



No. HFW 148 ACS 2021

Karnataka Government Secretariat  
Vidhan Soudha  
Bengaluru, dated: 9-5-2021

### Circular

Subject: Guidelines for Medical Oxygen Management in Karnataka.

The COVID-19 pandemic has been raging for more than a year and the second wave has been more severe and threatening to exhaust valuable health care resources. In order to prevent the surge of COVID-19 cases from overwhelming the health system, it is of utmost importance to keep an inventory of health care resources and use them judiciously. Oxygen is one of the most valuable resources that is used in the management of COVID-19. Hence, monitoring of Oxygen logistics and supply chain is crucial in the fight against COVID-19.

Karnataka has a daily allocation of 965 MT of Liquid Medical Oxygen (LMO) from the Government of India. The demand of LMO, based on the active COVID-19 patient load, is assessed at about 1500 MT per day. Therefore, there is a need to have efficient, transparent and comprehensive guidelines for management and distribution of the Medical Oxygen at all levels and until the last mile.

Instructions have already been issued to set up Oxygen Cells at the State, District and BBMP Zone levels. Also Camp Officers have started working at each of the Re-Filler Station level and keeping continuous watch on oxygen supplies. The **Daily Oxygen Monitoring System** has been put into place and functioning. The hospital wise oxygen requirements are being collected and compiled to ensure proper management.

Now, these comprehensive Medical Oxygen Management Guidelines are issued in due compliance of orders of Hon'ble High Court in WP No 6435/2020 & connected matters.

#### **State Oxygen Unit & Oxygen Helpline:**

1. The State Nodal Officers for Production, Transportation & Distribution of medical oxygen have already been appointed and they shall be overall in-charge of the respective oxygen-supply-chain legs and the corresponding coordination and management of the medical oxygen in the State.
2. 24x7 State Oxygen Unit is already functional along with a **24x7 State Oxygen HELPLINE** at the Drug Controller Head Office Bengaluru. It shall have such requisite officers and staff as deemed necessary.

3. The State Oxygen Helpline is meant for any escalated medical oxygen emergencies which the districts and BBMP are unable to solve at their levels.

**District Oxygen Cell & Oxygen HELPLINE:**

1. Each district shall set up a District Oxygen Cell Immediately.
2. It shall function 24x7.
3. Composition of District Oxygen Cell:
  - a. Additional Deputy Commissioner shall head the District Oxygen Cell.
  - b. The Cell shall also have by a dedicated and exclusive ***District Oxygen Nodal Officer*** who will be incharge of minute-to-minute operations
  - c. Cell shall have such other staff and officials as are necessary.
  - d. Cell shall have requisite Computer Systems & dedicated computer operator.
4. A **24x7 HELPLINE** shall be part of the District Oxygen Cell and manned by adequate staff/operator. The HELPLINE numbers shall be disseminated widely through press, media and social media and also put on district websites so as to enable all hospitals to reach out to District Administration for any oxygen emergencies or needs at any time.
5. The Camp Officers in the Re-Filling Stations, the Officers of the Drug Control Department for purposes of management of oxygen shall report to the District Oxygen Cell who shall ensure that Re-Filler Stations work as per these guidelines.
6. The District Oxygen Cell shall
  - a. Keep a watch over all the Re-Fillers in their district as well as the Re-Fillers who supply oxygen to their district even if they are outside the district.
  - b. Keep continuous and close watch over oxygen supplies at Re-Filler level as well as the supplies to the hospitals. The instructions issued vide Order No RD 158 TNR 2020 (3) dated 3.5.2021 shall be strictly followed and relevant formats on oxygen supplies shall be daily filled up.
  - c. Keep database of all hospitals in the district and their oxygen requirements and their oxygen suppliers.
  - d. Coordinate and solve any medical oxygen emergencies in any hospital.
  - e. The Cell & officers in the Cell shall be available 24x7 to all the hospitals via the HLEPLINE numbers as well as personally.
  - f. Ensure that all medical oxygen complaints and emergencies are addressed immediately.
  - g. Coordinate with the State Oxygen Unit and State Oxygen Nodal Officers for oxygen requirements and issues in the district.
7. The Deputy Commissioner shall ensure that the hospital wise and district's overall medical oxygen requirement are worked out regularly by the Cell. Any increase in oxygen beds within the districts shall be with proper tying up of the medical oxygen supplies.

