 Rotational rubbing of left thumb clasped in right palm and vice versa;



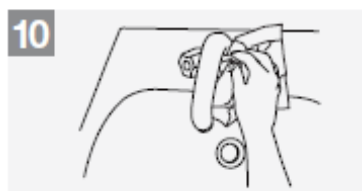
7 Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;



8 Rinse hands with water;



9 Dry hands thoroughly with a single use towel;



10 Use towel to turn off faucet;



11 Your hands are now safe.



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May 2009

To download the image on donning and doffing PPE, visit:

[https://www.who.int/gpsc/5may/How\\_To\\_HandWash\\_Poster.pdf?ua=1](https://www.who.int/gpsc/5may/How_To_HandWash_Poster.pdf?ua=1)

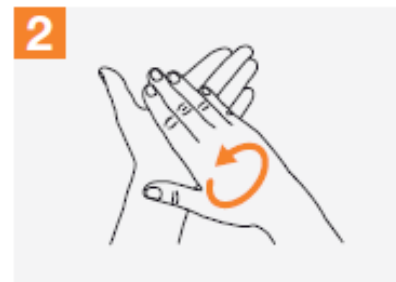
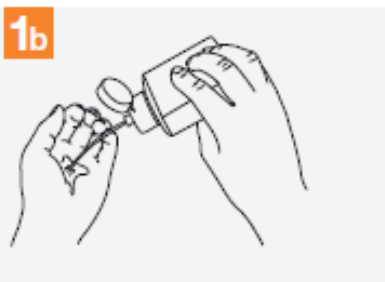
# How to Handrub?

RUB HANDS FOR HAND HYGIENE! WASH HANDS WHEN VISIBLY SOILED

 Duration of the entire procedure: 20-30 seconds



1a Apply a palmful of the product in a cupped hand, covering all surfaces;



2 Rub hands palm to palm;



3 Right palm over left dorsum with interlaced fingers and vice versa;



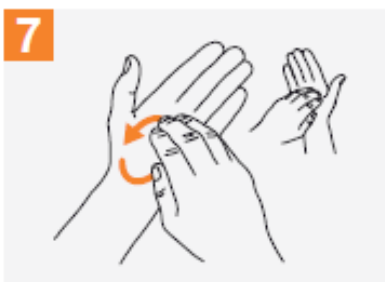
4 Palm to palm with fingers interlaced;



5 Backs of fingers to opposing palms with fingers interlocked;



6 Rotational rubbing of left thumb clasped in right palm and vice versa;



7 Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;



8 Once dry, your hands are safe.



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May 2009

To download the image on donning and doffing PPE, visit:

[https://www.who.int/gpsc/5may/How\\_To\\_HandRub\\_Poster.pdf?ua=1](https://www.who.int/gpsc/5may/How_To_HandRub_Poster.pdf?ua=1)

# STOP THE SPREAD OF GERMS

Help prevent the spread of respiratory diseases like COVID-19.

## Stay at least 6 feet (about 2 arms' length) from other people.



[cdc.gov/coronavirus](https://www.cdc.gov/coronavirus)

CS31917B May 12, 2020 4:01 PM

To download the image on donning and doffing PPE, visit:

<https://www.cdc.gov/coronavirus/2019-ncov/images/social-media-toolkit/social-distancing-6ft-1080x1080.jpg>



## Annexure 3:

Respiratory viruses that includes Coronaviruses target mainly the upper and lower respiratory tracts. Hence protecting the airway from the particulate matter generated by droplets/ aerosols prevents human infection. Contamination of mucous membranes of the mouth and nose by infective droplets or through a contaminated hand also allows the virus to enter the host. Hence the droplet precautions/ airborne precautions using masks are crucial while dealing with a suspect or confirmed case of COVID-19/ performing aerosol generating procedures.

Masks are of different types. The type of mask to be used is related to particular risk profile of the category of personnel and his/her work. There are two types of masks which are recommended for various categories of personnel working in hospital or community settings, depending upon the work environment:

1. Triple layer medical mask
2. N-95 Respirator mask

- Triple layer medical mask:

A triple layer medical mask is a disposable mask, fluid-resistant, provide protection to the wearer from droplets of infectious material emitted during coughing/sneezing/talking.

