



Ministry of Health and Family Welfare
PM Cares: Oxygen Concentrator for Health Facilities
in Rural India



PM CARES
Prime Minister's Citizen Assistance & Relief
in Emergency Situations Fund

Oxygen Concentrators (OCs) Distribution, Maintenance and Sterilization

Introduction

For bringing critical resource of Oxygen closer to the public, for management of COVID19 in rural, peri-urban and tribal areas.

- **One Lakh Oxygen Concentrators (5 LPM and 10 LPM) – mix of both Imported and Domestic** - are being distributed at :
 - CHCs,
 - PHCs / PHC–HWCs and,
 - SHCs / SHC–HWCs
- **Priority in allocation is given to States/UTs/districts which are not close to sources of Liquid Medical Oxygen or are geographically inaccessible like hilly regions, North East, and tribal regions.**
- These OCs may be deployed at Community CCCs being established by States/UTs for management of COVID in rural, peri-urban and tribal areas.

Criteria by MoHFW for Allocation of OCs to States / UTs

1. **Equal weightage** given to the **population** (mid-year population by 2020) and number of the **public healthcare facilities** (SHCs, PHCs and CHCs) available in the respective States/UTs.
2. **In SHCs-HWCs,**
 1. If functional oxygen cylinders are already available, 1 OC of **5 LPM**
 2. If such cylinders are not available, 2 OCs of **5 LPM** each.
3. **In PHCs**
 1. If oxygen cylinders are already available, 2 OCs of **5 LPM** or **10 LPM**
 2. If oxygen cylinder are not available, an additional OC of **5 LPM** or **10 LPM**
4. **CHCs** to be given a minimum of 2 - 4 OCs of **10 LPM** each.
5. OCs already supplied to States/UTs through foreign donation and other routes, to be factored-in and reduced from the total requirement

Procedure adopted by MoHFW for the Allocation of OCs

1. Total Requirement is arrived by allocating the OCs to PHFs as below.

| Facility | Minimum Number of OCs per PHF |
|-------------------------------|-------------------------------|
| SHC (5 LPM capacity) | 2 |
| PHC (5 LPM / 10 LPM capacity) | 2 Or 3 |
| CHC (10 LPM capacity) | 2 to 4 |

2. OCs already supplied to States/UTs through foreign donation and other routes, deducted from the total requirement to arrive at Net Requirement.

3. **One Lakh OCs under PM-CARES** are proportionately allocated by giving equal **weightage** to the **population** (mid-year population by 2020) and **number of the public healthcare facilities** (SHC & PHC-HWCs and CHCs) available in States/UTs.

4. Priority in allocation given to States/UTs with geographically inaccessible like Hilly Regions, NE & tribal regions.

Criteria for States to allocate OCs among Districts and Facilities

1. **Stage of pandemic** within the district/s
2. Prioritize depending upon **test positivity rate**, quantum and volume of cases and **resources available**.
 - a. **Priority to districts which are not close to sources of Liquid Medical Oxygen or are geographically inaccessible.**
3. States to **allocate OCs first to CHCs**, then to PHCs and SHCs
4. Factors to be considered for further rational deployment.
 - a. **Number of Health facilities available for COVID management** – both in public and private sector
 - b. **Distance** of the Health facilities from the nearest DCHs/DCHCs and the travel time to these dedicated COVID facilities.
 - c. High **volume**/high case load facilities
 - d. Health facilities having **adequate infrastructure** to support an oxygen concentrator
 - e. Health and Wellness Centres at SHCs & PHCs and CHCs with **24x7 power supply / adequate power backup systems** which can ensure functioning of oxygen concentrators.
5. States have the **flexibility to move the OCs across the public health facilities** as per needs.