**BBMP Central & Zonal Oxygen Cell & Oxygen HELPLINE:**

1. BBMP the Central Oxygen Cell shall be set up under a Special Commissioner with requisite staff and infrastructure. The BBMP Central Oxygen Cell shall be overall in-charge of the coordination and management of the medical oxygen within the BBMP. The detailed and field coordination and management of the medical oxygen in the BBMP shall be by the respective Zonal Oxygen Cell.

2. Each of 8-Zones in BBMP shall set up a Zonal Oxygen Cell immediately.
3. It shall function 24x7.
4. Composition of Zonal Oxygen Cell:
  - a. Joint Commissioner/Suitable Officer shall head the Zonal Oxygen Cell. He shall be assisted by the Health Officer of the Zone in this.
  - b. The Cell shall also have by a dedicated and exclusive **Zonal Oxygen Nodal Officer** who will be incharge of minute-to-minute operations
  - c. Cell shall have such other staff and officials as are necessary.
  - d. Cell shall have requisite Computer Systems & dedicated computer operator.
5. A **24x7 HELPLINE** shall be part of the Zonal Oxygen Cell and manned by adequate staff/operator. The **Zonal Oxygen HELPLINE** numbers shall be disseminated widely through press, media and social media and also put on websites so as to enable all hospitals to reach out to Zonal Administration for any oxygen emergencies or needs at any time.
6. The Camp Officers in the Re-filling Stations, the Officers of the Drug Control Department, for purposes of management of oxygen, shall report to the Zonal Oxygen Cell who shall ensure that Re-Filler Stations work as per government guidelines.
7. The Zonal Oxygen Cell shall
  - a. Keep a watch over all the Re-Fillers in their Zone as well as the Re-Fillers who supply oxygen to their Zone even if they are outside the Zone.
  - b. Keep continuous and close watch over oxygen supplies at Re-Filler level as well as the supplies to the hospitals. The instructions issued vide Order No RD 158 TNR 2020 (3) dated 3.5.2021 shall be strictly followed and relevant formats on oxygen supplies shall be daily filled up.
  - c. Keep database of all hospitals in the Zone and their oxygen requirements and oxygen suppliers.
  - d. Coordinate and solve any medical oxygen emergencies in any hospital.
  - e. The Cell & officers in the Cell shall be available 24x7 to all the hospitals via the HLEPLINE numbers as well as personally.
  - f. Ensure that all medical oxygen complaints and emergencies are addressed immediately.
  - g. Coordinate with the State Oxygen Unit, State Oxygen Helpline and State Oxygen Nodal Officers for oxygen requirements and issues in the Zone.
8. The BBMP Zonal Commissioner shall ensure that the hospital wise and Zone's overall medical oxygen requirement are worked out regularly by the Cell. Any increase in oxygen beds within the Zones shall be with proper tying up of the medical oxygen supplies.

**Camp Officers at Oxygen Re-Filler Stations:**

1. The Deputy Commissioners shall post *Camp Officers* at all the Re-Filler Stations in their districts. Further, in case a district has oxygen supplies from Re-Fillers from outside the district then the Deputy Commissioner, in coordination and consultation with the Deputy Commissioner of the said outside district, may post additional Camp Officers to such a Re-Filler Station.
2. In case of Re-Fillers in BBMP the Camp Officers have been posted by the Commerce & Industries Department. The same will continue. The BBMP Central Oxygen Cell as

well as the Zonal Oxygen Cell shall keep a watch and oversight over these Camp Officers and take any requisite actions to ensure Camp Officers continue to work at each Re-Filler Station. Provided that BBMP may post its own dedicated Camp Officers at the Re-Filler Stations in case it so decides.

