

# Healthcare Worker Safety Preparedness Plan for COVID-19 Pandemic 2020



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## 1. Introduction

Health care workers (HCW) are at the forefront of the fight against COVID-19 pandemic and are hence exposed to the risk of infection. In addition to exposure to the infection, they are also at risk of psychological stress, long working hours, violence from patients and attendants, occupational burn out and stigma. JIPMER recognize that it is of utmost importance to protect the HCWs during this pandemic, to prevent collapse of health care service. Measures adopted to protect the HCW includes administrative, engineering, and safe work practices, which are discussed in this document. It is re-emphasized that Infection control practices are central to HCW safety and hence this document should be read along with COVID-19 Infection Prevention & Control Standard Operating Procedure drafted by the Hospital Infection Control Committee (HICC).

## 2. Transmission Based Precautions:

Transmission based precautions (TBPs) are applied when standard infection control precautions (SICPs) alone are insufficient to prevent cross transmission of an infectious agent. TBPs are additional infection control precautions required when caring for a patient with a known or suspected infectious agent.

### 2.1 TBPs are categorised by the route of transmission of the infectious agent:

2.1.1 **Contact precautions:** Used to prevent and control infection transmission via direct contact or indirectly from the immediate care environment (including care equipment). This is the most common route of infection transmission.

2.1.2 **Droplet precautions:** Used to prevent and control infection transmission over short distances via droplets ( $>5\mu\text{m}$ ) from the respiratory tract of one individual directly onto a mucosal surface or conjunctivae of another individual. Droplets penetrate the respiratory system to above the alveolar level. The maximum distance for cross transmission from droplets has not been definitively determined, although a distance of approximately 2 metres (6 feet) around the infected individual has frequently been reported in the medical literature as the area of risk. However, a precautionary approach is recommended, and close contact has been defined as within 2 metres (approximately 6 feet) of a patient

2.1.3 **Airborne precautions:** Used to prevent and control infection transmission without necessarily having close contact via aerosols ( $\leq 5\mu\text{m}$ ) from the respiratory tract of one individual directly onto a mucosal surface or conjunctivae of another individual. Aerosols penetrate the respiratory system to the alveolar level. Interrupting transmission of COVID-19 requires both droplet and contact precautions; if an aerosol generating procedure (AGP) is being undertaken then airborne precautions are required in addition to contact precautions.

2.2 In addition to SICPs, droplet precautions should be used for patients known to be or possibly infected with COVID-19 in all healthcare settings.

- 2.2.1 COVID-19 virus is expelled as droplets from the respiratory tract of an infected individual (for example during coughing and sneezing) directly onto a mucosal surface or conjunctiva of a susceptible individual(s) or environmental surface(s)
- 2.2.2 Droplets travel only short distances through the air; a distance of at least 2 metres has been used for deploying droplet precautions; however, this distance should be considered as the minimum rather than an absolute

### **2.3 Duration of precautions**

- 2.3.1 For an individual patient, the duration that infection prevention and control precautions will need to be applied throughout the exposure.

## 2.4 Standard precautions

### 2.4.1 Hand hygiene

2.4.2 Hand hygiene is essential to reduce the transmission of infection in health and other care settings.

2.4.3 All staff, patients and visitors should decontaminate their hands with soap and water or alcohol-based hand rub (ABHR) when entering and leaving areas where patient care is being delivered.

2.4.4 Hand hygiene must be performed immediately before every episode of direct patient care and after any activity or contact that potentially results in hands becoming contaminated, including the removal of personal protective equipment (PPE), equipment decontamination and waste handling. Please refer to COVID-19 Infection Prevention & Control Standard Operating Procedure Version 2, 09.04.2020, for 5 moments for hand hygiene.

2.4.5 Before performing hand hygiene:

2.4.5.1 Expose forearms (bare below the elbows)

2.4.5.2 Remove all hand and wrist jewellery (a single, plain metal finger ring is permitted but should be removed (or moved up) during hand hygiene)

2.4.5.3 Ensure fingernails are clean, short and that artificial nails or nail products are not worn cover all cuts or abrasions with a waterproof dressing

2.4.5.4 If wearing an apron rather than a gown (bare below the elbows), and it is known or possible that forearms have been exposed to respiratory secretions (for example cough droplets) or other body fluids, hand washing should be extended to include both forearms. Wash the forearms first and then wash the hands. Please refer to COVID-19 Infection Prevention & Control Standard Operating Procedure Version 2, 09.04.2020 for steps of handwashing.

## 2.5 Respiratory and cough hygiene – ‘Catch it, bin it, kill it’

- 2.5.1 Patients, staff and visitors should be encouraged to minimise potential COVID-19 transmission through good respiratory hygiene measures (Please refer to COVID-19 Infection Prevention & Control Standard Operating Procedure Version 2, 09.04.2020 as well) Disposable, single-use tissues should be used to cover the nose and mouth when sneezing, coughing or wiping and blowing the nose. Used tissues should be disposed of promptly in the nearest waste bin
- 2.5.2 When tissues are not available, coughing into the sleeve should be encouraged.
- 2.5.3 Tissues, waste bins (lined and foot operated) and hand hygiene facilities should be available for patients, visitors and staff
- 2.5.4 Hands should be cleaned (using soap and water if possible, otherwise using ABHR) after coughing, sneezing, using tissues or after any contact with respiratory secretions and contaminated objects
- 2.5.5 Encourage patients to keep hands away from the eyes, mouth and nose
- 2.5.6 Some patients (such as the elderly and children) may need assistance with containment of respiratory secretions; those who are immobile will need a container (for example a plastic bag) readily at hand for immediate disposal of tissues

## **2.6 Patient use of face masks**

- 2.6.1 In common waiting areas or during transportation and where tolerable and appropriate in clinical areas, symptomatic patients may wear a surgical face mask. The aim of this is to minimise the dispersal of respiratory secretions and reduce environmental contamination. A surgical face mask should not be worn by patients if there is potential for their clinical care to be compromised (such as when receiving oxygen therapy)

## **2.7 Screening, Identification & Segregation of patients with symptoms – Outpatient setting**

- 2.7.1 One of the important steps in avoiding exposure of HCW to COVID-19 patients is to screen all patients and attendants at the hospital so that individuals with symptoms or travel and contact history can be identified early, segregated and evaluated in dedicated areas where additional precautions to prevent HCW exposure is possible. This strategy will also help in preserving PPE.

