



### Gender Integrated Response to Emerging COVID-19 Priorities in India

## STRENGTHENING HEALTH SYSTEMS TO RESPOND TO RESPIRATORY EMERGENCIES

### BACKGROUND

Worldwide, respiratory diseases are the third leading cause of death after ischemic heart disease and stroke.<sup>1</sup> India has the highest burden of chronic respiratory diseases in the world and contributes to one third of total deaths due to chronic obstructive pulmonary disease (COPD) and 32% of disability-adjusted life years (DALY) lost due to respiratory diseases worldwide.<sup>2</sup> Further, the quality of respiratory management needs to be improved as data suggests that per person DALY loss from respiratory illness in India is 2.4 times the global average.<sup>3</sup>

The need for emergency respiratory management is expected to increase in the future due to various factors including climate change and particularly air pollution which are major attributable risk factors for COPD in India, accounting for 53 % of DALY loss.<sup>3</sup> Levels of air pollution in India are increasing at an alarming rate which will further increase the prevalence of respiratory disease. Moreover, it is anticipated that lifestyle changes and the increase in the proportion of non-communicable diseases will further add to the burden.

World over, COVID exposed both the vulnerability and the resilience of health system capacity to deal with respiratory emergencies. India, too, bore the brunt, with 8.9% of certified deaths in 2020 being attributed to COVID.<sup>4</sup> Emergency respiratory care, when available, was provided mainly at tertiary care facilities. This resulted in overcrowding at these health facilities, leading to increased mortality and morbidity.

USAID's MOMENTUM Safe Surgery in Family Planning and Obstetrics project implemented by EngenderHealth, received funding through the American Rescue Plan Act (ARPA), under an activity focused on Gender Integrated Response to Emerging COVID-19 Priorities in India, worked to build capacity of health systems across six states to effectively manage respiratory emergencies in primary care facilities. The project was implemented in 25 districts in Assam, Chhattisgarh, Jharkhand, Karnataka, Madhya

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<sup>1</sup> <https://www.who.int/data/global-health-estimates>, accessed 4/7/2023.

<sup>2</sup> Prevalence and attributable health burden of chronic respiratory diseases, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017. [https://doi.org/10.1016/S2213-2600\(20\)30105-3](https://doi.org/10.1016/S2213-2600(20)30105-3)

<sup>3</sup> [https://www.thelancet.com/journals/langlo/article/PIIS2214-109X\(18\)30409-1/fulltext](https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(18)30409-1/fulltext)

<sup>4</sup> Report On Medical Certification of Cause Of Death 2020, Office Of The Registrar General, India

Pradesh, and Odisha, in partnership with the state NHM and WCD departments, MAMTA and SAATHII from September 2021 to August 2023.

## APPROACH

The project's approach focused on three areas:

1. **Addressing the needs of vulnerable and marginalized populations:** The project defined pregnant women, children, and newborns as vulnerable and marginalized groups that either had an increased risk of mortality due to COVID (pregnant women) or had increased vulnerability of disease onset due to non-availability of vaccine appropriate for them (newborns, children, and pregnant women). Additionally, the project attempted to capacitate peripheral health facilities to provide COVID and respiratory emergency care services closer to remote and underserved populations.
2. **Focus on subdistrict level health care facilities:** The project focused efforts on subdistrict and 24x7 primary health care facilities which provided in-patient care. The aim was to leverage basic resources already available in these facilities to make services available and accessible closer to the homes of those who needed care, and to ensure long-term sustainability.
3. **Collaboration and coordination with partners:** Different partners were working on different areas and themes to respond to the COVID emergency. The project leveraged the efforts of the government and other partners involved in improving the oxygen ecosystem, strengthening capacity building efforts in tertiary care facilities, and providing vaccination to have a coordinated respiratory care response.

## INTERVENTION AND RESULTS

To strengthen the systems needed to provide quality emergency respiratory care at the subdistrict level, the following interventions were done.

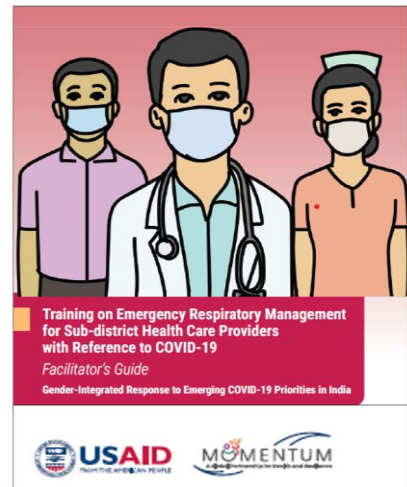
1. **Health Facility Assessment:** The project assessed 400 subdistrict health care facilities using a standard tool for health facility assessment to assess their readiness to provide emergency respiratory care. Some of the key findings were:
  - a. 64% of the facilities did not provide in-patient management for respiratory emergencies due to COVID. Most of them stated that they referred all such patients to higher centers. This highlighted the need to capacitate and utilize these facilities for managing moderate cases.
  - b. Tertiary care facilities were located at an average distance of 33 km from these facilities, thus highlighting the need to capacitate subdistrict facilities to provide emergency care before patients are transferred.
  - c. While numerous government efforts have been made to train staff and doctors at the district level, only 28% of staff were trained on pediatric case management, 47% on management of COVID in pregnant women and 60% on adult case management. This training had been done