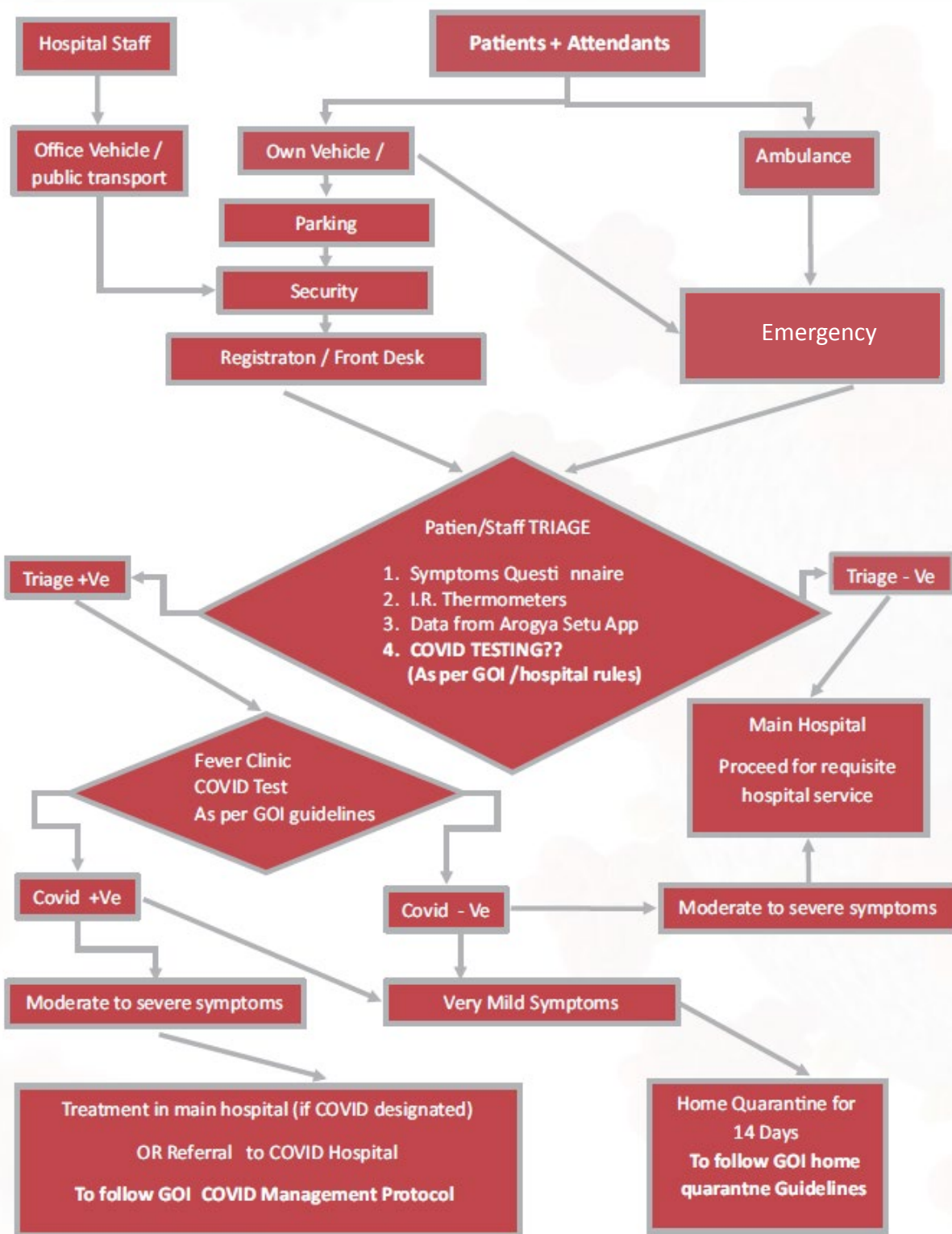
- N-95 Respirator mask:

An N-95 respirator mask is a respiratory protective device with high filtration efficiency to airborne particles. To provide the requisite air seal to the wearer, such masks are designed to achieve a very close facial fit.

Such mask should have high fluid resistance, good breathability (preferably with an expiratory valve), clearly identifiable internal and external faces, duckbill/ cup-shaped structured design that does not collapse against the mouth.

If correctly worn, the filtration capacity of these masks exceeds those of triple layer medical masks. Since these provide a much tighter air seal than triple layer medical masks, they are designed to protect the wearer from inhaling airborne particles.