NHM, MoHFW to coordinate with the States/UTs

- 1. Guidance Note to States** for an organized and rational distribution of these concentrators so that health facilities can utilize them optimally without any delay, for the benefit of the patients
- 2. Regular liasioning with the States/UTs**
3. Sharing with the States/UTs, the list of actual consumables and accessories (OCs brand wise) and technical specifications of OCs for each model.
- 4. In coordination with the Procurement Agency / ONGC, ensuring the**
 1. Timely supply of OCs along with consumables for 3 months
 2. AMC of the supplied OCs for one year
 3. Establishing a helpline for troubleshooting
 4. Furnishing the details of Service Engineers for attending the requirements.
- 5. Each OC is provisioned with unique QR code for tracking from the dispatch till they reach facilities.**
- 6. Post warranty period** (one year AMC is being provided by the supplier) they are to be linked with **existing Biomedical Equipment Management & Maintenance Program (BMMP)**

OxyCare – Management Information System (OC_MIS)

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Ministry of Health and Family Welfare
OxyCare - Management Information System
OC-MIS

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PM CARES
DISTRIBUTION OF OXYGEN CONCENTRATORS
TO RURAL INDIA

Welcome to OxyCare – Management Information System (OC-MIS)

When any patient gets a severe COVID-19, the oxygen levels in the body can get low. To keep your oxygen levels at the normal range, patient needs to be given medical oxygen. Medical oxygen can be made available through various devices like oxygen concentrators, PSA Oxygen Plants, Compressed Gas Cylinders and

MIS for allocation of OC's called as OC-MIS

1. **NIC has developed** an exclusive MIS / App for tracking the deployment on real-time and functioning of OCs, on the lines of existing RT-PCR App
2. Supply side details are entered by ONGC, which will be visible to the States, once OCs are allotted to MoHFW to the States
3. All the MDs and the identified officers at the State level and District Collectors / CMOs at the district level are already in the RT-PCR Portal. More users can also be added by States, based on needs.
4. States / Districts, based on the allocation within the States/Districts, will create **the Point of Contact (PoC) Users**.
5. **PoC users – at CHCs, SHCs and PHCs –** will download the App from Google Play store and will be validated through OTP mechanism and then, they will be able to utilize the features of the App.
6. On receipt of OCs, **the PoC users will acknowledge using QR code**, uploading the photos and thereby capturing the GPS locations.

| State | Allocated by MoHFW to State | Allocated by State to Districts | Dispatched to Consignees | Received at District | Received in Health Facility | Functional OCs | Faulty OCs having issue | Installed at Health Facility |
|-------|-----------------------------|---------------------------------|--------------------------|----------------------|-----------------------------|----------------|-------------------------|------------------------------|
|-------|-----------------------------|---------------------------------|--------------------------|----------------------|-----------------------------|----------------|-------------------------|------------------------------|

Sterilization of OC

- Adherence with **Infection prevention & Control (IPC)** practices during oxygen concentrator use.
- Maintaining Sterilization of Oxygen Concentrator after use.
- NHSRC has given training on Sterilization and also has made training video for use and sterilization of OC.
- Link to training material on OC use and sterilization - <https://nhsrcindia.org/training-material-0>

THANK YOU

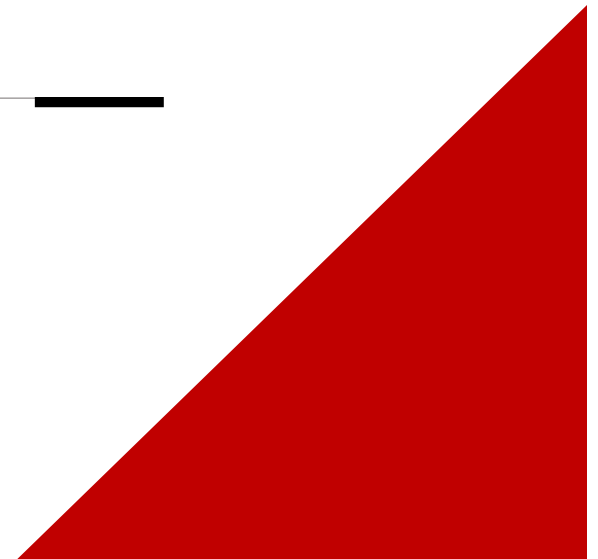
The text "THANK YOU" is rendered in a bold, blue, sans-serif font. The letters have a slight 3D effect with a gradient from a darker blue at the top to a lighter blue at the bottom. Below the text is a soft, semi-transparent reflection of the same text, creating a sense of depth and balance.

