

**DR D.Y.PATIL MEDICAL COLLEGE, HOSPITAL
AND RESEARCH CENTRE PIMPRI, PUNE**

(Accredited by NAAC with 'A' grade)

GUIDELINES FOR MANAGEMENT OF COVID-19 PATIENTS

**DEPARTMENT OF RESPIRATORY MEDICINE
AND
HOSPITAL INFECTION CONTROL COMMITTEE**

PREFACE

Dr D Y Patil Medical College, Hospital and Research centre has been designated for management of non COVID-19 hospital. Most of these patients will be referred from YCMH|(PCMC) after testing negative for COVID-19. Apart from this, the hospital will also screen patients for COVID-19 suspects who visit hospital directly. There will also be IPD cases who may turn out to be COVID-19 positive during period of hospitalization.

For smooth and uniform management of such patients, guidelines/protocols have been prepared by department of respiratory medicine and HICC.

All HOD's & HOU's are requested to disseminate these guidelines among faculty and residents and ensure strict implementation of these guidelines.



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MANAGEMENT OF SUSPECT/CONFIRMED CASES OF COVID-19

A. FEVER CLINIC/ FLU CLINIC

1. Entry of patients

Entry Points: a) Hi-Tech building-Main entrance (left side)

b) Casualty/Emergency Entrance.

Manpower: a) Security personnel-1

b) Nursing staff-1

Protocol:

- Security personnel will ensure all patients are wearing mask properly
- Nursing staff will ask patients for history of fever and do thermal scanning of the patient.
- If fever detected, patient will be directed to fever clinic registration counter.
- If NO fever, then patient will go to main registration counter.(1st floor)

2. Registration at Fever Clinic

Location: Casualty waiting area

Manpower a) Nursing staff-1

b) Data Entry Operator-1

Protocol:

- **Nursing staff**-will enter details of patient coming to fever clinic which includes name, age, mobile number, present address, aadhar card no.
- **Data Entry Operator**- Will enter details in HIS system and issue referral letter to the patient.
- Patient will be directed to fever clinic screening area.

3. Fever/Flu Clinic

Location: Casualty

Manpower

- Administrative: 1.HOD, Medicine. 2. Coordinator (Dr. Basweshwar)

(Reporting channel: Coordinator →HOD, Medicine→ Chairman, COVID-19 committee →Dean)

- Healthcare Workers - 1 Resident, 1 Nursing staff and 1 housekeeping staff each for 8 hours shift.

Morning : 8:00AM to 4:00 PM

Afternoon : 4:00PM to 12:00 PM

Night : 12:00AM to 8:00 AM

- Residents from dermatology, psychiatry, radiology, general surgery, orthopedics, ENT, ophthalmology department will be posted in fever clinic.
- Faculty on call of general medicine/respiratory medicine.
- **Nursing incharge:1**

Protocol:

- ***Ensure personal protection equipment to all HCWs strictly as per protocol* (Appendix-1).***
- Ensure patient has worn mask
- Maintain two meter distance with the patient while taking history
- All suspect cases clinically assigned as **Mild**, will be sent to YCM hospital, escorted by security personnel. He/ She will handover patients in YCM Hospital and signature of respective authority will be taken in the transfer register. Coordinator of fever clinic along with security in-charge will supervise this.
- For classification of COVID-19 (mild, moderate and severe) suspect cases, please refer to Appendix-I

Recording and Reporting at Fever Clinic -

- Fever clinic record forms (Annexure-I) will be filled up and signed by resident at the end of shift duty (in each shift).
- These forms of 3 shifts will be signed by coordinator and handed over to nursing in-charge at 8AM and will be submitted to concerned hospital authority

B. COVID-19 HOLDING FACILITY

1. Location– Casualty observation area, Ground floor, Hi-tech building

2. Manpower

A. Administrative Incharge- Dr.Nitin Gaikwad, Prof, Respiratory Medicine.

B. Healthcare Workers- 1 Resident,2 Nursing staff and 1 housekeeping staff each for 8 hours shift.

Morning : 8:00AM to 4:00 PM
Afternoon : 4:00PM to 12:00 PM
Night : 12:00AM to 8:00 AM