- 2.7.2 All patients entering JIPMER hospital buildings shall be screened for respiratory symptoms and fever
  - 2.7.2.1 Patients shall be screened at EMSD, Screening OPD, WCH & RCC
  - 2.7.2.2 All patients and their attendants entering JIPMER premises shall be asked to provide recent travel history and any history of contact with individuals who had or was suspected to have COVID-19
  - 2.7.2.3 Patients with symptoms or contact / travel history shall be segregated from other patients and shall be directed towards COVID-19 screening and isolation area for further evaluation and admission, if necessary

## **2.8 Patient placement - inpatient settings**

- 2.8.1 Patients with confirmed COVID-19 shall be segregated from patients who are suspected who are awaiting test results (Different floors of the building)

### **2.8.2 Negative pressure isolation rooms**

- 2.8.2.1 Special environmental controls, such as negative pressure isolation rooms, are not necessary to prevent the transmission of COVID-19. However, in the early stages where capacity allows, and in high risk settings, patients with possible or confirmed COVID-19 may be isolated in negative pressure rooms.

### **2.8.3 Single rooms**

- 2.8.3.1 Wherever possible, patients with confirmed COVID-19 should be placed in single rooms. Where single/isolation rooms are in short supply, and cohorting is not yet considered possible (patient(s) awaiting laboratory confirmation), prioritise patients who have excessive cough and sputum production for single/isolation room placement.
- 2.8.3.2 Single rooms in COVID-19 segregated areas should, wherever possible, be reserved for performing aerosol generating procedures (AGPs).
- 2.8.3.3 Single rooms in non-COVID-19 areas should be reserved for patients requiring isolation for other (non-influenza-like illness) reasons

## **2.9 Cohort areas**

- 2.9.1 If a single/isolation room is not available, cohort possible or confirmed respiratory infected patients with other patients with possible or confirmed COVID-19. Privacy curtains may be between the beds to minimise opportunities for close contact, where possible. A designated self-contained wing of the



healthcare facility shall be used for the treatment and care of patients with COVID-19. This area should:

- 2.9.1.1 include a reception area that is separate from the rest of the facility and should, if feasible, have a separate entrance/exit from the rest of the building
- 2.9.1.2 not be used as a thoroughfare by other patients, visitors or staff, including patients being transferred, staff going for meal breaks, and staff and visitors entering and exiting the building
- 2.9.1.3 be separated from non-segregated areas by closed doors
- 2.9.1.4 have signage displayed warning of the segregated area to control entry
- 2.9.2 May consider creating cohort areas which differentiate the level of care required.
- 2.9.3 It may also be prudent to consider:
  - 2.9.3.1 The need for cohorting in single/mixed sex wards
  - 2.9.3.2 Underlying patient condition (immunocompromised)
  - 2.9.3.3 Age groups when cohorting children
  - 2.9.3.4 Routine childhood vaccination status when cohorting children

## 2.10 **Staff cohorting**

- 2.10.1 Assigning a dedicated team of staff to care for patients in isolation/cohort rooms/areas is an additional infection control measure. This should be implemented whenever there are sufficient levels of staff available (so as not to have a negative impact on non-affected patients' care)
- 2.10.2 Staff who have had confirmed COVID-19 and recovered should continue to follow the infection control precautions, including personal protective equipment.

## 2.11 **Dedicated COVID-19 Patient Care Areas at JIPMER**

- 2.11.1 Ward 51 (Super Speciality Block Annex building) has been identified as the dedicated COVID-19 patient care area
- 2.11.2 The Dedicated facility will have separate isolation wards for 'suspected' and 'proved' COVID-19 without any intermingling of cases or HCW teams
- 2.11.3 Once the test reports are available and a 'suspected case' is ascertained to be negative for Coronavirus infection, he/she shall be transferred out of the dedicated COVID-19 facility to the relevant non-covid-19 ward

2.11.4 If a suspected case test positive for COVID-19, he/she shall be transferred to the ward/ICU dedicated for COVID-19 patients

2.11.5 The dedicated COVID-19 patient care areas will have additional security arrangements to limit entry of un-authorized persons

## 2.12 **Managing visitors**

2.12.1 Visitors to all areas of the healthcare facility should be restricted to essential visitors only, such as parents of paediatric patients. Risk assessment and practical management should be considered, ensuring this is a pragmatic and proportionate response, including the consideration of whether there is a requirement for visitors to wear PPE.

2.12.2 Visiting may be suspended in the dedicated COVID-19 patient care area (Ward 51), unless it is unavoidable (eg: small children as patients). All visitors entering a segregated/cohort area must be instructed on hand hygiene. They must not visit any other care area. Decisions to suspend or restrict visitors will depend on local circumstances and risk assessment. Limiting entry points to a facility will help manage local restrictions.

