



## **ABSTRACT**

COVID-19 pandemic – Treatment protocol for patients with corona virus infection  
Ordered – Amendment - Issued.

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### **HEALTH AND FAMILY WELFARE (P1) DEPARTMENT**

**G.O.(Ms) No.257**

**Dated: 31.05.2021**  
**Thiruvalluvar Aandu-2052**  
**Sree Pilava, Vaikasi –17**

**Read:**

1. G.O (Ms) No. 233, Health and Family Welfare (P1) Department, Dated 10.05.2021.
2. G.O (Ms) No. 234, Health and Family Welfare (P1) Department, Dated 11.05.2021.
3. G.O (Ms) No. 239, Health and Family Welfare (P1) Department, Dated 13.05.2021
4. From the Director of Medical Education, Letter Ref. No.3766/H&D/2/3/2020, dated 26.05.2021.

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### **ORDER:**

Based on the proposal of the Director of Medical Education, the protocol for managing COVID-19 cases at all health facilities other than Medical College Hospitals, Government Hospitals and Dedicated Covid Hospitals recommended by the Expert Committee has been approved in the Government Orders 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> read above.

2. The Director of Medical Education has now stated that the meeting of the Expert Committee to formulate the treatment protocol for patients with Corona Virus infection was held on 26.05.2021 and the committee members have recommended COVID-19 management revised protocol for managing COVID-19 cases at all health facilities other than Medical College Hospitals, Government Hospitals and Dedicated Covid Hospitals according to the latest guidelines.

3. The Director of Medical Education has submitted the revised draft protocol for managing COVID-19 cases at all health facilities other than Medical College Hospitals, Government Hospitals and Dedicated Covid Hospitals for approval of the Government.

4. The Government have examined the request of the Director of Medical Education and decided approve the revised protocol recommended by the Expert Committee for managing COVID-19 cases at all health facilities other than Medical College Hospitals, Government Hospitals and Dedicated Covid Hospitals, as in the annexure to this order in supersession of the treatment protocol issued in the Government Order 3<sup>rd</sup> read above. This is in addition to be overarching clinical protocol issued by Government of India from time to time.

(BY ORDER OF THE GOVERNOR)

J.RADHAKRISHNAN  
PRINCIPAL SECRETARY TO GOVERNMENT

To

- ✓ The Director of Medical Education, Chennai – 600 010.
- The Director of Medical and Rural Health Services, Chennai -600 006.
- The Director of Medical and Rural Health Services (ESI), Chennai – 600 006.
- The Director of Public Health and Preventive Medicine, Chennai – 600 006.
- The Managing Director, National Health Mission, Chennai- 600 006.
- The Commissioner, Greater Chennai Corporation, Chennai-600 003.
- The Project Director, Tamil Nadu Health System Project, Chennai-600 006.
- All District Collectors.

**Copy to:-**

- The Health and Family Welfare (Data Cell) Department, Secretariat,  
Chennai – 600 009.
- Stock File / Spare Copy.

//FORWARDED BY ORDER//

*h. Radhakrishnan*  
*21/5/21*  
SECTION OFFICER

*V.D.*  
*31.5.2021*

**(Annexed to G.O.(Ms)No.257, Health and Family Welfare (P1) Department,**  
**Dated:31.05.2021)**

**COVID-19 Case Management Protocol**

(Other than Medical College Hospitals/Government Hospitals/  
Dedicated COVID Hospitals)

COVID-19 (suspect and confirmed) cases are in need of treatment at the earliest accessible health facility (both Government and Private). Patients eligible for Home Isolation and treatment at primary care facilities are reaching higher facilities due to lack of awareness and panic. This results in occupying treating hospitals' time and resources of such facilities, which needs to be prioritized for severe COVID-19 cases.

The Expert Committee has recommended the following guideline for managing COVID-19 cases at all health facilities other than Medical College Hospitals/Government Hospitals/Dedicated COVID Hospitals.

