

Increasing the capacity to provide high-quality clinical management of COVID-19 cases in Egypt: EpiC's collaboration with key stakeholders engaged in the country's COVID-19 response

The United States Government (USG), through the United States Agency for International Development (USAID), provided the Government of Egypt with a donation of 250 ventilators for intensive care units to assist its fight against COVID-19. The donation delivers on the U.S. administration's pledge to provide these critically needed supplies and support Egypt's ongoing efforts to mitigate the impacts of the COVID-19 pandemic in the country. **Between June 2020 and May 2021, EpiC provided technical assistance (TA) and capacity-strengthening support to ensure that health providers and facilities could use the USG-donated ventilators safely and effectively.** EpiC collaborated closely with the Ministry of Health and Population (MOHP) to strengthen the capacity of the government to receive, install, and use the ventilators. EpiC then led an assessment of TA needs for the clinical management of COVID-19 and provided clinical TA. EpiC also worked with the Supreme Council of University Hospitals (SCUH) to provide similar TA to university hospitals that received USG ventilators.

EPIC'S KEY ACCOMPLISHMENTS

- Support for the installation of 250 mechanical ventilators at six university and 18 public hospitals
- 26 facility-level assessments conducted to confirm hospital capacity and identify technical assistance needs
- 194 critical care providers trained in ventilator installation and use
- 271 clinicians trained in COVID-19 clinical case management

Activities and Accomplishments

COORDINATION WITH STAKEHOLDERS

From the project's inception, EpiC has sought to strengthen and leverage relationships with the MOHP and the SCUH to ensure the alignment of EpiC activities with national priorities. To kick-start the project, EpiC held extensive discussions with both partners and collaboratively planned project activities. Ongoing communication and collaboration with the MOHP provided a foundation for successful program implementation.

FACILITY-LEVEL ASSESSMENTS

Six university hospitals were identified by the SCUH to receive 100 ventilators, and 18 public hospitals were identified by the MOHP to receive 150 ventilators. These hospitals are located in 12 governorates across Egypt. EpiC conducted facility-level assessments at all sites receiving ventilators to understand their level of readiness to use the ventilators in the care of patients with COVID-19. The information collected through these rapid assessments was used to target EpiC's clinical TA plan. In general, the assessment findings reflected the need to strengthen capacity of providers in COVID-19 case management and make protocols for critical care and ventilator management available.

TRAINING IN VENTILATOR INSTALLATION AND USE

Two hundred fifty specialized, compact travel ventilators designed to treat adult and pediatric patients experiencing severe breathing difficulties such as those caused by COVID-19 were donated by the USG and installed at six university and 18 MOHP hospitals in November 2020. To ensure the best use of the ventilators, EpiC adapted and translated training materials into Arabic and provided onsite training to 194 critical care physicians and intensive care unit (ICU) staff on the installation, use, and maintenance of the ventilators.

TRAINING ON COVID-19 CLINICAL MANAGEMENT

Following the ventilator trainings, EpiC held four rounds of training focused on adult COVID-19 case management, including management of ventilated patients, for critical care physicians and specialists from other relevant areas. Four university professors and lecturers who specialized in ICU care and mechanical ventilation delivered the in-person trainings. This team of instructors trained a total of 271 physicians from MOHP and university hospitals (111 females, 160 males).

EpiC also translated a number of critical care tools and job aids into Arabic and disseminated them to facilities during site visits and to physicians during training sessions.

Physicians were trained using the COVID-19 Adult Case Management Series Training Curriculum developed by EpiC with input from the University of California at San Francisco's Anesthesia Division of Global Health Equity, the Institute for Global Health Sciences, and the Johns Hopkins University School of Medicine. The case-based curriculum included foundational



A critical care physician discusses mechanical ventilation with the instructors of the first round of COVID-19 Adult Case Management Series training in Cairo, Egypt.

Photo credit: John Nabil

modules on personal protective equipment (PPE), patient triage, and therapeutics, followed by COVID-19 case scenarios. Training sessions also covered the Egyptian protocol for COVID-19 infection prevention and control per MOHP guidance, a ventilator demonstration, and availability of online COVID-19 clinical care resources, including job aids and protocols.

Lastly, participants created WhatsApp groups for ongoing discussion and knowledge exchange on COVID-19 case management. These groups offer an opportunity for providers to engage with peers and local experts to ask questions and share lessons and resources.

Conclusions

The COVID-19 ventilator initiative in Egypt has increased the country's capacity to provide high-quality clinical management of COVID-19 cases and served to strengthen collaboration and trust among key stakeholders engaged in the country's COVID-19 response. As one of the lecturers at Cairo University stated, "The [USG-donated] ventilators are very efficient, and the project, which is being implemented at a very critical time, is highly commendable; more projects of this kind are needed nowadays."

The outcomes and lessons learned from this initiative informed the design of the Supporting Egypt's Efforts to Combat COVID-19 (SEEC) project, through which USAID continues to support the Government of Egypt as it manages the pandemic. Under SEEC, EpiC is partnering with more hospitals and laboratories to reach a broader network of health care workers and laboratory technicians to strengthen Egypt's COVID-19 response in four focus areas—infection prevention and control, clinical management, laboratory strengthening, and data analysis and visualization. SEEC expands the use of the COVID-19 Adult Case Management Training Curriculum and disseminates key clinical job aids and other technical resources developed under the ventilator TA activity. To best meet the current clinical TA needs, SEEC also expands clinical management areas to include home-based care and critical care training for nurses.

Meeting Targets and Maintaining Epidemic Control (EpiC), a five-year global project funded by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) and the United States Agency for International Development (USAID), is dedicated to achieving and maintaining HIV epidemic control. EpiC is led by FHI 360 with core partners Right to Care (RTC), Palladium, Population Services International (PSI), and Gobe Group. EpiC and its consortium members are implementing COVID-19 activities in more than 20 countries on three continents. In 13 of those countries, EpiC is providing technical assistance (TA) to governments and specific health facilities that received U.S. Government (USG)-donated ventilators and to health providers on COVID-19 clinical case management.

This report is made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents are the responsibility of the EpiC project and do not necessarily reflect the views of USAID or the United States Government.