

*Date: 20<sup>th</sup> May 2020*

**WORK MANUAL FOR SAFETY – TO BE USED IN SMVMC&H**

Based on the standards and the suggestions provided by the clinical departments, the following protocol is designed for the prevention and control of COVID – 19.

All patients must attend screening OPD first and then they shall be guided accordingly.

No person is allowed inside the campus without wearing mask of any type. (Security has to check and allow).

**Screening OPD: ( Hospital portico)**

***Managed by COVID team***

No of HCWs at screening OPD- 2 interns and 2 nursing officers

No of counters: 2

- Minimum 1 meter physical distancing mandatory.
- History taking.
- No accompanying person allowed inside OPD (for non-ambulant/paediatric - 1 person can be allowed).
- Temperature check by non touch infra-red thermometer.
- If fever present, refer to FEVER clinic at reception. Waiting patients to be separated by 2 metres, with easy access to respiratory hygiene supplies.
- If no fever / respiratory complaints or history suggestive of COVID infection, refer to reception for registration.
- No chair for patients to sit. Those patients who cannot stand, can use the wheel chair available at the screening area. It needs to be disinfected regularly as per norms.
- In the reception area, the patients and attenders should occupy alternate chairs maintaining social distancing.

- Patient shall be directed to registration counter and then to corresponding OPD.

***FEVER CLINIC:*** managed by *Respiratory medicine and General Medicine* departments

Detailed checklist for other symptoms of covid 19 to be elicited

If suspicious of covid19, refer to IGMC/JIPMER. Maintain register of patients referred, and the list to be sent to IDSP through proper channel.

If fever due to other causes, managed by Medicine department

*\*Those persons who have suspected COVID symptoms and those from containment zone shall be referred to IGMCRI / JIPMER (subject to change as per Government norms)*

**Protocol to be followed in all OPD:**

- Only one patient at a time inside OPD room.
- No accompanying person allowed inside OPD (if needed 1 person can be allowed).
- Patients to be seated on alternate chairs to maintain social distancing.
- Disinfection of patients hand at nursing station.
- Mask mandatory for all patients and accompanying person.
- Patient shall be assessed and admitted only when in-patient services is mandatory.

**Protocol to be followed in managing in-patients:**

- The patient shall be transferred to the respective ward through lift and they have to maintain social distancing not more than 4 patients at a time and they have to stand facing the wall.
- The lift wall and the support railings shall be disinfected after each trip.
- In the ward the beds are placed at least 3 meter distance and 1 metre from the side wall.
- The patient shall be educated about importance of hand hygiene and respiratory etiquette.
- Hand washing solutions and sanitizer are placed before entering the ward.
- HCWs should perform hand hygiene in between patients.
- Linens should be changed without generating aerosol.
- Biomedical waste should be segregated as per BMW rule 2018.

- Any patient becoming positive during stay, contact tracing, testing and quarantine of HCWs shall be done by COVID team. The patient will be shifted to IGMCRI/JIPMER depending on the area of residence.
- Hospital staff (ward in-charge) must screen the patient attender for symptoms of COVID-19 (e.g., fever, sore throat, runny nose, cough, shortness of breath, muscle aches, or diarrhea) and conduct a temperature check prior to entering the clinical area and every twelve hours thereafter for the remainder of their presence at the bedside. Wear a surgical or procedure mask throughout their time in the hospital. Practice scrupulous hand hygiene.
- To send sample for Covid19 testing, it should be approved by the Covid team and should be brought to the notice of the Nodal Officer.

**Protocol to be followed in OT:**

***1. Emergency***

Screening for COVID – 19 symptoms in casualty

Symptomatic → ***Refer to JIPMER / IGMC. If not possible to refer, treat the patient after informing the nodal officer.***

Asymptomatic → Admission and

1. Inform cost of surgery including PPE cost – which the patient has to bear fully

Anesthetic assessment (Chest X- Ray / CT chest– no signs of COVID)

For patients from non containment area, use cotton surgical gowns.

Post for surgery under usual surgical and anesthetic protocol.