2.12.3 Signage to support restrictions is critical. Visitors with COVID-19 symptoms must not enter the healthcare facility. Visitors who are symptomatic should be encouraged to leave and must not be permitted to enter areas where there are extremely vulnerable patients

## 2.13 **Moving and transferring patients**

### 2.13.1 **Moving patients within the hospital**

2.13.1.1 the movement and transport of patients from their single room/cohort area should be limited to essential purposes only. Staff at the receiving destination must be informed that the patient has possible or confirmed COVID-19

2.13.1.2 if transport/movement is necessary, consider offering the patient a surgical face mask to be worn during transportation, to minimise the dispersal of respiratory droplets when this can be tolerated and providing this does not compromise clinical care

- 2.13.1.3 patients must be taken straight to and returned from clinical departments and must not wait in common use areas
- 2.13.1.4 if possible, patients should be placed at the end of clinical lists

## 2.14 **Transfer from primary care/community settings**

- 2.14.1 if transfer from a primary care facility or community setting to hospital is required, the ambulance service should be informed of the infectious status of the patient
- 2.14.2 staff of the receiving ward/department should be notified in advance of any transfer and must be informed that the patient has possible or confirmed COVID-19

## 2.15 **Moving patients between different hospitals**

- 2.15.1 Patient transfer from one healthcare facility may be undertaken if medically necessary for specialist care arising out of complications (for example, respiratory failure requiring ventilatory support) or concurrent medical events (for example, cardiac angioplasty, dialysis etc). If transfer is essential, the ambulance service and receiving hospital must be advised in advance of the infectious status of the patient.

## 2.16 **Critical care**

- 2.16.1 All respiratory equipment must be protected with a high efficiency filter (such as BS EN 13328-1). This filter must be disposed of after use
- 2.16.2 Disposable respiratory equipment should be used wherever possible. Re-usable equipment must, as a minimum, be decontaminated in accordance with the COVID-19 Infection Prevention & control guidelines from Hospital Infection Control Committee (HICC), JIPMER (Page no 16).
- 2.16.3 A closed suctioning system must be used
- 2.16.4 Ventilator circuits should not be broken unless necessary

2.16.5 Ventilators must be placed on standby when carrying out bagging

## 2.17 **Operating theatres (when these continue to be used for surgery)**

2.17.1 It is recommended that ventilation in both laminar flow and conventionally ventilated theatres should remain fully on during surgical procedures where patients may have COVID-19 infection. Air can bypass filtration if a respirator is not fitted perfectly or becomes displaced during use. Those closest to aerosol generation procedures are most at risk. The rapid dilution of these aerosols by operating theatre ventilation will protect operating room staff. Air passing from operating theatres to adjacent areas will be highly diluted and is not considered to be a risk.

2.17.1.1 theatres must be informed in advance of a patient transfer of a confirmed or possible COVID-19 positive case

2.17.1.2 the patient should be transported directly to the operating theatre and should wear a surgical mask if it can be tolerated

2.17.1.3 the patient should be anaesthetized and recovered in the theatre. Staff should wear protective clothing (JIPMER COVID-19 IPC HICC SOP, Page no 6) but only those within 2 metres of an aerosol generating procedure, such as performing intubation, need to wear N95/FFP3 respirators, disposable fluid repellent coveralls or long-sleeved gowns, gloves and eye protection. Considerations about the use of respiratory/anaesthetic equipment are addressed in the critical care section above

2.17.1.4 instruments and devices should be decontaminated in the normal manner in accordance with manufacturers' advice

2.17.1.5 both laryngoscope handle and blade should either be single use or reprocessed in the Central Sterile Supply Department (CSSD). Video laryngoscope blades should be single use and scope/handle decontaminated as per manufacture instructions.

2.17.1.6 the theatre should be cleaned as per HICC policy for infected cases, paying particular attention to hand contact points on the anaesthetic machine

2.17.1.7 possible or confirmed cases of COVID-19 should be placed at the end of the list where feasible

2.17.2 For patients with possible or confirmed COVID-19, any of these potentially infectious AGPs should only be carried out when essential. Where possible, these procedures should be carried out in a single room with the doors shut. Only those healthcare staff who are needed to undertake the procedure should be present. Once vacated by staff following an AGP, leave the room for 5 minutes before cleaning.

## 2.18 **Environmental decontamination**

There is evidence for other coronaviruses of the potential for widespread contamination of patient rooms or environments, so effective cleaning and decontamination is vital.

## 2.19 **While the patient is in the room**

2.19.1 Cleaning and decontamination should only be performed by staff trained in the use of the appropriate PPE; Staff may require additional training on standards and order of cleaning.

2.19.2 The COVID-19 Infection prevention & control SOP JIPMER should be followed for cleaning and disinfecting the room, frequently touched areas etc. (Page 12 of the JIPMER HICC IPC SOP)

2.19.3 To ensure appropriate use of PPE and that an adequate level of cleaning is undertaken which is consistent with the recommendations in this document, it is strongly recommended that cleaning of isolation areas is undertaken separately to the cleaning of other clinical areas.

2.19.4 Dedicated or disposable equipment (such as mop heads, cloths) must be used for environmental decontamination. Reusable equipment (such as mop handles, buckets) must be decontaminated after use with a chlorine-based disinfectant as described above. Common cleaning trollies should not enter the room.