- Residents from respiratory medicine, general medicine & anesthesia will be posted.
- **Nursing incharge-1**

3. Protocol:

- ***Ensure personal protection equipment to all HCWs strictly as per protocol* (Appendix-1).***
- Suspect cases clinically assigned as Moderate or Severe (non-ambulatory patients who will require immediate supportive management) will be shifted to triage area of casualty.
- These cases will be first evaluated by emergency department and COVID-19 suspect cases will be shifted to Casualty COVID-19 Holding area for further management.
- These patients will be given immediate supportive management and will be assessed for transfer to YCM hospital.
- Transfer of these patients will be done under supervision of respective HOD/HOU and only after telephonic conversation with respective HOD of YCM hospital .
- Patients who are not fit for transfer will be managed in isolation area till stabilization. Throat swab of these patients will be taken by ENT resident after confirmation from respective HOU under whom patient is admitted.
- Patient will be shifted to YCM hospital in ambulance after stabilization OR once throat swab report comes positive whichever is earlier. All IPC measurers to be taken while transferring such patients as per Annexure-III. While in casualty if throat swab of such patient comes negative, he/she will be shifted to respective specialty for further management.
- Daily recording and reporting of cases will be done in case record forms and signed by resident (Annexure-II) at the end of shift duty (in each shift).
- These forms of 3 shifts will be signed by Faculty incharge (Dr.Nitin Gaikwad) and handed over to nursing in-charge at 9 AM and will be submitted to concerned hospital authority

C. Isolation Ward/Quarantine Facility (Only for HCWs)

1. Locations

- a) Private ward, 8th Floor, Hi-tech Building (For asymptomatic doctors)
- b) Ward no. 76/77, 3rd floor, College Building (For symptomatic and or COVID-19 Positive HCWs including doctors)

2. Manpower

Administrative- I. For ward 76/77- HOD, Department of ENT.

II. For private wards - Dr. C.N.Jaideep, ICU in-charge

Healthcare Workers - Nursing staff : Requirement of nursing staff will be decided by number of patients

- **Throat swab collection of all HCWs will be done in our hospital ONLY**
- Daily recording and reporting of cases will be done as per hospital protocol.

D. Protocol for IPD patients including HCWs

In case IPD patients including *HCWs* develop symptoms like fever, cough, and /or breathlessness or influenza like illness (COVID-19 suspects) following protocol will be used

1. Head of concerned unit will inform Deputy Medical Superintendent
2. Suspect patient will be segregated from other patients in the same location.
3. In case of segregation is not possible for IPD patients (ward), such patients can be shifted to Casualty COVID-19 holding facility
4. For ICU patients, if segregation is not possible at same location, patients may be shifted to another ICU. In case above options are not feasible; all suspected patients may be shifted to **Casualty COVID-19 holding facility**. Segregation and shifting of such cases will be done under intimation and supervision of Dr. C.N. Jaideep, ICU In-charge.
5. Rationalization and testing of such IPD patients for COVID-19 will be decided by respective HOU
6. If patient is segregated in same location, following protocol is to be used-
 - He/She will not be moved to another ward/ICU till his/her throat swab report is available.
 - Throat swab will be collected by ENT resident and sent to YCM/Private Lab.
 - If throat swab report is positive, patient will be shifted to YCM hospital in ambulance.
 - If throat swab report is negative, patient will be managed at our hospital with all infection prevention control measures.
7. If HCWs develop symptoms like fever, cough, and /or breathlessness or influenza like illness
 - He/she should be shifted to isolation ward
 - Throat swab will be collected by ENT residents
 - Contact tracing will be done by department of community medicine in association with department of microbiology
 - If throat swab report is positive further management will be done as per protocol **annexure**

E. Testing for COVID-19 in elective invasive procedures

- In the present scenario, all patients coming to hospital for should be considered as COVID 19 suspects and all IPC measures should be taken.
- For Private Patients, test can be done in private lab.
- For other patients, it will not be feasible to do testing in private lab. The government labs / NIV will not accept these kinds of samples according to ICMR guidelines. In such cases elective procedures should NOT be cancelled/postponed. It needs to be re-emphasized that proper IPC measures be followed strictly in all cases.