## Annexure 4:



Staff/ Patient Flow in a Hospital for Triaging

## Annexure 5A:

### DECLARATION/ SCREENING FORM FOR COVID-19 INFECTION

To ensure your safety and the safety of the doctors and hospital staff who are trying to help you with your eye condition and for the safety of the other patients visiting the hospital, as per the guidelines issued by the Ministry of Health and Family Welfare, Government of India and WHO, We need the following particulars before we take you up for consultation/surgery/procedure. Please note that in case of any event in the future, if any of the below-given details are found to be false and not correct, strict action may be initiated against you and your family members as per guidelines and regulations laid down by MH&FW, Government of India.

Name of Patient: \_\_\_\_\_ Age / Sex: \_\_\_\_\_

Address: \_\_\_\_\_

Mobile No: \_\_\_\_\_ . (Verified Y / N)

MRD No: \_\_\_\_\_

Alt Mobile No: (Verified Y / N) \_\_\_\_\_

Email : \_\_\_\_\_ Aadhar Card Number : \_\_\_\_\_

Sl. No.	COVID-19 Questionnaire	Yes	No
1.	Do you or your accompanying relative or a family member staying with you have symptoms of Fever, Cough, Sneezing, Sore throat, Extreme tiredness/ body ache, difficulty in breathing, Loss of smell and taste.		
2.	Have you or a family member staying with you travelled outside city to any other city/town/place/containment zone/country in past 21 day? If Yes, mention details. Details of place visited: _____		
3.	Are you or a family member staying with you a health care worker? If yes, do you work in a hospital where COVID infected patients are treated?		
4.	Did you or a family member staying with you have any exposure to a confirmed COVID-19 patient or to a suspicious patient in last 21 days?		
5.	If yes, have you downloaded Arogya Setu application on your phone and kept it "ON"?		
6.	If no, has your close family member downloaded it?		
7.	Have you or a family member staying with you visited a health care facility in the past 21 days? If Yes, mention purpose _____		
8.	Did you or a family member staying with you have a red eye in last 21 days		

Body Temperature recorded : .....

Name and Signature of the patient : .....

Name and Signature of Accompanying Relative : .....

Verified by Staff Sign : .....

Time : ..... Date : .....

## COVID-19 PANDEMIC OPHTHALMIC TREATMENT CONSENT FORM

I understand the novel coronavirus causes the disease known as COVID-19. I understand the novel coronavirus has unknown and long incubation period during which carriers of the virus may not show symptoms and still be contagious. Even though lockdown is lifted, in the wake of the current Coronavirus threat pandemic (present all over the world), I have come to \_\_\_\_\_ (Name of the Hospital) by my own free will for my Eye Treatment. If I am an asymptomatic carrier (with no discomfort or symptoms present, but the virus still present hidden in my body) or an undiagnosed patient with COVID 19, I suspect it may endanger doctors and hospital staff. It is my responsibility to take appropriate precautions and to follow the protocols prescribed by the hospital staff.

I am aware that I may get an infection from the hospital or from a doctor, or other patients in the hospital even after the hospital has taken precautions, which have been explained to me, as per guidelines prescribed by the Ministry of Health and Family Welfare, Government of India and WHO. This disease spreads by aerosol and is very contagious even though every precaution is taken it will reduce the risk of transmission and will not completely eliminate the risk.

I understand that ophthalmology (eye) procedures (OPD & OT) might create droplets which is one way that the novel coronavirus can spread. The droplets can linger in the air for minutes to sometimes hours, which can transmit the novel coronavirus.

I confirm that I am not in a high-risk category, including: diabetes, cardiovascular disease, hypertension, lung diseases including moderate to severe asthma, being immunocompromised, or over age 60. OR I fall into the following high-risk category (\_\_\_\_\_) and my doctor and I have discussed the risks, and I agree to proceed with treatment.

I confirm that I am not waiting for the results of a laboratory test for the novel coronavirus.

I verify that I have not been identified as a contact of someone who has tested positive for novel corona virus or been asked to self-isolate by the government.

I also understand that during my treatment and recovery, I can contact this infection outside the hospital premise. I will take every precaution to reduce the risk of transmission from happening, but I will not at all hold doctors and hospital staff accountable if such infection occurs to me or my accompanying persons. In case I or my attendant gets the COVID-19 infection after the visit to the hospital, I will inform the hospital authorities at the earliest, so that appropriate tracking of the patients/attendants and hospital staff present on the day of my visit can be done.

I verify the information I have provided on this form and in the questionnaire overleaf is truthful and accurate. I knowingly and willingly consent to necessary investigations and treatment completed during the COVID-19 pandemic. I am also aware, if any details provided by me or by my accompanying relative are found to be false and not correct or if I or accompanying relative has hidden facts and other relevant details, appropriate legal action may be initiated against me and my family members as per applicable government rules.