***For patients from containment area, full PPE compulsory for all HCWs.***

Sets of PPE (major – 7 nos.)

1. Surgeon
2. Assisting doctor
3. Assisting staff

***2. Elective cases – only for non- containment area***

Positive / symptomatic / containment area cases may be referred to COVID center.

Other cases → admission after

1. Consent for iatrogenic / hospital acquired COVID infection for patient and attenders.

One surgery / OT per day – complete disinfection and fogging after every case

- ❖ Absorbable sutures only to be used.
- ❖ Patient should be shifted to post – op ward.
- ❖ COVID ward if symptomatic after surgery. Contact tracing and quarantine measures shall be as per ICMR guidelines.

### Anaesthesiology

#### *Patient selection for elective surgery*

- For elective surgery, patient shall be admitted three days in advance and investigated for COVID infection (as decided by COVID team)
- Thorough history taking in view of COVID related symptoms including travel history.
- Investigations including CBC, CRP, chest X-ray will be done for all patients.
- 4th hourly temperature monitoring using IR thermometer.
- For suspected cases it is advisable to take Pulmonologist opinion.
- One theater shall be designated as COVID19 theatre where the suspected COVID person can be operated if emergency procedure is needed.
- Fitness from the PAC team and **COVID team** is mandatory to post any patient for elective surgery.