F. Testing for COVID-19 in pregnant women

ICMR has recommended that all pregnant women residing in containment zones/ hotspots, who presents with signs of labour or are likely to deliver in next five days should be tested for COVID-19,even if asymptomatic. Throat swab of all such patients will be sent to NIV/govt lab as per the protocol. Further management of these patients will be as per report

G. Clinical management of COVID 19 – For details see Appendix II

H. For IPC measures in hospital – For details see Appendix III

Guidelines on rational use of Personal Protective Equipment

Personal protection equipment has been recommended as per the ICMR guidelines for Covid-19 hospital (Appendix-1). Since our hospital is Non Covid-19, PPE guidelines for non Covid-19 hospital (which were issued recently on 02 May-Appendix-II) are applicable to us. The usage of N-95 masks & full PPE has been restricted to only few areas in these guidelines. However, we shall continue following PPE guidelines for COVID -19 hospital so long as we have adequate supply of PPE equipments. In view of this, it needs to be reiterated that rational usage of PPE must be strictly ensured

- Components of PPE-goggles, face-shield, mask, gloves, coverall/gowns (with or without aprons), head cover and shoe cover.
- Rational use of PPE as per ICMR Guidelines below MUST be followed STRICTLY all over hospital

APPENDIX-I Guidelines on rational use of Personal Protective Equipment for COVID-19 Hospital

A. Outpatient Services (FEVER/FLU CLINIC)-

S. No	Setting	Activity	Risk	Recommended PPE	Remarks
1	Entry Points	Thermal scanning	Moderate Risk	N 95 mask	Patients get masked.
2	Registration counter	Provide information to patients	Moderate risk	N-95 mask Gloves	
4	Holding area/ waiting area	Nurses / paramedic interacting with Patients	Moderate Risk	N 95 mask Gloves	Minimum distance of one meter needs to be maintained.
5	FEVER CLINIC	Clinical management (doctors, nurses)	Moderate Risk	N 95 mask & Face shield Gloves	No aerosol generating procedures should be allowed.
6	House Keeping staff	Cleaning frequently touched surfaces/ Floor/ cleaning Linen	Moderate risk	N-95 mask Gloves	
7	Visitors accompanying young children and elderly	Waiting area	Low risk	Triple layer medical mask	No other visitors should be allowed to accompany patients in OPD settings.

B. Outpatient Services (other than FEVER / FLU CLINIC)

Suggested protocol is as follows-

- In OPDs of clinical specialties, each OPD room will have maximum 1 faculty and 1 resident. They will wear N95 mask and gloves and will strictly follow IPC protocol
- If any patient found with symptoms suggestive of COVID-19 suspect, patient should be sent directly to FEVER CLINIC for further triage.

C. Isolation ward/Quarantine Facility (ONLY HCWs)

S. No.	Setting	Activity	Risk	Recommended PPE	Remarks
1	Isolation ward	Clinical management	Moderate risk	N 95 mask Gloves	Patient masked. Patients stable. No aerosol generating activity.
2	Healthcare staff		Moderate Risk	N-95 masks Gloves	
3	Support staff		Low Risk	Triple layer mask Gloves	

D. Emergency Department

S.No	Setting	Activity	Risk	Recommended PPE	Remarks
1	Emergency	Attending emergency cases	Moderate risk	N 95 mask Gloves	No aerosol generating activity performed
		Attending to severely ill patients of SARI	High risk	Full PPE	Aerosol generating activities performed
2	CASUALTY COVID-19 ISOLATION FACILITY	Attending to severely ill patients of SARI	High risk	Full PPE	Aerosol generating activities performed