## 2.20 **Cleaning the room once the patient has been discharged or left the room**

- 2.20.1 Clearance of aerosols is dependent on the ventilation and air change within the room. Once an end to dispersion can be defined (such as the patient leaving the room), a single air change is estimated to remove 63% of airborne contaminants and similarly with each subsequent air change. After 5 air changes, less than 1% of the original airborne contamination is thought to remain.
- 2.20.2 In an isolation room with 10 to 12 air changes per hour (ACH) a minimum of 30 minutes will reduce contamination to less than 1%. In a side room with 6 ACH, one hour would be a pragmatic time, allowing for aerosols settling out as well as being removed by ventilation.
- 2.20.3 Following transfer (recovery) and/or discharge of the patient, it is recommended that the room is left vacant with the door closed for 20 minutes in a negative pressure isolation room or one hour for a neutral pressure room prior to performing a terminal clean. Windows to the outside in neutral pressure rooms can be opened. If the room needs to be put back into use urgently, then it is recommended that the room is cleaned as in section 14.1.
- 2.20.4 Before entering the room, perform hand hygiene then put on a disposable plastic apron and gloves. If a risk assessment indicates that a higher level of contamination may be present or there is visible contamination with body fluids, then the need for additional PPE such as a fluid resistant surgical mask, and eye protection should be considered.
- 2.20.5 Collect all cleaning equipment and healthcare waste bags before entering the room
- 2.20.6 The person responsible for undertaking the cleaning with detergent and disinfectant should be trained in the process
- 2.20.7 Remove all healthcare waste and any other disposable items
- 2.20.8 Bedding and bed screens should be treated as infectious linen. Do not shake linen and avoid all necessary agitation
- 2.20.9 Dedicated or disposable equipment (such as mop heads, cloths) must be used for environmental decontamination and disposed as clinical waste
- 2.20.10 Reusable equipment (such as mop handles, buckets) must be decontaminated after use with a chlorine-based disinfectant as described above
- 2.20.11 Common cleaning trollies should not enter the room

2.20.12 The COVID-19 Infection prevention & control SOP JIPMER can be referred to for cleaning and disinfecting the room after patient discharge/transfer /death (Page 17 of the JIPMER HICC IPC SOP)

## 2.21 **Waste**

2.21.1 Large volumes of waste may be generated by frequent use of PPE; bio-medical waste management team should plan in advance on how to manage this.

2.21.2 Dispose of all waste as clinical waste.

2.21.3 Disposal of all waste related to possible or confirmed cases should be classified as infectious clinical waste suitable for alternative treatment, unless the waste has other properties that would require it to be incinerated.

## 2.22 **Linen**

2.22.1 All linen used in the direct care of patients with possible and confirmed COVID-19 should be managed as 'infectious' linen. Linen must be handled, transported and processed in a manner that prevents exposure to the skin and mucous membranes of staff, contamination of their clothing and the environment:

2.22.2 Appropriate PPE as recommended in HICC IPC SOP should be worn when handling infectious linen

2.22.3 All linen should be handled inside the patient room/cohort area. A laundry receptacle should be available as close as possible to the point of use for immediate linen deposit

## 2.23 **When handling linen:**

2.23.1 Do not rinse, shake or sort linen on removal from beds/trolleys

2.23.2 Do not place used/infectious linen on the floor or any other surfaces such as a locker/table top

2.23.3 Do not re-handle used/infectious linen once bagged

2.23.4 Do not overfill laundry receptacles

2.23.5 Do not place inappropriate items, such as used equipment/needles, in the laundry receptacle

2.24 When managing infectious linen, place them in leak proof bag and never carry them against body.

2.25 All linen bags/receptacles must be tagged with ward/care area and date. Store all used/infectious linen in a designated, safe, lockable area, if available, whilst awaiting uplift.

2.26 Instructions for washing can be referred to COVID-19 IPC SOP JIPMER page no 18.

## 2.27 **Staff uniform**

2.27.1 The appropriate use of personal protective equipment (PPE) will protect staff uniform from contamination in most circumstances. The dedicated COVID-19 patient care area (Ward 51) shall provide changing rooms/areas where staff can change into uniforms on arrival at work.

2.27.2 The use of theatre scrubs for staff who do not usually wear a uniform but who are likely to come into close contact with patients (for example, medical staff) is recommended.

2.27.3 Hospital's laundry services should be used to launder staff uniforms. In a situation where laundry facility is not available, uniforms should be transported home in a disposable plastic bag. This bag should be disposed of into the household waste stream.

2.27.4 Uniforms should be laundered:

2.27.5 Separately from other household linen

2.27.6 In a load not more than half the machine capacity

2.27.7 At the maximum temperature the fabric can tolerate, then ironed or tumbled-dried

2.27.8 **Note:** It is best practice to change into and out of uniforms at work and not wear them when travelling; this is based on public perception rather than evidence of an infection risk. This does not apply to community health workers who are required to travel between patients in the same uniform.

## 2.28 **Management of equipment and the care environment**

2.28.1 **Decontamination of equipment and the care environment must be performed** as recommended by COVID-19 IPC HICC SOP JIPMER (Page no 12-16)



## 2.29 **Equipment**

- 2.29.1 Patient care equipment should be single-use items if possible. Reusable (common) non-invasive equipment should as far as possible be allocated to the individual patient or cohort of patients. Please refer to HICC IPC SOP on decontamination as well.
- 2.29.2 Reusable (common) non-invasive equipment must be decontaminated:
- 2.29.3 Between each patient and after patient use
- 2.29.4 After blood and body fluid contamination
- 2.29.5 At regular intervals as part of equipment cleaning
- 2.29.6 An increased frequency of decontamination should be considered for reusable non-invasive care equipment when used in isolation/cohort areas.
- 2.29.7 Ventilators should be protected with a high efficiency filter, such as BS EN 13328-1
- 2.29.8 Closed system suction should be used
- 2.29.9 Avoid the use of fans that re-circulate the air.
- 2.29.10 There is no need to use disposable plates or cutlery. Crockery and cutlery can be washed by hand or in a dishwasher using household detergent and hand-hot water after use.

## 2.30 **Environment**

- 2.30.1 Patient isolation rooms, cohort areas and clinical rooms must be decontaminated during every shift (8<sup>th</sup> hourly) and others appropriately with reference to COVID-19 IPC SOP JIPMER. Clinical rooms should also be decontaminated after clinical sessions for patients with possible/known pandemic COVID-19.
- 2.30.2 In addition, patient isolation rooms must be terminally cleaned:
- 2.30.3 Following resolution of symptoms, discharge or transfer (this includes removal and laundering of all curtains and bed screens)
- 2.30.4 Once vacated by staff following an AGP
- 2.30.5 Clearance of infectious particles after an AGP is dependent on the mechanical/natural ventilation and ACH within the room. A single air change is

estimated to remove 63% of airborne contaminants; after 5 air changes, less than 1% of airborne contamination is thought to remain.