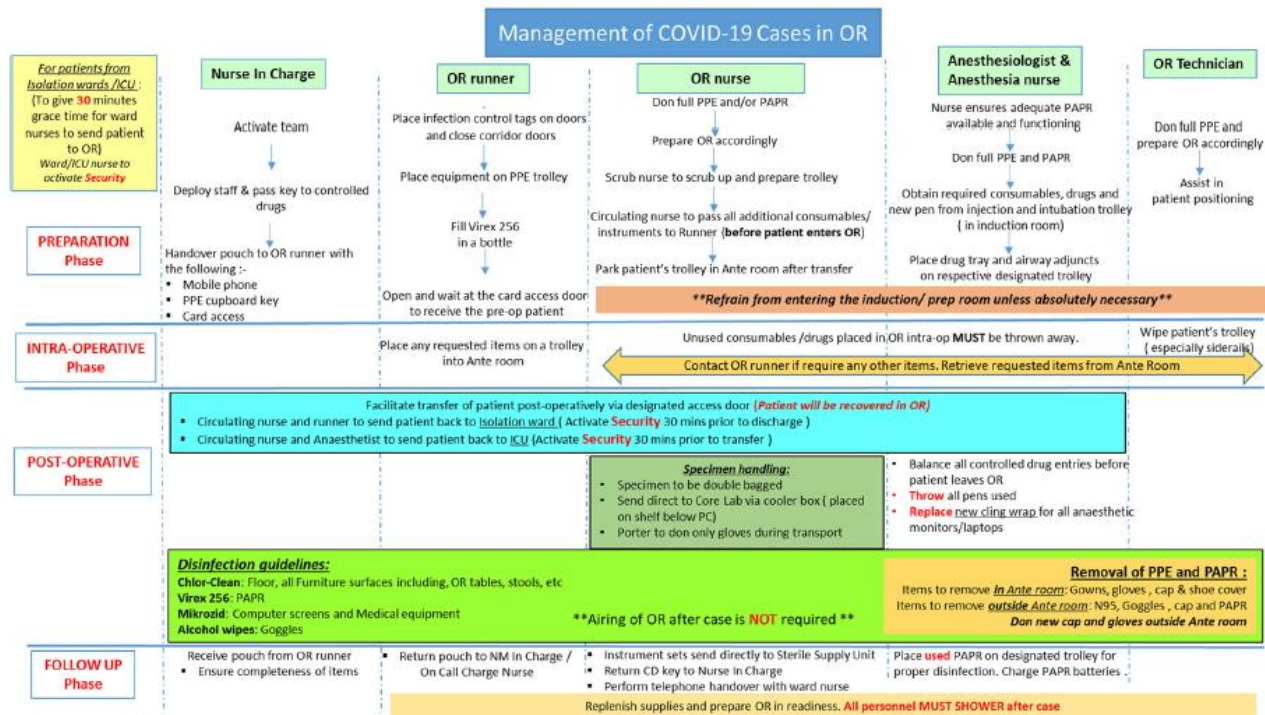
#### *Pre-op holding area:*

- There shall be no holding area. Each patient is transferred directly from ward to theater after communicating with the respective team.
- It is mandatory for all the patients to wear a three layer surgical mask while shifting from the ward.
- The relatives are not allowed to accompany the patient.
- The necessary consent regarding the nature of surgery and anaesthesia should be explained and obtained to the patient/attenders in the ward itself.
- The path of transfer is also kept clear.

### ***Operation theatre:***

- A briefing should be done by the anaesthesia team and surgery team to the staff nurses and technicians regarding the nature of surgery and the necessary equipments required for surgery to avoid unnecessary contamination of equipments present in the OT.
- Number of personnels who are participating in the surgery should be pre-assigned with their roles and number of personnels should be reduced as far as possible.
- On an average, 7-8 PPE kit is required for a surgical procedure : Surgeons-2 ( if 1 feasible), Nurse-1, Anaesthesiologist-2 (if 1 feasible), OT Technician 1, Sweeper -1, SoS Paediatrician-1
- It is mandatory to wear PPE with face shield and N95 mask to remain in the OT.
- The donning of PPE is done within the OT after proper sterile hand sanitization.
- After the procedure, the doffing of the PPE will be done within the OT and will be disposed in designated bags.
- After surgery, the patient shall be shifted directly to the post operative ward/ICU if required monitoring.
- After the patient is shifted, a gap of 1 hour should be given to clean and sterilize the OT properly.
- The nature of sterilization will be followed as recommended by the Infection control committee guidelines.
- It is advisable to work without air conditioning.
- OT doors should not be frequently opened.
- HME filter is mandatory for all patients who are undergoing surgical procedures in general anesthesia.
- Soda lime will be replaced after every surgery.
- All the surface and equipments used in the surgery should be decontaminated with 1% sodium hypochlorite solution after each procedure.
- Extra precaution should be taken for sending the histopathologic specimens.
- ***COVID 19 surgical safety check list in conjunction with WHO surgical safety check list shall be strictly adhered to during and after surgery.***

(Grelat M, Pommier B, Portet S, et al. Patients with Coronavirus 2019 (COVID-19) and Surgery: Guidelines and Checklist Proposal [published online ahead of print, 2020 Apr 25]. World Neurosurg. 2020;S1878-8750(20)30862-7. doi:10.1016/j.wneu.2020.04.155)



**Figure** Complete operating room workflow for a coronavirus disease 2019 (COVID-19) case. CD = controlled drugs; ICU = intensive care unit; NM = nurse manager; OR = operating room; PAPR = powered air-purifying respirator; PC = personal computer; PPE = personal protection equipment; pre-op = preoperative

(Ti, LK, Ang LS, Foong TW, Ng BS. What we do when a COVID-19 patient needs an operation: operating room preparation and guidance. Can J Anesth 2020; 67. DOI: <https://doi.org/10.1007/s12630-020-01617-4>.)

As per standard guideline the environmental disinfection procedure is as follows:

**Categorization of areas:**

High risk areas	Moderate risk areas	Low risk areas
Operating rooms All Intensive Care Units Emergency Department Labour room Haemodialysis Unit Isolation wards Endoscopy Unit	Outpatient department Wards Pharmacies Dietary services Laundry services Laboratories areas	Administration areas Libraries Meeting rooms Medical record section Store section

***Cleaning frequency and level of disinfection:***

<b><i>Areas</i></b>	<b><i>Frequency of cleaning</i></b>	<b><i>Level of disinfection</i></b>
High risk area	Three times a day and spot cleaning as required	Cleaning and high level disinfection
Moderate risk area	Two times a day and spot cleaning as required	Cleaning and moderate level disinfection
Low risk area	Once in a day and spot cleaning whenever necessary	Cleaning with floor cleaner