---

SIGNATURE/THUMB IMPRESSION OF PATIENT

Name \_\_\_\_\_ Date \_\_\_\_\_

Mobile No.: \_\_\_\_\_

Address: \_\_\_\_\_

Name of the Attendant: \_\_\_\_\_ Date: \_\_\_\_\_ Mobile No. \_\_\_\_\_

Signature of the Attendant

Name of the Doctor/Hospital Personnel \_\_\_\_\_ Date: \_\_\_\_\_

---

SIGNATURE OF THE DOCTOR/ HOSPITAL PERSONNEL

## Annexure 6:

Sl. No.	Setting	Activity	Risk	Recommended PPE	Remarks
1.	Help desk/ Registration counter	Provide information to patients	Mild risk	<ul style="list-style-type: none"> <li>• Triple layer medical mask</li> <li>• Latex examination gloves</li> <li>• Face shield*</li> </ul>	Physical distancing to be followed at all times
2.	Doctors chamber	Clinical management	Mild risk	<ul style="list-style-type: none"> <li>• Triple layer medical mask</li> <li>• Latex examination gloves</li> </ul>	No aerosol generating procedures should be allowed.
3.	Chamber of Dental/ ENT doctors/ Ophthalmology doctors	Clinical management	Moderate risk	<ul style="list-style-type: none"> <li>• N-95 mask</li> <li>• Goggles</li> <li>• Latex examination gloves</li> <li>• Face shield</li> </ul>	Aerosol generating procedures anticipated.  Face shield, when a splash of body fluid is expected
4.	Pre- anesthetic check-up clinic	Pre-anesthetic check-up	Moderate risk	<ul style="list-style-type: none"> <li>• N-95 mask</li> <li>• Goggles*</li> <li>• Latex examination gloves</li> </ul>	* Only recommended when close examination is to be done
5.	Pharmacy counter	Distribution of drugs	Mild risk	<ul style="list-style-type: none"> <li>• Triple layer mask</li> <li>• Latex examination gloves</li> </ul>	Frequent use of hand sanitiser is advised over gloves.
6.	Sanitary staff	Cleaning frequently touched surfaces/ Floor	Mild risk	<ul style="list-style-type: none"> <li>• Triple layer medical mask</li> <li>• Latex examination gloves</li> </ul>	
7.	Ward/ individual rooms	Clinical management	Mild risk	<ul style="list-style-type: none"> <li>• Triple layer medical mask</li> <li>• Latex examination gloves</li> </ul>	Patients stable. No aerosol generating activity.



Sl. No.	Setting	Activity	Risk	Recommended PPE	Remarks
8.	ICU/ Critical care	Critical care management	Moderate risk	<ul style="list-style-type: none"> <li>• N-95 mask</li> <li>• Goggles</li> <li>• Nitrile examination gloves</li> <li>• Face shield</li> </ul>	Aerosol generating activities performed.
				+Face shield	Face shield, when a splash of body fluid is expected
9.	Operating Room	Performing surgery, administering general anaesthesia	Moderate Risk	Triple Layer medical mask Face shield (- wherever feasible) Sterile latex gloves	Already OT staff shall be wearing
				+Goggles & N95 mask	For personnel involved in aerosol generating procedures.

\*Face shield if a screen is not present at the registration desk.

- N 95 Mask is applicable in OR, if patients belong to containment zone.

## Annexure 7:

### Isolation Department

Sl. No.	Setting	Activity	Risk	Recommended PPE	Remarks
1	Isolation Department (Red eye OPD)	Attending emergency cases	High risk	Full complement of PPE	Complete disinfection of the room after every case

### Ambulance Services

Sl. No.	Setting	Activity	Risk	Recommended PPE	Remarks
1.	Ambulance Transfer to designated hospital	Transporting patients not on any assisted ventilation	Moderate risk	N-95 mask Gloves	
		Management of SARI patient while transporting	High risk	Full complement of PPE	When aerosol generating procedures are anticipated
		Driving the ambulance	Low risk	Triple layer medical mask Gloves	Driver helps in shifting patients to the emergency