2.30.6 In an isolation room with 10 to 12 ACH a minimum of 20 minutes is considered pragmatic; in a side room with 6 ACH this would be approximately 1 hour.

2.30.7 An increased frequency of decontamination should be incorporated into the environmental decontamination schedules for areas where there may be higher environmental contamination rates, as recommended by HICC IPC SOP (4<sup>th</sup> hourly):

2.30.8 Toilets/commodos particularly if patients have diarrhoea

2.30.9 'frequently touched' surfaces such as medical equipment, door/toilet handles and locker tops, patient call bells, over bed tables and bed rails should be cleaned at least twice daily and when known to be contaminated with secretions, excretions or body fluids

2.30.10 Domestic/cleaning staff performing environmental decontamination should:

2.30.11 Be allocated to specific area(s) and not be moved between COVID-19 and non-COVID-19 care areas

2.30.12 Be trained in which personal protective equipment (PPE) to use and the correct methods of wearing, removing and disposing of PPE

2.30.13 The care environment should be kept clean and clutter free. All non-essential items including toys, books and magazines should be removed from reception and waiting areas, consulting and treatment rooms, emergency departments, day care areas and lounges. If made available, these items should not be shared. All toys must be cleanable and should be cleaned regularly (preferably at the same time as the environment).

## 2.31 Handling the deceased

2.31.1 The principles of SICPs and TBPs continue to apply whilst deceased individuals remain in the care environment. This is due to the ongoing risk of infectious transmission via contact although the risk is usually lower than for living patients. Where the deceased was known or possibly infected with COVID-19, it is

necessary to place the body in leak proof plastic body bag. Viewing of the body may be allowed with standard precautions and embalming is not permitted.

2.31.2 Hygienic preparations and post-mortem need to be avoided.

2.31.3 The HICC SOP and Guidelines from MOHFW on handling body of the deceased may be referred to.

### 3. Infection Prevention Measures - Implementation, Reinforcement & Monitoring

3.1 The protocols for Basic Infection Control Practices (eg: Hand washing) drafted by the Hospital Infection Control Committee (HICC) shall be followed

[\[https://jipmer.edu.in/sites/default/files/Hand-hygiene.pdf\]](https://jipmer.edu.in/sites/default/files/Hand-hygiene.pdf)

3.2 Implementation of the HICC protocol in all patient care areas shall be reinforced and monitored

3.3 HICC has drafted COVID-19 specific infection control protocols and the same shall be adhered to [COVID-19 Infection Prevention & Control Standard Operating Procedure JIPMER Version 1]

3.4 Re-training shall be provided to HCWs on infection control practices by the HICC

#### 4. Dedicated COVID-19 Teams & Manpower Deployment:

4.1 A dedicated team comprising of all categories of HCWs (eg: Faculty, Residents, Interns, Nurses, Physiotherapists, Technicians and Housekeeping staff) shall man the COVID-19 facilities.

4.2 The duty schedule of all categories of staff shall be synchronized

4.2.1 Duty period of all categories of HCWs should start and end on the same date. Duty schedule of one category of HCW shall not overlap with the duty schedules of two teams of another category of HCW

4.2.2 The Duty schedule proposed is:

4.2.2.1 Each COVID-19 team shall be on duty for 7 days, followed by 7 days of duty off.

4.2.2.2 This schedule shall alternate between the team on duty and the second team on duty off

4.3 The entire team of HCWs in the hospital shall be categorized into three groups

4.3.1 On active COVID-19 duty

4.3.2 Duty off after COVID-19 duty

4.3.3 Non-COVID-19 Team

4.4 The Non-COVID-19 team shall man the rest of the hospital (where COVID-19 patients are not admitted)

4.5 While one team of HCWs man the COVID-19 facilities, another team shall be on duty-off. The two teams shall alternate for duty in the COVID-19 areas

4.6 HCWs who are assessed to be at higher risk of complications from COVID-19

**<https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/groups-at-higher-risk.html>** may be deployed in the non-COVID-19 areas while those at lower risk shall man the COVID-19 areas

5. **Criteria for Medical Risk stratification of HCW (Categorization of staff)**

5.1 The following conditions confer higher risk for severe disease and hence may be considered for exclusion from work at areas where known COVID-19 cases are being cared. However, in the event of case surge overwhelming hospital infrastructure, there criteria will not be applicable.

5.2 **Age Criteria:**

5.2.1 Age cut-off for COVID-19 treatment areas will be 50 years and for non- COVID-19 areas will be 55 years

5.3 **Medical Risk Factors Criteria:** People of all ages with underlying medical conditions, particularly if not well controlled, including:

5.3.1 People with chronic lung disease or moderate to severe asthma

5.3.2 People who have serious heart conditions

5.3.3 People who are immunocompromised including cancer treatment, bone marrow or organ transplantation, immune deficiencies, poorly controlled HIV or AIDS, and prolonged use of corticosteroids and other immune weakening medications

5.3.4 People with severe obesity (body mass index [BMI] of 40 or higher)

5.3.5 People with chronic kidney disease Stage 4 & 5

5.3.6 People with severe liver disease

5.3.7 Pregnancy and lactation

5.3.8 Hypertension and Diabetes in the absence of end organ damage will be considered for exclusion only if there are enough personnel

5.3.9 **Reference :** Centers for disease control and prevention (CDC). Interim U.S. Guidance for Risk Assessment and Public Health Management of Healthcare Personnel with Potential Exposure in a Healthcare Setting to Patients with Coronavirus Disease (COVID-19). [Cited on 8th April]. Available from:

- <https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-risk-assesment-hcp.html>
- <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-at-higher-risk.html> .

