

Strengthening capacity for COVID-19 critical case management in the Philippines

Between June 2020 and June 2022, the Meeting Targets and Maintaining Epidemic Control (EpiC) project funded by the United States Agency for International Development (USAID) provided technical assistance (TA) and capacity strengthening support to the Philippines to respond to COVID-19 and prepare for future epidemics.

EpiC built the capacity of frontline health care providers and health facilities to manage critically ill COVID-19 patients and safely operate and maintain 100 state-of-the-art ventilators recently donated by the U.S. Government (USG). The ventilators were installed in intensive care units (ICUs) in 46 hospitals across all 17 regions of the Philippines. The donation delivers on the U.S. administration's pledge to provide critically needed supplies and support the country's ongoing efforts to mitigate the impacts of the COVID-19 pandemic.

EpiC collaborated closely with the Department of Health (DOH) to strengthen the capacity of the government to receive, install, operate, and sustain the use of the ventilators. EpiC then led an assessment of TA needs for the clinical management of COVID-19 and provided clinical TA to fill identified gaps.

Activities and Accomplishments

COORDINATION WITH STAKEHOLDERS

EpiC established strong collaboration and partnerships with the Philippine DOH and other key stakeholders at national and regional levels. Through continuous consultation, participatory planning, and feedback from the DOH, EpiC coordinated with One Hospital Command (OHC)—the centralized comprehensive response unit handling COVID-19 case referral and management within DOH. The OHC supports and monitors the designated COVID-19 referral hospitals across the country, including the 46 that received USG-donated ventilators. In its various TA activities, EpiC worked closely with different DOH units, such as the Disease Prevention and Control Bureau (DPCB), Health Human Resource

EPIC'S KEY ACCOMPLISHMENTS

- Supported the installation of 100 mechanical ventilators in 46 hospitals across all 17 regions of the country
- Conducted facility-level assessments in 31 priority hospitals to determine capacity and identify TA needs
- Trained more than 3,000 health care workers in COVID-19 clinical case management through blended and online models of learning
- Nearly 1,500 participants attended three Community of Practice (COP) webinars on critical care and surge capacities
- Trained 30 priority hospitals and selected regional health offices in ventilator commodity forecasting and quantification

Development Bureau (HHRDB), and Health Promotion Bureau (HPB). EpiC partnered with the private sector, including the professional medical societies and allied health organizations, to hold a series of COP webinars. Partners included the Philippine College of Chest Physicians, Critical Care Nurses Association of the Philippines, and others.

To ensure a coordinated response and complementary efforts, EpiC joined the regular COVID-19 Partners' Meeting facilitated by the USAID Mission in the Philippines. This monthly meeting is attended by development partners such as the World Health Organization and United Nations Children's Fund (UNICEF), as well as other implementing partners. Likewise, EpiC attended regular meetings specific to ventilator TA and support with private partners, including the ventilator manufacturer and its local service provider in the Philippines.

FACILITY-LEVEL ASSESSMENTS

On June 22, 2020, the DOH released a memorandum on the recommended 46 hospitals to receive ventilators across all 17 regions of the country. In coordination with the DOH and USAID, EpiC prioritized and selected 31 hospitals from the list, which underwent the EpiC project's facility-level assessment (FLA) to determine capacity and readiness to receive and use the mechanical ventilators in caring for COVID-19 patients and to identify TA gaps and capacity-strengthening needs, particularly on COVID-19 critical care management. The FLA tool, developed by the University of California San Francisco (UCSF) through the USAID-funded STAR project, gathered essential facility-level data on general demographics, infrastructure and equipment, infection prevention and control, medications, human resources, and ICU services and protocols. With technical guidance from the local team of clinical experts and supported by a DOH memo dated September 25, 2020, EpiC customized and fielded the FLA survey through virtual interviews and remote consultations.

Based on FLA findings, EpiC proposed a training session on key concepts of COVID-19 management and integrated them into the existing national updated algorithms. In addition, EpiC identified the need for customized learning sessions for each hospital.

TRAINING ON COVID-19 CLINICAL MANAGEMENT

One of the major TA needs identified was training and capacity strengthening in critical care management of people with COVID-19 respiratory complications, including mechanical ventilator use and COVID-19 clinical treatment. The EpiC team of Filipino experts specializing in pulmonary medicine and critical care adapted global resources accessed via OpenCriticalCare.org and used them to develop Lessons and Algorithms on COVID-19 (LEARN COVID), a localized training package tailored and responsive to the needs of health care workers in the Philippine context. LEARN COVID's training design was informed and structured by the outcomes of the FLAs.