**In any case, patients with SpO2 >94 should not be admitted in COVID-19 hospital**

Category 1	Category 2	Category 3
<b>COVID POSITIVE</b>	<b>COVID POSITIVE</b>	<b>COVID POSITIVE</b>
<ul style="list-style-type: none"> <li>• COVID-19 rtPCR: Positive</li> <li>• Irrespective of Symptoms</li> <li>• SpO2 &gt;94 AND RR &lt; 24/min</li> </ul>	<ul style="list-style-type: none"> <li>• COVID19 rtPCR: Positive</li> <li>• Irrespective of Symptoms</li> <li>• SpO2 90-94 OR RR 24 - 30 / min</li> </ul>	<ul style="list-style-type: none"> <li>• COVID19 rtPCR: Positive</li> <li>• Irrespective of Symptoms</li> <li>• SpO2 &lt;90% OR RR &gt;30/min</li> </ul>
<b>COVID SUSPECT</b>	<b>COVID SUSPECT</b>	<b>COVID SUSPECT</b>
<ul style="list-style-type: none"> <li>• COVID19 rtPCR: Negative or Untested</li> <li>• Symptoms suggestive of COVID- Fatiguability, Myalgia, Sore throat, Breathlessness, Continuous fever, Headache, Diarrhea, Cough, Loss of taste, Loss of smell</li> <li>• SpO2 &gt;94 AND RR &lt; 24 /min</li> <li>• Repeat rtPCR if negative or not done earlier</li> </ul>	<ul style="list-style-type: none"> <li>• COVID19 rtPCR: Negative or untested</li> <li>• Symptoms suggestive of COVID - Fatiguability, Myalgia, Sore throat, Breathlessness, Continuous fever, Headache, Diarrhea, Cough, Loss of taste, Loss of smell</li> <li>• SpO2 90-94 OR RR 24-30/min</li> <li>• Repeat rtPCR if negative or not done earlier</li> </ul>	<ul style="list-style-type: none"> <li>• COVID19 rtPCR: Negative or untested</li> <li>• Symptoms suggestive of COVID - Fatiguability, Myalgia, Sore throat, Breathlessness, Continuous fever, Headache, Diarrhea, Cough, Loss of taste, Loss of smell</li> <li>• SpO2 &lt;90% OR RR &gt;30/min</li> <li>• Repeat rtPCR if negative or not done earlier</li> </ul>
<b>PLACE OF TREATMENT</b>	<b>PLACE OF TREATMENT</b>	<b>PLACE OF TREATMENT</b>
<b>Home Isolation</b>	Admission at	Initiate treatment at any health facility and shift for hospitalization to <b>Medical College Hospitals/ District Headquarter Hospitals /Dedicated COVID Hospitals</b>
prescribed at Testing centres, Screening/ triaging centers, health facilities, outreach camps and Home visits	<b>Primary Health Centres, COVID Care Centres (CCC), COVID Health Centres (CHC)</b>	

## At Testing centres, Screening/triaging centers, health facilities, and outreach camps

### Category 1 - Case Management

- **Advised Home Isolation.** If facility for home isolation is not possible patient may be referred to COVID Care Centres. COVID Positive Pregnant and lactating mothers and patients above 65 years of age should be referred to COVID Hospitals.
- Tab. Vitamin C (500mg OD x 5 days)
- Tab. Zinc (50mg OD x 5 days)
- Tab. Paracetamol (500 mg 4 times a day AND SOS) – if having Fever or myalgia
- Routine medication for comorbid conditions to be continued.
- Adequate hydration
- Prone position is advisable
- Self-monitoring of temperature and SPO2 every 6 hours.
- Seek hospital care/admission if red flag signs appear