E. In Patient services

S. No	Setting	Activity	Risk	Recommended PPE	Remarks
1	Individual isolation rooms/ cohorted isolation rooms	Clinical management	Moderate risk	N 95 mask Gloves	Patient masked. Patients stable. No aerosol generating activity.
2	ICU/ Critical care	Critical care	High risk	Full PPE	Aerosol generating activity performed
3	ICU /critical care	Dead body packing	High risk	Full complement of	
4	ICU/ Critical care	Dead body transport to mortuary	Low Risk	Triple Layer mask Gloves	
5	Sanitation	Cleaning frequently touched surfaces/ floor/ changing linen	Moderate risk	N-95 mask Gloves	
6	Caretaker accompanying the admitted patient	Taking care of the admitted patient	Low risk	Triple layer medical mask	The caretaker thus allowed should practice hand hygiene, maintain a distance of 1 meter

F. 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	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

G. Other supportive/Ancillary Services

S. No.	Setting	Activity	Risk	Recommended PPE	Remarks
1.	Laboratory	Sample collection and transportation	High risk	Full complement of PPE	
		Sample testing	High risk	Full complement of PPE	
2	Mortuary	Dead body handling	Moderate Risk	N 95 mask Gloves	No aerosol generating procedures should be allowed. No embalming.
		While performing autopsy	High Risk	Full complement of PPE	No post-mortem unless until specified.
3	Sanitation	Cleaning frequently touched surfaces/ Floor/ cleaning linen in COVID treatment areas	Moderate risk	N-95 mask Gloves	
4	CSSD/Laundry	Handling linen of COVID patients	Moderate risk	N-95 mask Gloves	
5	Other supportive services	Administrative Financial Engineering Security, etc.	No risk	No PPE	No possibility of exposure to COVID patients. They should not venture into COVID-19 treatment areas.

Points to remember while using PPE

1. PPEs are not alternative to basic preventive public health measures such as hand hygiene, respiratory etiquettes which must be followed at all times.
2. Always (if possible) maintain a distance of at least 1 meter from contacts/suspect/confirmed COVID-19 cases
3. Always follow the laid down protocol for disposing off PPEs as detailed in infection prevention and control guideline available on website of MoHFW.

APPENDIX-II Guidelines on rational use of PPEs in *Non-COVID Hospitals*

1. Out Patient Department

S.No.	Setting	Activity	Risk	Recommended PPE	Remarks
1	Help desk/ Registration counter	Provide information to patients	Mild risk	<ul style="list-style-type: none"> ▪ Triple layer medical mask ▪ Latex examination gloves 	Physical distancing to be followed at all times
2	Doctors chamber	Clinical management	Mild risk	<ul style="list-style-type: none"> ▪ Triple layer medical mask ▪ Latex examination gloves 	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"> ▪ N-95 mask ▪ Goggles ▪ Latex examination gloves <p>+ face shield</p>	<p>Aerosol generating procedures anticipated.</p> <p>Face shield, when a splash of body fluid is expected</p>
4	Pre- anesthetic check-up clinic	Pre-anesthetic check-up	Moderate Risk	<ul style="list-style-type: none"> ▪ N-95 mask ▪ Goggles* ▪ Latex examination gloves 	* Only recommended when close examination of oral cavity/dentures is to be done
5	Pharmacy counter	Distribution of drugs	Mild risk	<ul style="list-style-type: none"> ▪ Triple layer medical mask ▪ Latex examination gloves 	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"> ▪ Triple layer medical mask ▪ Latex examination gloves 	