in an online mode, which was not sufficient to develop skills to deliver oxygen in cases where it is required.

- d. Only 32% of emergency wards or casualty rooms had a triage area for holding and screening suspected COVID cases, while 82% had a triage area for categorizing and treating confirmed COVID cases, thereby stressing the need for emergency preparedness.
- e. Only 41% of the facilities had oxygen-supported beds in the isolation ward, either through central supply, cylinder, or concentrator; however, almost all of them had other supplies related to COVID management.

2. **Focused skills-based capacity building of providers to manage respiratory emergencies as per their need:** Since most staff were not trained at all, or only trained in an online mode, staff lacked skills for emergency respiratory care. To build their capacity quickly, the project did the following:

- a. The project quickly developed a simplified, integrated curriculum for capacity building of subdistrict health care providers on comprehensively managing respiratory emergencies not only in adults, but also in vulnerable populations such as pregnant women, adolescents, children and newborns, using national and international guidelines, primarily focusing on hands-on skills development. This curriculum was vetted by national level experts.
- b. Using this curriculum, the project trained 1517 providers to provide emergency respiratory care. Training focused on skills related to triaging and referral criteria, provision of emergency respiratory care including oxygen therapy, stabilization before transport, and transportation and infection prevention, among other topics.



*Respiratory care expert demonstrating the skills of rational use of oxygen to participants*

Photo credit- Dr Meeta Mahar, EngenderHealth



3. **Strengthening the preparedness of health facilities to ensure rapid response:** To ensure that facilities are well prepared to respond to sudden emergencies, the project conducted supportive supervision

visits to assess and address infrastructure needs and ensure a sufficient supply of essential medical supplies to provide emergency respiratory care.

## LEARNINGS

Some key learnings from the project include:



*“This kind of training is must, as it creates awareness and is beneficial for health staffs as well as common people. Such type of training should be conducted regularly. The subject content was very good.”*

**- Medical Officer, Bokaro, Jharkhand**

1. Reconfiguring and preparing primary and secondary care facilities is critical to respond to any unexpected surge of demand for respiratory emergencies and to maintain continuity of care. These facilities are often underutilized, given the availability of human resources and infrastructure. This will reduce the need to create additional infrastructure and reduce the burden on tertiary care facilities.
2. Emergency management remains a neglected area and primary and secondary healthcare systems, including medical officers and nurses, need regular updates and training to cater to changing disease profiles. This training should address not only knowledge enhancement but should also focus on refreshing required skills.
3. While developing capacity building approaches, due consideration should be given to digital fatigue. It was observed that building skills via digital platforms is not easy, and that these should be primarily utilized for knowledge enhancement only in select areas.

## FUTURE CONSIDERATIONS

Innovations introduced in response to the COVID-19 pandemic will have continued utility and need to be maintained to continue to strengthen health system resilience. This remains important because:

1. In India, climate change and consequential air pollution are rising at fast rate. Projections forecast that air quality will continue to decrease and there will be a 24% increase in associated premature mortality by 2050.<sup>5</sup> There is a direct association between air pollution and respiratory diseases.
2. Demographics of India are changing. It is expected that by 2031, 12% of India will be over 60 years of age.<sup>6</sup> With rising age, it is expected that the incidence of respiratory diseases will also rise.

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<sup>5</sup> <https://aaqr.org/articles/aaqr-21-08-0a-0204> accessed 15/7/2023.

<sup>6</sup> [https://www.indiabudget.gov.in/budget2019-20/economicsurvey/doc/vol1chapter/echap07\\_vol1.pdf](https://www.indiabudget.gov.in/budget2019-20/economicsurvey/doc/vol1chapter/echap07_vol1.pdf) accessed 15/7/2023.

3. In the future, it is predicted that pandemics will emerge more often, spread more rapidly, cause more damage to the global economy and lead to greater global morbidity and mortality. Respiratory viruses have more likelihood to cause pandemics.

All these factors necessitate the need for further focus on respiratory care, particularly through strengthening availability of care at the primary health care level.



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