## At Primary Health Centres, COVID Care Centres (CCC)

### Category 2 - Case Management

- Admit to a health facility which has provisions for administering oxygen if needed.
- COVID Positive patients should be in a COVID ward, and COVID Suspects/Negatives should be admitted in separate ward away from the COVID ward
- To do Complete Blood Count (CBC) and X-ray chest, if available
- To monitor Capillary Blood Glucose/ Plasma Glucose, urine ketones (for known diabetics)
- Prone position (2 to 4 hours proning for 4- 8 times per day)
- Tab. Vitamin C (500mg OD x 5 days)
- Tab. Zinc (50mg OD x 5 days)
- Tab. Ranitidine (150mg BD x 5 days)
- Tab. Paracetamol (500 mg 4 times a day AND SOS) – if having Fever or myalgia
- If the SPO2 is  $\leq 94\%$  start Oxygen, steroid and LMWH as below
  - initiate low flow oxygen therapy as per guidelines Start Oxygen to target a SPO2 of 90-92% with
    - nasal canula 2-5 liters /min
    - simple mask upto 6-8 litres per minute,
    - use non rebreathing mask if flow required is  $> 8$  litres per minute
    - refer if the oxygen flow requirement is  $> 10$  litres per minute.
  - Tab. Dexamethasone (8mg [equivalent to 6mg salt] OD x 7 days) OR Tab. Methylprednisolone (16mg BD x 7 days)
  - If Vomiting present, give
    - IV Inj. Dexamethasone (8mg [equivalent to 6mg salt] OD x 7 days) OR IV Inj. Methyl Prednisolone (0.5mg/kg per day not exceeding 40mg / day x 7 days)
  - Inj. Enoxaparin (LMWH) 40 mg (0.4 ml) Sub Cutaneous (SC) OD OR

Unfractionated Heparin 5000 Units SC BD.

(Do not start anticoagulant for a patient with a history of bleeding disorders, and platelet count < 1 lakh per microliter and Refer to COVID hospitals)

- Routine medication for comorbid conditions to be continued
- Adequate hydration and strict glycemic control (CBG 120-150 mg%) Stop Metformin and SGLT2 inhibitors. Continue or titrate with other OHAs.
- Blood pressure control should be ensured.
- Monitor SPO2 and respiratory rate every 2 hours.
- Tab. Azithromycin (10mg/kg not more than 500mg OD x 3 days) OR Cap. Doxycycline (100 mg BD) may be considered for COVID Suspect or rtPCR Negative patients.

#### **When to refer**

- If two consecutive values of Random blood sugar( 6 hours apart) is more than 300 mg%, transfer the patients to district headquarters hospitals or the concerned referral hospitals.
- If Urine ketone is positive irrespective of blood sugar, transfer the patients to district headquarters hospitals or the concerned referral hospitals.
- **If the patient is not improving and saturation falls below 90%, refer to COVID Hospital**
- if SPO2 is not maintained (> 90%) with oxygen flow > 10 litres per minute, refer to COVID hospitals
- if there is more than 1 risk factor for progression to respiratory compromise like obesity , other co-morbidities

#### **At all Health facilities other than Medical College Hospitals/ Government Hospitals/ Dedicated COVID Hospitals**

##### **Category 3 - Case Management**

- Any patient self-reporting in Category 3 status or those already under Category 2 management progressing to Category 3 in any health facility
- Patients require admission to Medical College Hospitals/Government Hospitals/Dedicated COVID Hospitals / COVID Health Centres with oxygen supplementation for further management.
- While a patient is being transported or waiting for the bed, initiate treatment as below:
- If SpO2 <90%, initiate low flow oxygen therapy as per guidelines Start Oxygen to target a SPO2 of 90-92% with
  - nasal canula 2-5 liters /min
  - simple mask upto 6-8 litres per minute and titrate as per guidelines,
  - use non rebreathing mask if flow required is > 8 litres per minute
- IV Inj. Dexamethasone (8mg [equivalent to 6mg salt] OD) OR  
IV Inj. Methyl Prednisolone (0.5mg/kg per day not exceeding 40mg / day) OR