***Disinfection Process:***

<b><i>Areas/Equipment</i></b>	<b><i>Disinfectant</i></b>	<b><i>Cleaning frequency</i></b>
High touch surfaces: Bed, Bed rails, Door handle, Monitor, BP machine, Stethoscope, Pillow, TV remote, Call bell, Toilet, Hand washing, Sink, Chair, Table, Wheel chair, Stretchers, Ventilators, Syringe pump, Keyboard, Mouse, Telephones and other non movable items	5% Lysol	In between patients
Floor	1% Sodium Hypochlorite Solution	Three Times a Day
Ambulance inner surface, floor, it's patient shifting structures and other accessories	1% Sodium Hypochlorite Solution	In between patients shifting
Toilet	Cleaning with harpic/Soap solution followed by cleaning with 1% Hypochlorite solution	Three Times a day and whenever required

***Hospital Infection Control Committee***

***COVID committee***

***Medical Superintendent***

***Annexure:***

***Document from MoHFW***

**Ministry of Health and Family**  
**Welfare Directorate General of Health Services**  
**[Emergency Medical Relief]**  
**(Updated on 15<sup>th</sup> May 2020)**

***Novel Coronavirus Disease 2019 (COVID-19): Additional guidelines on rational use of Personal Protective Equipment (setting approach for Health functionaries working in non-COVID areas)***

**1. About this guideline**

This guideline is for health care workers and others working in Non COVID hospitals and Non- COVID treatment areas of a hospital which has a COVID block. These guidelines are in continuation of guidelines issued previously on ‘Rational use of Personal Protective Equipment’ (<https://www.mohfw.gov.in/pdf/GuidelinesonrationaluseofPersonalProtectiveEquipment.pdf>). This guideline uses “settings” approach to guide on the type of personal protective equipment to be used in different settings.

**2. Rational use of PPE for Non COVID hospitals and Non-COVID treatment areas of a hospital which has a COVID block**

The PPEs are to be used based on the risk profile of the health care worker. The document describes the PPEs to be used in different settings.

**1. Out Patient Department:**

<b>S. No.</b>	<b>Setting</b>	<b>Activity</b>	<b>Risk</b>	<b>Recommended PPE</b>	<b>Remarks</b>
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> </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> </ul> <p style="text-align: center;">+ face shield</p>	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> </ul>	* Only recommended when close examination of close



				<ul style="list-style-type: none"> <li>▪ Latex examination gloves</li> </ul>	examination of is to be done
5	Pharmacy counter	Distribution of drugs	Mild risk	<ul style="list-style-type: none"> <li>▪ Triple layer medical mask</li> <li>▪ Latex examination gloves</li> </ul>	Frequent use of hand sanitizer 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>	

**2. In-patient Department (Non-COVID Hospital & Non-COVID treatment areas of a hospital which has a COVID block)**

S. No.	Setting	Activity	Risk	Recommended PPE	Remarks
1	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.
2	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> </ul> <p>+Face shield</p>	Aerosol generating activities performed.  Face shield, when a splash of body fluid is expected
3	Ward/ICU /critical care	Dead body packing	Low Risk	<ul style="list-style-type: none"> <li>▪ Triple Layer medical mask</li> <li>▪ Latex examination gloves</li> </ul>	
4	Ward/ICU/ Critical care (Non-COVID)	Dead body transport to mortuary	Low Risk	<ul style="list-style-type: none"> <li>▪ Triple Layer medical mask</li> <li>▪ Latex examination gloves</li> </ul>	
5	Labor room	Intra-partum care	Moderate Risk	<ul style="list-style-type: none"> <li>▪ Triple Layer medical mask</li> <li>▪ Face shield</li> <li>▪ Sterile latex gloves</li> </ul> <p>N-95 mask*</p>	Patient to be masked in the Labor room  *If the pregnant woman is a resident of containment zone