16 September 2021

Improving availability of oxygen concentrators

Lessons from Rajasthan

Siddharth Mahajan
Secretary – Medical and Health
Government of Rajasthan, India



Presentation **Outline**

- 1** Background
- 2** Why Oxygen Concentrators?
- 3** Procurement of oxygen concentrators
- 4** Distribution of oxygen concentrators
- 5** E-Upkaran – Web based repair and maintenance
- 6** Training on oxygen concentrators

Background



~20%

Covid-19 patients required oxygen supported beds during second wave



Unprecedented

requirement of medical oxygen during the 2nd wave of Covid-19 pandemic



Oxygen Concentrators

Based on expressed needs for use at the periphery to reverse hypoxia

Why Oxygen Concentrators?



Immediate response to oxygen need

Oxygen concentrators were best of the options to respond to the spike in oxygen demand during second wave



Other options required time to implement

Liquid medical oxygen storage and installation of PSA plants required time to procure, install, train and operate



Oxygen concentrators could be procured locally by the state

During the second wave, LMO supplies were managed centrally, which had the whole country to cater to, with priority to high burden states



Best option for ensuring last mile delivery

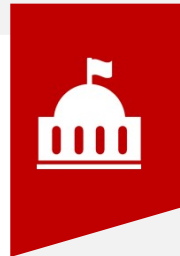
Oxygen concentrators are easy to deploy and operate at peripheral facilities, which helped community demands

Procurement of oxygen concentrators



SIMPLIFIED PROCUREMENT

70% procurement through Rajasthan Medical Society Corporation Limited (RMSCL), a state agency for procurement of drug and equipment



QUALITY ASSURANCE

Quality checks of OCs ensured through provisions in tender document and by biomedical Engineers during receipt of OCs



50,000+

oxygen concentrators are currently deployed in the state

Distribution of oxygen concentrators



Responsibility

Administrative officer of the district were entrusted with the task



Health facilities

Minimum 6 to 7 OCs per PHC and 10 OCs per CHC installed

Also deployed at higher level facilities like SDH, District Hospitals etc. based on expressed needs



OC banks

Establish OC banks in all districts of Rajasthan

+ 500 units at Jaipur, ~ 500 units at divisional HQs, ~ 400 units at district HQs

Accessible through helpline number or via District Drug Warehouse, with a security deposit on refundable basis

E-Upkaran – Support for repair & maintenance



A web-based application

manages and maintains equipment's and instruments from one platform

ensures seamless and error free functionality

contains detail of all the OCs available in the state

manages repair and maintenance of statewide oxygen concentrators

NATIONAL HEALTH MISSION
Medical, Health & Family Welfare Department
Government of Rajasthan



NATIONAL HEALTH MISSION

E-Upkaran

e-Upkaran: Equipment Management and Maintenance System.

e-Upkaran (EMMS) is a comprehensive software solution to improve the Inventory Management & Maintenance Services of Equipments in Hospital's across the Rajasthan.

Training on oxygen concentrators



Training content

Operational
management of
oxygen concentrators

Decontamination, repair
and maintenance



Trainees

Specialists, Medical
Officers and Nurses

Technicians and
Pharmacists

Biomedical
Engineers

ITI trained technicians
and instructors



Training

Virtual/ e-learning

With Skill India

Classroom and
practical

Lessons from Rajasthan



- Procurement through a reliable intermediary, with demonstrated history of quality and timely delivery

- Explore multiple channels to make OC available to the people – health facilities, OC banks, rural facilities

- Have an automated system for operations and maintenance to ensure 100% functionality of all devices

- Train a wide range of professionals to manage OCs – not just nurses and technicians

- A pandemic of this proportion cannot be managed solely at tertiary care facilities

- Pandemic response requires interventions at rural levels and services at facility nearest to the community

Thank You