3. The Camp Officer shall keep continuous and close watch over oxygen supplies at Re-Filler level as well as the supplies to the hospitals. The instructions issued vide Order No RD 158 TNR 2020 (3) dated 3.5.2021 shall be strictly followed and relevant formats on oxygen supplies shall be daily filled up and submitted to the District Oxygen Cell or the Zonal Oxygen Cell, as the case may be.
4. The phone numbers of the Camp Officers at each Re-Filler Station shall be widely shared with each of District/Zonal Oxygen Cells and the officers manning these Cells.
5. The Camp Officers shall discharge such further duties as are assigned to them from time to time to ensure smooth and hassle-free supply of oxygen to the hospitals.

#### **Oxygen Demand-Supply Management & Allocation:**

1. The Government of India has allocated 965 MT LMO to Karnataka and actual supplies are about 750-800 MT per day over the last few days.
2. Due to short medical oxygen supplies compared to the unrestricted demand, it is inevitable that oxygen supplies have to be managed within the available quantities.
3. The oxygen supply quantities have not increased but the hospitals in the districts & BBMP are increasing their consumption beyond supplies by increasing oxygenated beds. **This is the core reason for hospitals running out of oxygen.** This is unsustainable. The consumption has to remain within the available supplies.
4. Therefore, the district wise and BBMP allocation for oxygen shall be based on the active patient load and norms of the consumption of oxygen for each category of patient as per guidelines of Government of India and the Health Department in Circular No HFW 134 ACS 2021 dated 3.5.2021. To begin with the district wise allocation may be as per actual daily consumption of oxygen on 6<sup>th</sup> May 2021. However, the allocation should be brought in alignment with active patient load and patient category wise norms of consumption of oxygen in the next one week.
5. It is seen oxygen usage of different hospitals for the same category of patients vary widely. Similarly, the districts oxygen consumptions are varying widely. This shall be corrected over the coming days.
6. Each District & BBMP shall maintain its daily consumption of medical oxygen within the said allocation until the allocation is changed at the State level based on changes (increase or decrease) in oxygen supplies or changes in active patient load of the districts.
7. The Districts and the BBMP shall conduct Oxygen Audit of each hospital and arrive at patient category wise per patient consumption by the hospital. The Oxygen Audit would lead to identification of hospitals which may be consuming oxygen way beyond the norm and, therefore, plugging of leakages, sub-optimal usage of oxygen shall be addressed as per guidelines of Health Department in Circular No HFW 134 ACS 2021 dated 3.5.2021. The complete district and BBMP Zone Oxygen Audit shall be completed within 7-days and repeated every week.
8. The Re-Fillers or Manufacturers shall not supply medical oxygen to individual persons and all medical oxygen supplies shall be only to the hospitals.

9. The Deputy Commissioners & BBMP shall collect actual oxygen consumption and oxygenated beds from each hospital as on 6<sup>th</sup> May 2021 (as per actual patient load) and ensure that the hospitals shall not ramp up consumption or oxygenated without prior tie up for enhanced oxygen supplies from the Re-Fillers/Manufacturers.
10. While all hospitals and the districts and BBMP shall follow above directions; but the oxygen requirement being dependent on the individual patient consumption, even without adding additional oxygen beds, the consumption can fluctuate. This could lead to oxygen emergencies.
11. The Deputy Commissioners and the BBMP shall create a BUFFER STOCK of 10% of their daily consumption at their disposal in order to meet any emergency requirements that arise during the day. The BUFFER STOCK shall be locally created within 7-days and shall be in control of the Deputy Commissioner.

**Districts which don't have bottling units:**

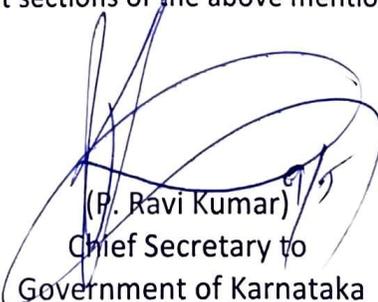
There are nine districts with no bottling units in Karnataka. These districts are tagged to the Re-fillers for their supplies of oxygen, these districts are dependent on their neighboring districts for supply of oxygen, all other guidelines and SOPs mention in these guidelines are to be followed and they shall create a BUFFER STOCK of 20% of their daily consumption at their disposal in order to meet any emergency requirements that may arise. The BUFFER STOCK shall be locally created within 7-days and shall be in control of the Deputy Commissioner.