## 6. **Safe Practices : SOP while entering and exiting the covid-19 areas**

### 6.1 **General measures:**

- 6.1.1 No Wallets, Rings, Chains, Mobile phones permitted inside COVID-19 ward & ICU
- 6.1.2 Cleaning of Desk, Computers at regular intervals
- 6.1.3 Do not touch door handles, Frequent Hand Washing, Frequent use of wipes
- 6.1.4 Food from home or canteen, bottled Water, reusable & washable carry bags
- 6.1.5 Food at dedicated lounge, maintain social distancing. No food in and near patient care areas

### 6.2 **Directions to be followed at the beginning of shifts:**

- 6.2.1 The name and designation should be conveyed to the security guard on duty to verify on the duty roster (Done to restrict the entry to avoid unnecessary exposure)
- 6.2.2 Temperature will be checked by a thermal scanner and recorded
- 6.2.3 Google form/printed form (Annexure 1) to be filled at Entry Point which will be ensured by the HCW safety team volunteer
- 6.2.4 Enter the changing room, wash hands with soap and water for a minimum of 20 seconds
- 6.2.5 Change to new hospital gowns and shoes, keep the worn clothes in personal bag, wear personal protective equipment (PPE) appropriate to the area of work following the donning directions issued by JIPMER
- 6.2.6 Move onto the patient care areas as soon as PPE is worn
- 6.2.7 Dedicated Pen, Backpack with wiping during duty hours

### 6.3 **Before Leaving Hospital at the End of Shifts**

- 6.3.1 Cleaning of Pen, ID card, Key etc using Alcohol Wipes
- 6.3.2 Remove the PPE as per the doffing directions issued by JIPMER and dispose in the appropriate containers

- 6.3.3 Bath and dry with towel supplied individually for each person and Change to Home attire & footwear
- 6.3.4 Exit the room as soon as changing the clothes
- 6.3.5 Temperature Check will be done & google form/ printed form to be filled at Exit Point which will be ensured by the HCW safety team volunteer
- 6.3.6 Security guard will now open the door and exit through the door without touching the door

#### **6.4 Safety Practice upon arrival at home / accommodation:**

- 6.4.1 Shoes & Clothes off outside homes / Back Door
- 6.4.2 Backpacks with hospital stuffs at dedicated room
- 6.4.3 No Hugs to Kid & other family
- 6.4.4 Straight to Hot Shower
- 6.4.5 Daily Hot Washing of clothes/Gowns

#### **6.5 Health Monitoring of Staff On COVID-19 Duty:**

##### **6.6 What is the purpose?**

- 6.6.1 Screening for COVID-19 symptoms in the staff (early detection and protection of other staff)
- 6.6.2 Staff may contract infection at work or from the community (esp. in the community transmission stage)
- 6.6.3 Proactive Identification of breach in PPE use and contact with the patient

##### **6.7 What is done?**

- 6.7.1 Temperature check and administering a set of questions on COVID-19 symptoms as well as potential contacts outside duty hours when reporting for duty
- 6.7.2 Temp check and administering a set of questions on possible contact with patients and breach in PPE use at the end of shift, before leaving work
  - 6.7.2.1 Temperature shall be checked at the entrance to the building
  - 6.7.2.2 Shall be recorded while reporting at duty and at leaving



6.7.2.3 Temperature should be < 37.2°C

**6.8 Questions while reporting for duty:**

6.8.1 Symptoms: Fever, Cough, Breathlessness, Sore Throat

6.8.2 History of close contact (<1 meter) with any person known or suspected to have coronavirus infection after last shift

6.8.3 Accommodation: Home / Hospital Provided

6.8.4 Mode of commute: Public / JIPMER – Common / Private

6.8.5 Any visit outside home between last shift and now: Y / N

6.8.5.1 Specify if Yes:

6.8.6 Any guests at home / room after last shift who had symptoms of fever, cough, breathlessness or sore throat, travel away from home within last 14 days including abroad or contact with persons known or suspected to have COVID-19: Y / N

6.8.6.1 Specify if Yes:

**6.9 Questions while leaving after shift:**

6.10 Did you provide direct care to a confirmed COVID-19 patient? YES/NO

6.11 Did you have face-to-face contact (within 1 meter) with a confirmed COVID-19 patient without wearing PPE? YES/NO

6.12 Were you present when any aerosol generating procedures was performed on the patient? YES/NO

6.13 During the period of a health care interaction with a COVID-19 infected patient, did you have any episode of accident with biological fluid/respiratory secretions?  
YES/NO

6.14 If the health worker responds 'Yes' to any of the Questions the health worker should be considered as being exposed to COVID-19 virus. And should be assessed

for risk exposure. (<https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-risk-assessment-hcp.html>)

6.15 Risk categorization of health workers exposed to COVID-19 virus

6.15.1 High

6.15.2 Medium

6.15.3 Low

6.16 **High risk:** Healthcare worker who had prolonged close contact\* with a COVID-19 patient, while both patient and Healthcare worker were not wearing facemask/N95. Being present in the room for procedures that generate aerosols or during which respiratory secretions are likely to be poorly controlled (e.g., cardiopulmonary resuscitation, intubation, extubation, bronchoscopy, nebulizer therapy, sputum induction) on COVID-19 patient when the healthcare providers' eyes, nose, or mouth were not protected

6.17 **Medium risk:** HCP who had prolonged close contact with patients with COVID-19 who were wearing a facemask while HCP nose and mouth were exposed. aerosol-generating procedure would be considered to have a medium-risk exposure

6.18 **Low risk:** brief interactions with patients with COVID-19 or prolonged close contact with patients who were wearing a facemask for source control while HCP were wearing a facemask or respirator. Use of eye protection, in addition to a facemask or respirator would further lower the risk of exposure.

