



आरती आहूजा भा.प्र.से.

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निर्माण भवन, नई दिल्ली-110011

Government of India  
Ministry of Health and Family Welfare  
Nirman Bhavan, New Delhi - 110011

D. O. No. 1830290/Immunization/2020

Dated the 25<sup>th</sup> September, 2020

**Subject: Guidelines for rational use of Oxygen for management of COVID-19**

Dear Sir / madam,

As you are aware that medical oxygen is one of the mainstays for management of "Moderate" and "Severe" COVID-19 cases. COVID-19 pandemic has led to a need of ensuring adequate supply of oxygen and also the protocols for its rational use.

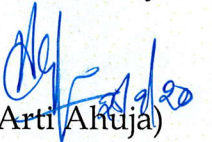
Keeping above facts in mind, Ministry of Health and Family Welfare has developed new 'Guidelines for rational use of Oxygen for management of COVID-19' which are enclosed.

You are requested to instruct all the concerned state and district level officials to strictly follow these Guidelines for creation of Non-ICU oxygen supported beds & ICU beds and for calculation of oxygen requirement for each and every health facilities providing COVID-19 treatment accordingly.

With warm regards,

Encl: as above

Yours sincerely

  
(Arti Ahuja)

To: - Additional Chief Secretary / Principal Secretary / Secretary (Health) - All States/UTs

Copy to:

1. Mission Director (NHM) - All States/UTs
2. State Nodal Officer, Oxygen - All States/UTs

## GUIDELINES FOR RATIONAL USE OF OXYGEN FOR MANAGEMENT OF COVID-19

These guidelines are being issued based on the recommendations of The Empowered Group 1 (EG – 1) chaired by Dr. V.K. Paul, Member, NITI Aayog, the Joint Monitoring Group (JMG) headed by Director General of Health Services (DGHS) MoHFW and the inputs provided by Prof. (Dr.) Randeep Guleria, Director, AIIMS, New Delhi and Prof. (Dr.) Balram Bhargav, DG ICMR cum Secretary, Department of Health Research.

1. It is assumed that out of the 100 confirmed cases of Covid-19:
  - a. 80 cases will be Asymptomatic / Pre-Symptomatic or with “**Mild**” disease requiring home isolation or admission to Covid Care Center (CCC).
  - b. Out of remaining 20 cases:
    - i. 17 cases will be of “**Moderate**” disease requiring hospitalization for 7 days on Non-ICU Oxygen Supported Beds. States / UTs would require to have oxygen storage capacity for all 17 Beds. However, for the purpose of calculation of Daily Oxygen consumption requirement, 50% of these Beds (i.e. 8.5) would be considered for computation purpose.
    - ii. 3 will be “**Severe**” cases requiring ICU Beds for 18 days in ratio of 20% for Invasive Ventilation, 40% for Non-Invasive Ventilation (NIV) / High Flow Nasal Cannula (HFNC) and remaining 40% for oxygen therapy by Non-Re Breathing Mask (NRBM) etc. For the purpose of calculation of Daily Oxygen consumption requirement at each health facility, all the Beds (i.e. 3) would be considered for computation purpose.
2. For Moderate cases (SpO<sub>2</sub> level *between* 94%-90%), the indicative oxygen flow rate is 2-4 Liters/minute by nasal prongs; 6-10 Liters/minute by facemask and 10-15 Liters/minutes by Non-Rebreathing Mask (NRBM).
3. For Severe cases (SpO<sub>2</sub> level less than 90%), the indicative oxygen flow rate is 10 Liters/minute by Invasive Mechanical Ventilation; 25-60 Liters/minute by Non-Invasive Ventilation and 10-15 Liters/minutes by NRBM.

4. For rational use of oxygen for COVID 19 management and for monitoring of oxygen consumption, the following action points are suggested to be implemented by the States / UTs :-
- i. Oxygen is a life-saving essential drug. The target **Oxygen saturation rate should be 94%-95%** for the hospitalized COVID 19 patient. Once this rate is achieved, flow of oxygen may not be increased as it may not provide any additional benefit to the patient.
  - ii. Oxygen consumption should be regularly monitored at each hospital/health facility level.
  - iii. **Oxygen Monitoring Committee** may be formed in every hospital which may consist of Additional Medical Superintendent, Head of Anesthesia, Head of Respiratory Medicine (Head of Internal Medicine in case Respiratory Medicine department does not exist) and Nursing Superintendent.
  - iv. The Oxygen Monitoring Committee may be mandated to supervise inventory planning, oxygen consumptions, regular repair and maintenance of gas pipelines, gas plant, and wall mounted gas outlets etc.
  - v. A team of one Nurse and one OT Technician may be designated as **Oxygen Monitoring Team** for each shift at each hospital/health facility level.
    - a. The team must inspect the gas pipeline, wall mounted gas outlets, as well as gas cylinders to detect and promptly address leakages, if any. Nurse in the team will check the oxygen mask on a regular basis.
    - b. Ensure closure of valves during 'no-use' at all times.
  - vi. HFNC device should be used only in ICU setting under supervision of a respiratory physician/physician. Patient should be put on HFNC only after approval of the senior most respiratory physician/physician.
  - vii. Patients who are on oxygen therapy may be reviewed during daily rounds to evaluate their oxygen requirements as well as oxygen saturation rates.

- viii. Regular training of OT Technicians and Nurse should be undertaken on proper oxygen administration and monitoring.
- ix. District Magistrate (DM) assisted by the Chief Medical Officer (CMO) of the district must also monitor the consumption including the rational use of oxygen in all facilities of the district on a weekly basis.

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