## Annexure 8:

### Verifying authenticity of PPE Certificates:

1. All items to be supplied need to be accompanied with certificate of analysis from national/ international Organisations/ labs indicating conformity to standards from time to time
2. An authentic certificate should contain the following:
  - Name and address of the Organisation certified
  - Scope of certification describing its activities under certification – e.g. production, packing and sale of personal protective equipment like coveralls, shoe covers etc. (broad list of products)
  - Standard (or sometimes scheme or regulation) against which certification is granted e.g. ISO 9001 or ISO 13485 (standard) or AS 9100 or FSSC 22000 (scheme) – in general guidance standards are not amenable to certification – these have to be formal, requirement standards or specifications for products or process
  - Date of issue and expiry of certificate
  - Unique identification number of the certificate
  - Name and address of the certification body (CB)
  - Logo of the certification body
  - Accreditation symbol indicating the name of the accreditation body (AB) which has accredited the certification body (in most countries, in the absence of any law requiring certification bodies to register, accreditation is the only way of recognising a competent, authentic certification body)
  - IAF Mark (optional) – indicating that the certificate is covered under the Multilateral Mutual Recognition Arrangement (MLA) of the International Accreditation Forum (IAF) and hence is internationally equivalent and acceptable in the market.
  - In order to judge the authenticity, the names of member ABs of IAF can be seen on its website **www.iaf.nu**, it also gives information on which accreditation bodies are signatories to IAF MLAs for specific schemes and QMS or EMS or FSMS. Once you locate the AB in a country, you can go to its website from the link given on IAF website and then on AB's website to verify if the CB is accredited.

**Note:** ISO is only a standard setting body and does not undertake any certification – hence use of ISO logo in any form on a certificate is misuse of its logo and you can assume that the certificate is not authentic.

CE mark is Europe's regulatory mark and in case of PPE, EC has a separate regulation under which Notified Bodies are designated only in Europe. The list is available at link

[https://ec.europa.eu/growth/toolsdatabases/nando/index.cfm?fuseaction=directive.notifiedbody&dir\\_id=155501](https://ec.europa.eu/growth/toolsdatabases/nando/index.cfm?fuseaction=directive.notifiedbody&dir_id=155501)

## Quality compliant PPE with standards, or equivalent:

### 1. Gloves

- Nitrile
- Non-sterile
- Powder free
- Outer gloves preferably reach mid-forearm (minimum 280 mm total length)
- Different sizes (6.5 & 7)
- Quality compliant with the below standards, or equivalent:
  - i. EU standard directive 93/42/EEC Class I, EN 455
  - ii. EU standard directive 89/686/EEC Category III, EN 374
  - iii. ANSI/SEA 105-2011
  - iv. ASTM D6319-10

### 2. Coverall (medium and large)

- Impermeable to blood and body fluids
- Single use
- Avoid culturally unacceptable colors e.g. black
- Light colors are preferable to better detect possible contamination
- Thumb/finger loops to anchor sleeves in place
- Quality compliant with following standard
  - i. Meets or exceeds ISO 16603 class 3 exposure pressure, or equivalent

### 3. Goggles

- With transparent glasses, zero power, well fitting, covered from all sides with elastic band/or adjustable holder.
- Good seal with the skin of the face
- Flexible frame to easily fit all face contours without too much pressure
- Covers the eyes and the surrounding areas and accommodates for prescription glasses
- Fog and scratch resistant

- Adjustable band to secure firmly so as not to become loose during clinical activity
- Indirect venting to reduce fogging
- May be re-usable (provided appropriate arrangements for decontamination are in place) or disposable
- Quality compliant with the below standards, or equivalent:
  - i. EU standard directive 86/686/EEC, EN 166/2002
  - ii. ANSI/SEA Z87.1-2010

#### 4. N-95 Masks

- Shape that will not collapse easily
- High filtration efficiency
- Good breathability, with expiratory valve
- Quality compliant with standards for medical N95 respirator:
  - a. NIOSH N95, EN 149 FFP2, or equivalent
- Fluid resistance: minimum 80 mmHg pressure based on ASTM F1862, ISO 22609, or equivalent
- Quality compliant with standards for particulate respirator that can be worn with full face shield

#### 5. Shoe Covers

- Made up of the same fabric as of coverall
- Should cover the entire shoe and reach above ankles

#### 6. Face Shield

- Made of clear plastic and provides good visibility to both the wearer and the patient
- Adjustable band to attach firmly around the head and fit snugly against the forehead
- Fog resistant (preferable)
- Completely covers the sides and length of the face
- May be re-usable (made of material which can be cleaned and disinfected) or disposable
- Quality compliant with the below standards, or equivalent:
  - a. EU standard directive 86/686/EEC, EN 166/2002
  - b. ANSI/SEA Z87.1-2010