2. In-patient Department (Non-COVID Hospital)

S.No.	Setting	Activity	Risk	Recommended PPE	Remarks
1	Ward/individual rooms	Clinical management	Mild risk	<ul style="list-style-type: none"> ▪ Triple layer mask ▪ Latex examination gloves 	Patients stable. No aerosol generating activity.
2	ICU/ Critical care	Critical care management	Moderate risk	<ul style="list-style-type: none"> ▪ N-95 mask, Goggles ▪ Nitrile exam gloves ▪ Face shield 	<p>Aerosol generating activities performed.</p> <p>Face shield, when a splash of body fluid is expected</p>
3	Ward/ICU/ critical care	Dead body packing	Low Risk	<ul style="list-style-type: none"> ▪ Triple Layer mask ▪ Latex examination gloves 	
4	Ward/ICU/ Critical care	Dead body transport to mortuary	Low Risk	<ul style="list-style-type: none"> ▪ Triple Layer mask ▪ Latex examination gloves 	
5	Labor room	Intra-partum care	Moderate Risk	<ul style="list-style-type: none"> ▪ Triple Layermask ▪ Face shield ▪ Sterile latex gloves ▪ N-95 mask* 	<p>Patient to be masked in the Labor room</p> <p>If the pregnant woman is a resident of containment zone</p>
6	Operation Theater	Performing surgery, administering general anaesthesia	Moderate Risk	<ul style="list-style-type: none"> ▪ Triple Layer medical mask ▪ Face shield (- wherever feasible) ▪ Sterile latex gloves ▪ Goggles ▪ N95 mask 	<p>Already OT staff shall be wearing</p> <p>For personnel involved in aerosol generating procedures</p>
7	Sanitation	Cleaning frequently touched surfaces/ floor/ changing Linen	Low Risk	<ul style="list-style-type: none"> ▪ Triple Layer medical mask ▪ Latex examination gloves 	

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"> ▪ Triple Layer medical mask ▪ Latex examination gloves 	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"> ▪ Full complement of PPE 	