6.19 *\*Prolonged close contact:* This will include direct contact with patient within 2 meter distance lasting for more than a few minutes, including visiting the patient, other patient care activities, sitting with the patient or even a brief contact where there was an unprotected contact with the patient's secretions.

## 6.20 Management of HCWs exposed to COVID-19 virus

6.20.1 The management of HCWs exposed to COVID-19 varies according to the risk categorization, as above.

### 6.21 Recommendations for HCWs at high risk for infection:

6.21.1 Stop all health care interactions with patients for a period of 14 days after the last day of exposure to a confirmed COVID-19 patient;

6.21.2 Be tested for COVID-19;

6.21.3 Quarantine for 14 days in a designated setting.

6.21.4 Shall be provided psychosocial support during quarantine, or throughout the duration of illness if HCW is confirmed to have COVID-19;

6.21.5 Provide review of IPC training for the health care facility staff, including HCWs at high risk for infection after 14-day quarantine period.

### 6.22 Recommendations for health workers at low risk for COVID-19:

6.22.1 Self-monitor temperature and respiratory symptoms daily for 14 days after the last day of exposure to a COVID-19 patient.

6.22.2 HCWs should call the health care facility if they develop any symptoms suggestive of COVID-19.

6.22.3 Reinforce contact and droplet precautions when caring for all patients with acute respiratory illness and standard precautions for all patients.

6.22.4 Reinforce airborne precautions for aerosol-generating procedures on all suspected and confirmed COVID-19 patients.

6.22.5 Reinforce the rational, correct, and consistent use of personal protective equipment.

6.22.6 Apply WHO's "My 5 Moments for Hand Hygiene" before touching a patient, before any clean or aseptic procedure, after exposure to body fluid, after touching a patient, and after touching a patient's surroundings.

6.22.7 Practice respiratory etiquette at all times.

6.23 **Who will do this?**

6.23.1 Can be self-administered

6.23.2 Designated staff / volunteers doing this may be essential to ensure proper implementation and compliance, esp. if the staff had poor knowledge of English

## 7. SOP in case of exposure of HCW

**7.1 High risk and medium risk exposure:** Active monitoring\* of the health care worker for a period of 14 days after last potential exposure and exclude from duty for 14 days after last potential exposure

**7.2 Low risk:** Self-monitoring with supervision\*\* of health care worker for a period of 14 days after last potential exposure. No exclusion from duty needed.

**7.3\* Active monitoring:** Health care worker will be contacted by a social worker at least once a day to enquire about fever and other respiratory features associated with COVID-19. The health care worker should check the temperature twice daily, if the temperature is >1000F or they are feeling feverish or they are feeling respiratory features typical of COVID-19, they should immediately isolate themselves from others at their place of living and inform the social worker immediately.

**7.4\*\* Self-monitoring with supervision:** Health care worker should subject himself to temperature check at the front desk twice a day, during entry and exit of the COVID-19 ward. If the temperature is >1000F he should be immediately isolated. The health care worker if feeling feverish, or having respiratory features typical of COVID-19 at any time point, should inform the duty medical officer in while duty time or the social worker while at home.

Ref: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-risk-assessment-hcp.html>

## 8. SOP For Maintaining Social Contact For Quarantined HCWs

### 8.1 Why this is done?

- 8.1.1 This is a World Health Organization (WHO) recommended measure in order to alleviate the stress involved in isolation/quarantine during the COVID-19 pandemic. It will help in reducing the stress, manage the worries of the health care worker and will also help in making sure that the person is feeling alright at regular intervals

### 8.2 How it will be done?

- 8.2.1 The health care worker (HCW) can suggest few contacts who are available over the phone and are working in JIPMER.
- 8.2.2 The social worker will contact the suggested persons and ask for their willingness to be 'buddy' for the HCW under quarantine or isolation.
- 8.2.3 If there are no names suggested, then the social worker can randomly contact a staff member, preferably working in the same cadre, same age group, same gender, speaking the same language as that of the HCW under quarantine

### 8.3 Instruction for the social worker

- 8.3.1 The social worker has to call the HCW, enquire and ensure, whether communication is adequate with the buddy. This should be done once in every three days
- 8.3.2 The social worker has to inform the HCW in case he/ she face any difficulties, inconsistencies, communication problems with the buddy, they have to immediately contact the social worker
- 8.3.3 The social worker has to properly inform the buddy regarding what to talk and what not to according to the general instruction for buddies given in this document

### 8.4 Instruction to the buddy (to be conveyed by the social worker)

- 8.4.1 The staff who is designated as buddy should call the HCW twice a day (Morning 8 am and evening 8 pm)
- 8.4.2 The buddy should ask how he is feeling, any new symptoms or other difficulties
- 8.4.3 Ask about any specific worries they have in mind and try to reassure them
- 8.4.4 Do not suggest any remedies that are not medically approved, or discuss any controversial points regarding the COVID-19

## 9. SOP For Keeping Family Members of Admitted Patients Informed

### 9.1 Purpose

9.1.1 To keep the patient's attendants informed about the health status of the patient.

This is an integral part of health care delivery but is considered all the more important in the context of the COVID-19 pandemic. The family members of COVID-19 patients will most likely be quarantined themselves (home quarantine) and may not be physically available in the hospital. There is excessive fear among the lay public about the pandemic and regular communication of health status may allay anxiety. Effective and transparent communication may help in prevent violent and disruptive behavior from family members directed at HCWs in the event of any untoward event happening to the patient.