**Oxygen Supply & Emergency Management Protocol:**

1. The hospitals (both government and private) are themselves responsible for tying up and obtaining their regular oxygen supplies from the Oxygen Re-Filler/Manufacturers. Without increasing these regular supplies, the hospital shall not increase their oxygenated beds.
2. There are subsisting oxygen supply contracts between the hospitals (both government and private) and Oxygen Re-Fillers/Manufacturers. The same shall continue to operate and decide the oxygen supplies except as specifically provided for in this order to meet oxygen emergencies.
3. The hospital facing an oxygen emergency which it is unable to handle on its own shall bring it to the notice of the District/Zonal Oxygen Cell at the earliest possible time via Helpline Number (to enable District/Zonal Oxygen Cell have adequate time to respond and solve the oxygen emergency).
4. The hospital facing an oxygen emergency may also bring it directly to the notice of the officers of Oxygen Cell in case the Helpline is unresponsive or there is a delayed response.
5. In case District or BBMP Oxygen Helpline is unresponsive or there is a delayed response, the hospital can also call the State Oxygen Helpline numbers.
6. The District/BBMP Zone Nodal Officer **ALONG WITH THE** Assistant Drug Controller of the District/BBMP shall follow the following protocol –
  - a. talk to the regular supplier of the hospital and try to ensure that the requisite oxygen is delivered in time to solve the emergency
  - b. if that does not work, then check the BUFFER STOCK available with the district/BBMP and try to meet the emergency requirement out of the same

- c. if that does not work either, then check oxygen stocks with any Re-filler in the district/BBMP or in the neighboring district Re-Filler and if stocks are available then on emergency basis direct that the requisite oxygen stocks be given. The same shall be permitted to be billed by the Supplier/Re-Filler to the relevant hospital.
  - d. If that does not also work, then matter be escalated to State Oxygen Helpline & Cell who shall follow the same above protocol.
  - e. If that does not also work, then matter be immediately escalated to Deputy Commissioner and Addl Deputy Commissioner of the District who shall follow the same above protocol.
  - f. However, if the Deputy Commissioner/Addl Deputy Commissioner are unable to locally solve the emergency then they shall speak to the State Oxygen Helpline/State Nodal Officers and have the problem solved.
  - g. **However, as per exigency of the situation the required coordination and action at any level – including from the State HQ and any officer – may be sought at any point of time if needed.**
7. Notwithstanding anything contained in a subsisting contract, in order to meet emergent exigency oxygen requirements, the State Oxygen Nodal Officers may order in writing that supplies to a particular hospital or more hospitals in a district shall be supplied by a particular Re-Filler and Manufacturer, for such period of time as is necessary to meet the COVID-19 pandemic oxygen requirements of hospitals/districts.
8. It is seen that Re-Fillers are not informing the government and the district authorities about the supply details of the oxygen. The medical oxygen account and usage is not getting available to the government and districts/BBMP authorities. Therefore, if anytime so ordered by the State Nodal Officers with respect to one or more than one Re-Fillers then the oxygen indents from such a Re-Filler(s) to the Manufacturers shall be honored only in case they bear the counter-signatures of the officer so designated.

These guidelines are issued under Section 24 of the Disaster Management Act 2005 and section 4 of the Karnataka Epidemic diseases Act 2020. Any violation of these guidelines will attract penalties under relevant sections of the above mentioned Acts and the IPC.

  
(P. Ravi Kumar)  
Chief Secretary to  
Government of Karnataka

To:

- 1) Chief Commissioner, BBMP
- 2) Deputy Commissioner of all Districts
- 3) All CEOs of ZPs,
- 4) The Special Commissioner – Health , BBMP, Bengaluru
- 5) All District Health Officer
- 6) The Chief Health Officer (Public Health), BBMP, Bengaluru

- 7) The District Surveillance Officer, All Districts.
- 8) Drug controller, Karnataka.
- 9) Assistant drug controllers of all Districts.

**Copy for information:**

1. Additional Chief Secretary to Govt. HFW Department
2. Principal Secretary to Government, Revenue Department (Disaster Management)
3. Commissioner, Department of HFW
4. Mission Director, National Health Mission
5. Director, HFW Services
6. PS to Hon. Minister for Health and Family Welfare and Medical Education