4. Other Supportive/ Ancillary Services

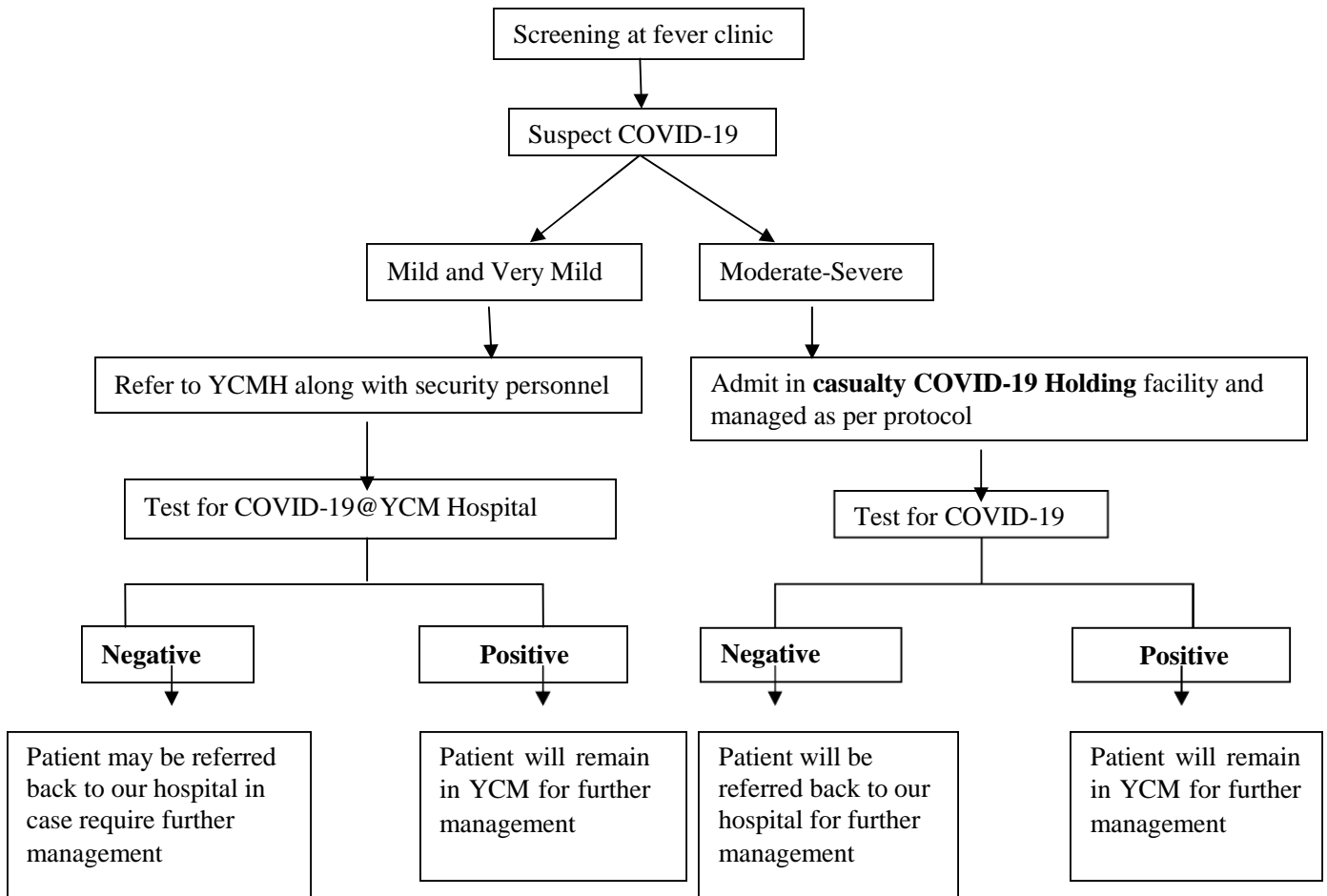
S.No.	Setting	Activity	Risk	Recommended PPE	Remarks
1.	Routine Laboratory	Sample collection and transportation and testing of routine (non- respiratory) Samples	Mild risk	<ul style="list-style-type: none"> ▪ Triple layer mask ▪ Latex gloves 	
		Respiratory samples	Moderate risk	<ul style="list-style-type: none"> ▪ N-95 mask ▪ Latex gloves 	
2	Radio-diagnosis, Blood bank, etc.	Imaging services, blood bank services etc.	Mild risk	<ul style="list-style-type: none"> ▪ Triple layer mask ▪ Latex gloves 	
3	CSSD/Laundry	Handling linen	Mild risk	<ul style="list-style-type: none"> ▪ Triple layermask ▪ Latex gloves 	
	Other Supportive services incl. Kitchen	Administrative Financial Engineering** & dietary**, services etc	Low risk	<ul style="list-style-type: none"> ▪ Face Cover 	Engineering & dietary services personnel visiting treatment area will wear personnel protective gear 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"> ▪ Triple layer medical mask ▪ Latex examination gloves 	
		Management of SARI patient	High risk	<ul style="list-style-type: none"> ▪ Full complement of PPE (N-95 mask, coverall, goggle, latex examination gloves, shoe cover) 	While performing aerosol generating procedure
		Driving the ambulance	Low risk	<ul style="list-style-type: none"> ▪ Triple layer medical mask ▪ Latex examination gloves 	Driver helps in shifting patients to the emergency

APPENDIX-III

Algorithm for isolation of suspect/confirmed cases of COVID-19



Categorization of patients

Group 1: Suspect and confirmed cases clinically assigned as **mild and very mild** are defined as patients presenting with fever and/or upper respiratory tract illness (Influenza Like Illness, ILI).

Group 2: Suspect and confirmed cases clinically assigned as **moderate** are defined as Pneumonia with no signs of severe disease (Respiratory Rate 15 to 30/minute, SpO₂ 90%-94%).

Group 3: Suspect and confirmed cases clinically assigned as **severe** are defined as severe Pneumonia (with respiratory rate ≥ 30 /minute and/or SpO₂ < 90% in room air) or ARDS or Septic shock