## 7. Triple Layer Medical Mask

- Three layered medical masks of non-woven material with nose piece, having filter efficiency of 99% for 3-micron particle size.
  - a. ISI specifications or equivalent

## 8. Body Bags- Specifications

- Impermeable
- Leak proof
- Air sealed
- Double sealed
- Disposable
- Opaque
- White
- U shape with Zip
- 4/6 grips
- Size: 2.2 x 1.2 Mts
- Standards:
  - a) ISO 16602:2007
  - b) ISO 16603:2004
  - c) ISO16604:2004
  - d) ISO/DIS 22611:2003



## GLOSSARY

Sl. No.	Term	Definition/ Description
1	Arogya Setu App	Aarogya Setu is a mobile application developed by the Government of India to connect essential health services with the people of India in our combined fight against COVID-19. The App is aimed at augmenting the initiatives of the Government of India, particularly the Department of Health, in proactively reaching out to and informing the users of the app regarding risks, best practices and relevant advisories pertaining to the containment of COVID-19.
2	Asymptomatic	Showing no symptoms of disease. A person infected with the virus can be asymptomatic because they are in an early stage of infection and symptoms have not yet developed (“pre-symptomatic”), or they may not develop any symptoms at all during their infection.
3	Anaesthesia	Loss of bodily sensation with or without loss of consciousness by the administration of gases or the injection of drugs before surgical operations.
4	Containment zone	Demarcation of containment zones is done within a town, village, or municipal or panchayat area. Containment zones are where the restrictions on movement and interaction are the most severe. In many cities, the entire demarcated area is barricaded and the entry and exit points closed. Only the very basic supplies and services are allowed inside. It is the district, town or panchayat authorities that decide which areas have to be marked as containment zones.
5	COVID-19	The name of the disease caused by the novel coronavirus, SARS-CoV-2, and is short for “Coronavirus Disease 2019.”
6	Close contact	A person who may be at risk of a contagious disease because of their proximity or exposure to a known case. Exact definition of close contact differs by disease; for COVID-19, the CDC defines a close contact as anyone who has been within 6 feet of a person infected with the virus for a prolonged period of time, or has had direct contact with the infected person’s secretions.
7	Disinfection	The process of cleaning something, especially with a chemical, in order to destroy bacteria.
8	Decontamination	The neutralization or removal of dangerous substances, radioactivity, or germs from an area, object, or person.
9	Donning and doffing	Donning and doffing is the practice of putting on and removing work-related protective gear, clothing, and uniforms. Donning refers to putting on work clothes, gear, and equipment, while doffing means removing them.

Sl. No.	Term	Definition/ Description
10	Droplet transmission/ spread	A mode of transmission for a contagious disease that involves relatively large, short-range (less than 6 feet) respiratory droplets produced by sneezing, coughing, or talking.
11	Discharge summary	A part of a patient record that summarises the reasons for procedure/ admission, significant clinical findings, procedures performed, treatment rendered, patient's condition on discharge and any specific instructions given to the patient or family (for example follow-up medications).
12	Fomite	An inanimate object that can be the vehicle for transmission of an infectious agent (e.g., bedding, towels, or surgical instruments). There is evidence that coronavirus spreads via fomites although, this is a less common route of transmission.
13	Hotspot	A coronavirus hotspot is an area in a district where six or more people have been tested positive of coronavirus infection. The area is earmarked based on probability of high degree of spread and people's response to the call for home stay.
14	Isolation	Isolation is separation of persons who are ill from those who are not ill. The purpose of isolation is to break the cycle of transmission.
15	Negative-pressure rooms	Rooms specifically designed for patients with contagious diseases that contain any circulating air in the room and prevent it from being released into any other part of the hospital.
16	Personal Protective Equipment (PPE)	Personal protective equipment is protective clothing, helmets, goggles, or other garments or equipment designed to protect the wearer's body from injury or infection. The hazards addressed by protective equipment include physical, electrical, heat, chemicals, biohazards, and airborne particulate matter.
17	Quarantine	Separating and restricting the movement of people exposed (or potentially exposed) to a contagious disease.
18	Risk Assessment	A systematic process of evaluating the potential risks that may be involved in a projected activity or undertaking.
19	Symptomatic	Showing symptoms of disease. The most common symptoms of Covid-19 include: cough, shortness of breath or difficulty breathing, fever, chills, muscle pain, sore throat, and new loss of taste or smell.
20	Triage	The assignment of degrees of urgency to wounds or illnesses to decide the order of treatment of a large number of patients or casualties.

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