6	Operation Theater	Performing surgery, administering general anaesthesia	Moderate Risk	<ul style="list-style-type: none"> <li>▪ Triple Layer medical mask</li> <li>▪ Face shield (- wherever feasible)</li> <li>▪ Sterile latex gloves</li> </ul> + Goggles  N-95 mask*	Already OT staff shall be wearing  For personnel involved in aerosol generating procedures  *If the person being operated upon is a resident of containment zone
7	Sanitation	Cleaning frequently touched surfaces/ floor/ changing linen	Low Risk	<ul style="list-style-type: none"> <li>▪ Triple Layer medical mask</li> <li>▪ Latex examination gloves</li> </ul>	

### 3. Emergency Department (Non-COVID)

S. No.	Setting	Activity	Risk	Recommended PPE	Remarks
1	Emergency	Attending emergency cases	Mild risk	<ul style="list-style-type: none"> <li>▪ Triple Layer medical mask</li> <li>▪ Latex examination gloves</li> </ul>	No aerosol generating procedures are allowed
2		Attending to severely ill patients while performing aerosol generating procedure	High risk	<ul style="list-style-type: none"> <li>▪ <b>Full complement of PPE (N-95 mask, coverall, goggle, Nitrile examination gloves, shoe cover)</b></li> </ul>	

### 4. Other Supportive/ Ancillary Services

S. No.	Setting	Activity	Risk	Recommended PPE	Remarks
1.	Routine Laboratory	Sample collection and transportation and testing of routine (non-respiratory) samples	Mild risk	<ul style="list-style-type: none"> <li>▪ Triple layer medical mask</li> <li>▪ Latex examination gloves</li> </ul>	
		Respiratory samples	Moderate risk	<ul style="list-style-type: none"> <li>▪ N-95 mask</li> <li>▪ Latex examination gloves</li> </ul>	

2	Radio-diagnosis, Blood bank, etc.	Imaging services, blood bank services etc.	Mild risk	<ul style="list-style-type: none"> <li>▪ Triple layer medical mask</li> <li>▪ Latex examination gloves</li> </ul>	
3	CSSD/Laundry	Handling linen	Mild risk	<ul style="list-style-type: none"> <li>▪ Triple layer medical mask</li> <li>▪ Latex examination gloves</li> </ul>	
4	Other supportive services incl. Kitchen	Administrative Financial Engineering** and dietary** services, etc.	Low risk	<ul style="list-style-type: none"> <li>▪ Face cover</li> </ul>	** Engineering and dietary service personnel visiting treatment areas will wear personal protective gears appropriate to that area

### 5. Pre-hospital (Ambulance) Services

S. No.	Setting	Activity	Risk	Recommended PPE	Remarks
1	Ambulance Transfer to designated hospital	Transporting patients not on any assisted ventilation	Low risk	<ul style="list-style-type: none"> <li>▪ Triple layer medical mask</li> <li>▪ Latex examination gloves</li> </ul>	
		Management of SARI patient	High risk	<ul style="list-style-type: none"> <li>▪ Full complement of PPE (N-95 mask, coverall, goggle, latex examination gloves, shoe cover)</li> </ul>	While performing aerosol generating procedure
		Driving the ambulance	Low risk	<ul style="list-style-type: none"> <li>▪ Triple layer medical mask</li> <li>▪ Latex examination gloves</li> </ul>	Driver helps in shifting patients to the emergency

#### **Points to remember while using PPE**

1. Standard precaution to be followed at all times
2. PPEs are not alternative to basic preventive public health measures such as hand hygiene, respiratory etiquettes which must be followed at all times.
3. Always follow the laid down protocol for disposing off PPEs as detailed in infection prevention and control guideline available on website of MoHFW.

In addition, patients and their attendants to be encouraged to put on face cover.

In case a COVID-19 patient is detected in such Non-COVID Health facility, the MoHFW guidelines for the same has to be followed (Available at: <https://www.mohfw.gov.in/pdf/GuidelinestobefollowedondetectionofsuspectorconfirmedCOVID19case.pdf>)