

## Increasing the capacity to provide high-quality clinical management of COVID-19 cases in El Salvador

**Between August 2020 and August 2021, the Meeting Targets and Maintaining Epidemic Control (EpiC) project provided technical assistance (TA) and capacity-strengthening support to ensure that health providers and facilities in El Salvador could use ventilators donated by the United States Government (USG) safely and effectively.** The USG, through the United States Agency for International Development (USAID), provided the Government of El Salvador with a donation of 589 ventilators for intensive care units to assist the country's fight against COVID-19. The donation delivered on the U.S. administration's pledge to provide these critically needed supplies and support El Salvador's ongoing efforts to mitigate the effects of the COVID-19 pandemic in the country.

EpiC collaborated closely with the Ministry of Health 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 subsequently provided clinical TA on ventilator use.

### EPIC'S KEY ACCOMPLISHMENTS

- Supported the installation of 158 of the 589 mechanical ventilators donated by USAID at 31 hospitals
- Conducted 13 facility-level assessments to confirm hospital capacity and identify technical assistance needs
- Trained 1,117 clinicians in COVID-19 clinical case management

## Activities and Accomplishments

### COORDINATION WITH STAKEHOLDERS

EpiC provided technical and logistical support for the delivery of 158 USAID-donated ventilators in El Salvador in 2020. This operational support included coordinating their receipt and inventorying the arrival at the airport and working alongside Ministry of Health (MINSAL) staff as they determined locations for each machine and tested each machine to ensure functionality before installation.

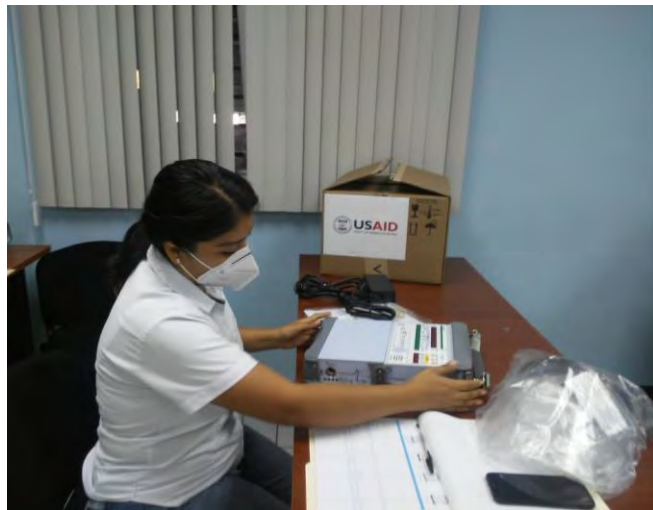
### FACILITY-LEVEL ASSESSMENTS

EpiC conducted facility-level assessments in 13 hospitals in El Salvador that have intensive care units. Data revealed a large disparity in human resources, technical capacity, operational capacity, and services related to critical care, including mechanical ventilation. EpiC used the information collected through these assessments to develop a clinical TA plan, including the list of priority training topics that were incorporated into the clinical management trainings, as all hospitals indicated a desire for training to complement the receipt of donated ventilators.

### TRAINING ON COVID-19 CLINICAL MANAGEMENT

From August 2020 to January 2021, EpiC conducted both in-person and online trainings for health care workers on COVID-19 clinical management. They began in August 2020 with online trainings focused on the use of mechanical ventilators and other critical patient care competencies including clinical management of COVID patients, infection prevention control (IPC), and initial stabilization of critical patients. In total, 530 medical personnel were trained virtually during this phase of the trainings. With joint support from the USAID-funded Health Policy Plus (HP+) and EpiC projects, the online courses were supplemented with in-person mentorship of staff on COVID-19 patient management. A total of 254 medical personnel from 22 facilities received mentorship on critical care patient management and use of mechanical ventilation. An additional 197 medical personnel from seven MINSAL hospitals were subsequently trained using a training of trainers' approach.

In December 2020, the HP+ and EpiC projects jointly developed a second phase of training. The second phase of training followed an approach similar to the first phase: virtual sessions supplemented by in-person mentorship on the same topics (critical care patient management and mechanical ventilation). Participants included physicians, nurses, and hospital administration staff, including those that had participated in the first phase of training. Three different topics were covered: COVID-19 update, arterial blood gas (ABG) interpretation, and oxygen therapy. In this phase, 128 health care providers received virtual training, 105 people received mentorship on critical care topics, and 35 mentors were trained.



*Facility staff received training on use and maintenance of USG-donated ventilators. Photo by Guillermo Corleto.*

In January 2021, HP+ and EpiC launched the “Learning Network COVID Response in Latin America.” This collaborative work between both projects in Honduras and El Salvador consisted of a series of six virtual Spanish-language sessions to assist health care workers and their teams in Latin America to improve service delivery in critical care. Topics included how to improve IPC in health care facilities, guidance on mechanical ventilation, guidance for pre-intubation oxygen therapy, and mental health for health care workers.

In March 2021, EpiC launched a critical care hospital staff community of practice (COP) to continue engagement with participants from previous critical care and ICU trainings and mentorship phases. The COP was led by facility health care workers from eight hospitals in the Eastern health region. Each week, one hospital chose a representative to prepare and share an interesting case about COVID-19 case management, followed by group discussion. EpiC supported the establishment and processes of launching and running the COP, which identified

topics of interest related to COVID-19 and patient care and held four educational sessions. The groups met via Google Meets and then continued discussions via a private WhatsApp group. Session topics selected by the COP members included COVID-19 and diabetes mellitus, pediatric COVID-19, COVID-19 pneumonia, and oxygen therapy and COVID-19 with a surgical patient.

In collaboration with the USAID-funded Sustaining Technical and Analytic Resources (STAR) project (led by University of California, San Francisco or UCSF), EpiC translated several critical care resources into Spanish and posted them on the [Open Critical Care website](#). These materials were also used in trainings for health care workers. Translated resources included:

- COVID therapeutics guideline document (National Institutes of Health [NIH])
- COVID pulmonary, ARDS, and ventilator resources (American Association of Critical-Care Nurses [AACN])
- COVID-19 frequently asked questions (STAR project)
- Mental health for critical care providers and PTSD (Psychology Tools)
- Oxygen supply calculator (STAR project)
- Viral load brief (Society for Critical Care Medicine)

In addition to the training programs above, EpiC initiated a separate critical care training and mentorship program for nurses working in hospitals with critical care services and ICUs throughout the country. The program was developed through a subaward partnership with the National Nursing Association of El Salvador (ANES). ANES identified 18 nurse facilitators from 14 hospital facilities (some large facilities had more than one facilitator) from their membership to lead facility-based training and mentorship on five critical care topics through a multi-week program. The 18 facilitators reached a total of 411 participants over the life of the program.

## Conclusions

EpiC's COVID-19 clinical case management technical assistance in El Salvador has increased the knowledge of health care workers in El Salvador, giving them the information and skills needed to provide high quality clinical management of COVID-19 cases. These gains are being sustained through the clinical COP, where health care workers continue to share lessons learned and best practices beyond the life of the project.

*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, and Population Services International (PSI). 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.*

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