- Tab. Dexamethasone (8mg [equivalent to 6mg salt] OD) OR  
Tab. Methylprednisolone (16mg BD) for 7 days
- Inj. Enoxaparin (LMWH) 40 mg (0.4 ml) SC BD OR  
Unfractionated Heparin 5000 Units SC TDS.  
(Do not start anticoagulant for a patient with a history of bleeding disorders, and platelet count < 1 lakh per microliter and Refer to COVID hospitals)
  - Adequate hydration and strict glycemic control (CBG 120-150 mg%) Stop Metformin and SGLT2 inhibitors. Continue or titrate with other OHAs along with Insulin.
  - Blood pressure control should be ensured.
  - SPO2 and respiratory rate monitoring every 2 hours.

### Instructions to be given to all patients falling under the Category 1

- When to seek consultation (**Red Flag Signs for Home isolated persons**)
  - Persistent fever not responding for more than 5 days OR
  - Persistent cough OR
  - Breathlessness OR fatiguability
  - **SpO2 90-94% OR RR 24-30/ min**Seek care at PHC/Screening Centres OR Telemedicine for getting assessed by a doctor for further treatment
- **When to call emergency line 104:**
  - **SpO2 <90% OR RR > 30 or persistent fever more than 7 days** for admission at COVID hospitals

### Facility Step down Criteria

- **FROM** Medical College/District Headquarter Hospital/Dedicated COVID Hospitals **TO** CHC with Oxygen beds (CCC added with oxygen beds will be redesignated as CHC)
  1. Patients having **SpO2 >92% for 48 hours** after weaning of from respiratory support like Non-Invasive Ventilation / Invasive ventilation
  2. Patients requiring low flow O2 support (nasal cannula & mask) and maintaining **SPO2 > 92% for more than one day**

### Discharge Criteria

- Medical College/ District Headquarter Hospital /Dedicated COVID Hospitals
  - **Patients having SpO2 >92% in room air for three days**
- COVID Healthcare Centre (CHC) with Oxygen beds
  - **Patients having SpO2 >92% in room air for three days**
- COVID Care Centres (CCC)
  - **Patients having SpO2 >92% in room air for three days**
- Post Discharge Advice – Deep breathing exercises, to seek consultation if any new symptoms develop.

### Health Facilities for COVID-19 Treatment

- **Category 1:** Testing centres, Screening/triaging centers, health facilities, and outreach camps. Public health team could visit the patient's home and provide treatment
- **Category 2:** Primary Health Centres, COVID Care Centres (CCC), COVID Health Centres (CHC)
- **Category 3:** Initiate treatment at any health facility and shift to Medical College/ District Headquarter Hospital /Dedicated COVID Hospitals.

### General Instructions for patient care

- Avoid exertion
- Bed rest and Prone position up to 16 hours a day
- Small frequent light diet and adequate hydration
- Monitoring of blood sugars and optimal control is essential at all levels of care
- Routine medication for comorbid conditions to be continued
- All COVID Positive pregnant and lactating mothers should be referred to COVID Hospitals
- In Category 1 rtPCR Positive – for patients with a persistent cough, Inhaled Budesonide 800 mcg twice a day may be considered for 3-5 days and reassess.
- Admit if the Category 1 patient is having persistent fever or Cough for more than 7 days
- In a confirmed COVID Positive patients irrational use of antibiotics without evidence has to be avoided.
- Caution: Do not use steroids prophylactically.
- Do not repeat rtPCR routinely.
- All patients admitted in the facility to wear surgical mask at all times. For pts on nasal canula, surgical mask can be worn over it, for simple face mask or NRBM surgical face mask can be worn under them.
- All healthcare personnel to wear PPE when caring for COVID patients.

This protocol is issued considering the current pandemic situation and will be reviewed and revised as and when needed.

**J.RADHAKRISHNAN**  
**PRINCIPAL SECRETARY TO GOVERNMENT**

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*H. J. Jeyaraj*  
31/5/21  
SECTION OFFICER

*V.D*  
31.5.2021