From December 2020 to February 2021, through a blended learning approach, EpiC trained more than 500 doctors, nurses, respiratory therapists, and allied health professionals on core theories and their practical applications in key clinical areas. These concepts included personal protective equipment (PPE) basics, ICU communications, approach to hypoxemia, high-flow noninvasive oxygen delivery, airway and ventilator management (including sedation and liberation), and COVID-19 therapeutics. By September 2021, EpiC converted these modules into recorded videos as a self-paced, web-based training course.¹ In collaboration with the DOH's DPCB and HHRDB, this tracking package, including its assessments, videos, and resources, was uploaded to the DOH Academy, the department's official eLearning platform. LEARN COVID also received accreditation for Continuing Professional Development (CPD) units from 12 council boards by the Professional Regulation Commission (PRC), including medicine, nursing, and respiratory therapy.



Health care workers are trained on mechanical ventilator use and COVID-19 clinical treatment. Photo by EpiC Philippines.

LEARN COVID online garnered more than 2,800 enrolled learners via the DOH Academy platform from September 24, 2021, to June 30, 2022, of which 998 completed the modules and received certificates with CPD units. In addition, EpiC provided critical care cards to 46 hospitals as a quick guide to help health care workers use and troubleshoot ventilators.

COMMODITY FORECASTING AND PROCUREMENT

EpiC trained 30 priority hospitals on ventilator consumable forecasting and quantification. EpiC also procured and provided six months of consumables and supplies to 46 hospitals so that they could sustain use of the ventilators. These items included patient breathing circuits, heat and moisture exchange (HME) filters, air inlet and oxygen filters, and batteries. EpiC also provided TA for forecasting, procurement planning, and managing consumable ventilator commodities.

COMMUNITY OF PRACTICE AND MENTORSHIP PROGRAM

EpiC facilitated and hosted a series of COP webinars on various topics in the COVID-19 continuum of care. This COP is a platform for sharing knowledge and experience, including lessons learned, best practices, and practical applications from real-world settings. Primarily

¹ The training package can be accessed through the [DOH Academy e-Learning Platform](#).

targeted to its 31 supported hospitals, EpiC extended this learning platform to all interested participants, reaching representatives from an additional 180 health facilities, regional and local health offices, professional societies, and development partners from both public and private sectors. Other professional organizations represented at COP events included the Philippine Medical Association (PMA), Philippine College of Physicians (PCP), Philippine Academy of Family Physicians (PAFP), Philippine Nursing Association (PNA), Association of Nursing Service Administrators of the Philippines (ANSAP), among others. Based on webinar evaluations, the majority enjoyed and learned from the webinars and confirmed they would most likely apply what they learned to their work and practice.

“Health care workers in the COVID-19 ward were not familiar with advanced airway management of COVID-19 like high-flow nasal oxygen. Because of the USAID’s technical assistance, our health care workers, especially doctors who are going on a 24-hour duty, now know how to manage patients needing oxygenation.” – A doctor from Camarines Norte Provincial Hospital

“The additional training given by USAID enhanced the learning of our staff, which added to their knowledge towards immediate actions in the setting of emergency care in our ICU.” – Frontline health care workers from Mayor Hilarion A. Ramiro Sr. Medical Center

Conclusions

EpiC project ensured the sustainability of its TA activities by building the clinical capacity of health care workers and securing buy-in and commitment from the DOH, local partners, and health facilities. Through collaboration with the DOH, EpiC successfully implemented its activities and established strong partnerships with supported hospitals. EpiC has underscored the importance of a multisectoral approach, stakeholder management, and innovative and adaptive approaches to learning. Since knowledge about COVID-19 is rapidly evolving, EpiC will support continuous learning based on the latest clinical guidelines by:

- Updating the online LEARN COVID module and developing additional modules on the clinical care pathways for mild and moderate cases, including triage, infection prevention and control, therapeutics, and referrals.
- Complementing the LEARN COVID training package by facilitating online COP events as a platform for knowledge exchange where industry experts share best practices and partners from the grassroots level share their real-world experiences.
- Supporting the 31 priority hospitals trained on LEARN COVID to take an active role in establishing a mentor-mentee network as a sustained approach to building health care workers’ capacities.

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