### 9.2 How it will be done

9.2.1 It will be done by the medical officer in charge or social worker according to the setting the patient is kept. It will be done via telephone from the social workers office. The phone number of the patients relative should be collected at the time of registration itself so that the information is conveyed to the right person as a representative of the family. If that number was not contactable in the first try, the person informing has to try again, and if not possible to connect, the reason (such as ringing but not attended, receiver end out of network etc) should be entered with time and patient name in a register book kept for the same in the ward or social workers office.

### 9.3 When information will be conveyed?

9.3.1 *In ward setting:*

9.3.1.1 Information about the health status will be conveyed two times daily, morning 8 AM and evening 8 PM for patients who are admitted in the ward setting. The information regarding the patient status will be updated to social worker through google sheet by the treating physician. If the patient needs to be shifted to intensive care unit, that should be informed to the family as soon as he is shifted. In case of any sudden deterioration that requires cardio-pulmonary resuscitation as soon as patient is stabilized the family should be informed.

*9.4 In ICU setting:*

9.4.1 Information has to be conveyed three times daily morning 8AM, afternoon 1PM and evening 8PM by the treating physician. In case of any sudden deterioration that requires cardio-pulmonary resuscitation as soon as patient is stabilized the family should be informed.

**9.5 Who will convey the information?**

9.5.1 For a patient in the ward setting, the social worker will inform with the information provided by the treating doctor.

9.5.2 For a patient in the intensive care setting, the treating doctor has to convey the information.



## Annexure 1

### Health workers risk assessment in the context of COVID-19

This tool is to be completed by all health workers in COVID-19 patient care area

1. Date: (DD/MM/YYYY)

2. Name:

3. Employee ID NO:

4. Phone number:

5. Type of health care personnel:

(Doctor; Nurse Laboratory Technician; Physical therapist dietitian; Pharmacist SMC, DRL, Security)

6. Area of work :

(ICU, Ward, Laboratory, Pharmacy, Cleaning services, Reception, Security)

7. Did you provide direct care to a confirmed COVID-19 patient? YES/NO

8. Did you have face-to-face contact (within 1 meter) with a confirmed COVID-19 patient without wearing PPE? YES/NO

9. Were you present when any aerosol generating procedures was performed on the patient?

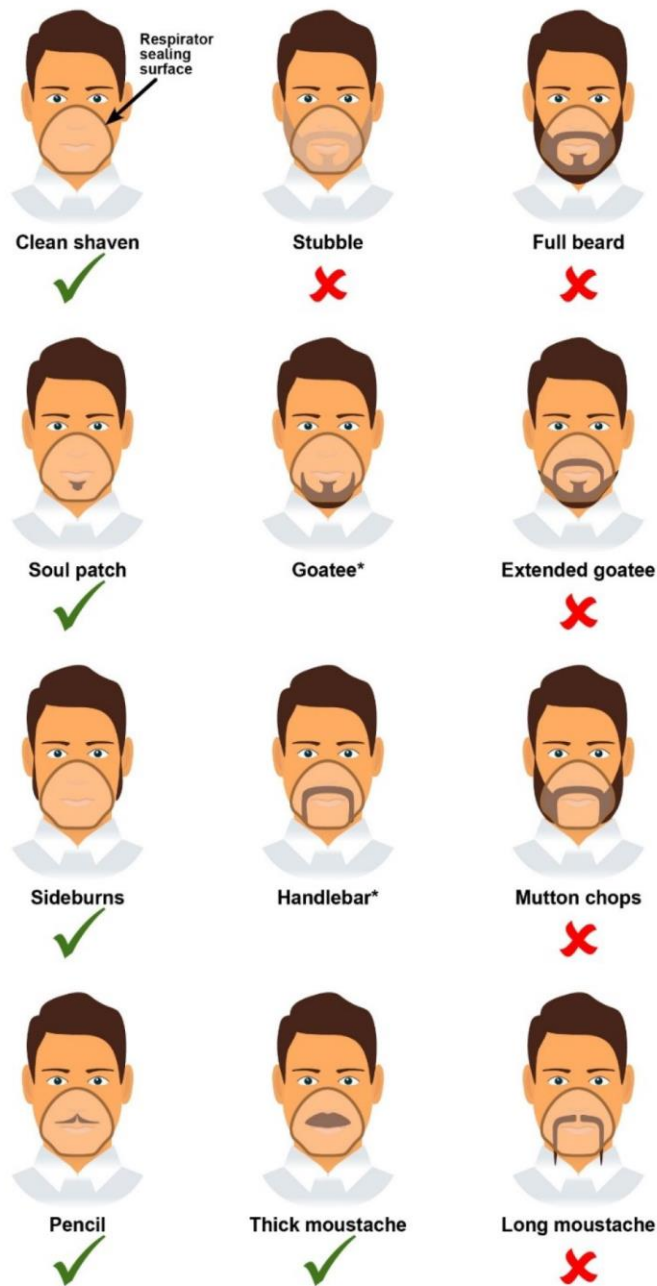
YES/NO

10. During aerosol generating procedures on a COVID-19 patient, did you wear personal protective equipment (PPE)? YES/NO

11. During the period of health care interaction with the COVID-19 case, did you perform hand hygiene before and after touching the COVID-19 patient? YES/NO

12. During the period of a health care interaction with a COVID-19 infected patient, did you have any episode of accident with biological fluid/respiratory secretions? YES/NO

## Facial Hair and N95 respirator use



\*Ensure that hair does not cross the respirator sealing surface

For any style, hair should not cross or interfere with the respirator sealing surface. If the respirator has an exhalation valve, hair within the sealed mask area should not impinge upon or contact the valve.

\*Adapted from The US Centers for Disease Control and Prevention, The National Personal Protective Technology Laboratory (NPPTL), NIOSH. Facial Hairstyles and Filtering Facepiece Respirators. 2017.