

## Increasing capacity to deliver care for critically ill COVID-19 patients in Fiji

From June 2020 to April 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 to the Republic of Fiji's to respond to the COVID-19 pandemic and prepare for future epidemics. Through USAID, the U.S. Government (USG) provided US\$250,000 to build the capacity of Fiji health care providers and health facilities to manage critically ill COVID-19 patients and safely operate and maintain 30 life-saving ventilators recently donated by the USG. The funding delivered on the U.S. administration's pledge to support the Government of Fiji's ongoing efforts to mitigate the impacts of the COVID-19 pandemic in the country. EpiC collaborated closely with local partner Pacific Community (SPC) and the Fiji Ministry of Health and Medical Services (MHMS) to receive, install, and use ventilators for the management of patients who require breathing support and to provide trainings on ventilator use and COVID-19 clinical case management.

### EPIC'S KEY ACCOMPLISHMENTS

- Conducted three facility-level assessments on hospital capacity to install ventilators and identify technical assistance needs
- Supported the installation of 30 mechanical ventilators at three hospitals
- Trained 70 health care workers, including biomedical technicians, to set up and operate the ventilators
- Trained 235 health care workers in COVID-19 clinical case management

EpiC assessed three targeted health facilities to identify gaps in critical-care capacity. Based on the assessment, SPC biomedical experts supported the location selection and set-up of the 30 ventilators at the facilities and designed and delivered training for health care workers (HCWs), including technicians, to maintain and operate the ventilators. After installation and training were complete, experts from SPC continued to provide TA to ensure routine calibration of the equipment. To complement the TA in ventilator use and prepare for the treatment of COVID-19 patients, EpiC developed a clinical training program focused on care for critically ill COVID-19 patients and on ventilator operation. The training program incorporated a hybrid virtual and face-to-face training approach to build the capacity of 205 HCWs in COVID-19 clinical case management. Additionally, based on the needs assessment, EpiC procured consumables (supplies) to support the operation of the ventilators and teleconferencing equipment to enable each facility to conduct virtual trainings and meetings with the ventilator manufacturers.

### COORDINATION WITH STAKEHOLDERS

When Fiji's first COVID-19 case was confirmed in March 2020, the efforts of the MHMS, relevant government sectors, and the Prime Minister's Office were aggressive, scalable, and proportionate, enabling Fiji to largely contain the spread of COVID-19. Following consultations and preparatory discussions with the MHMS, EpiC's partner SPC commenced implementation of the USAID-funded ventilator TA program with the goal to integrate efforts into the government's overall COVID-19 response.

### FACILITY-LEVEL ASSESSMENTS

As the first component of implementation, SPC conducted facility-level assessments (FLAs) in August 2020 at three targeted health facilities. These facilities had been preselected by the MHMS based on their geographic areas, critical care resources, available equipment, and workforce ability to manage COVID-19 cases and critically ill patients who would require ventilator support. The facilities included Colonial War Memorial (CWM) Hospital in Viti Levu, Labasa Hospital ICU in Vanua Levu, and Lautoka Hospital in Viti Levu. To conduct the FLAs, clinical teams collected data and held consultations with the Secretary of Health, health advisor, medical superintendents of the hospitals, anaesthetists in charge, nursing directors, biomedical technicians, human resources staff, and other relevant staff.

The FLAs provided recommendations on appropriate locations for each ventilator and demonstrated that the facilities catered to both adult and pediatric patients, used oxygen cylinders for oxygen delivery, and stocked basic essential drugs available for critically ill patients. The most pressing issues the FLAs identified at the facilities were that additional consumables were required to support ventilator use; despite facilities having adequate supplies of medication at the time of the assessment, stocks could quickly deplete during a large surge; intensive care medical specialists were in short supply and the facilities could face human resource constraints during a surge, pointing to the need to train additional local physicians; and some critical-care areas would benefit from the development of additional standard operating procedures (SOPs), as well as TA. EpiC presented the FLA results to the MHMS to identify the TA activities to jointly address these needs.

### TRAINING ON COVID-19 CLINICAL MANAGEMENT

In response to the FLA findings, and with support from the University of California, San Francisco (UCSF), a clinical training program was developed for HCWs in Fiji to manage critically ill COVID-19 patients and other patients in need of ventilator support. The trainings incorporated online videos demonstrating practical scenarios, along with guidelines provided by SPC and additional relevant online resources.

A total of 235 HCWs and biomedical technicians from each of the targeted facilities attended a hybrid mix of virtual and face-to-face trainings and refresher trainings throughout 2020 and 2021. SOPs on the use of personal protective equipment (PPE), intubation and extubation of

patients, and the suctioning of an endotracheal tube (ETT) in suspected/confirmed COVID-19 patients were developed and incorporated into the training. SPC continued to provide TA to HCWs and facilities that had follow-up questions. Recordings of training sessions were uploaded to publicly accessible platforms, including YouTube, to ensure clinicians could review them as needed. In January 2021, 30 Fijian HCWs attended a short training conducted by EpiC, SPC, and USAID on the management of COVID-19 patients with noncommunicable diseases (NCDs), given the concerns around vaccination, continuum of care, and long COVID.



Photo credit: Mr. Tociro Katsuki

*HCWs at Colonial War Memorial Hospital attend a training on ventilator operation and receive hands-on instruction.*

To ensure the long-term functioning of the ventilators, EpiC trained 70 HCWs and biomedical technicians across the three facilities on procedures for safely and effectively setting up and operating the equipment. In addition, the manufacturer provided virtual guidance during and after the trainings, as needed. An SPC biomedical technician consultant provided ongoing repair and maintenance services for the ventilators and mentored the biomedical technicians in the facilities to sustainably manage the equipment. EpiC further supported the facilities to conduct annual calibrations and arranged the logistics to have each ventilator serviced in Australia on a staggered basis. At the height of the second wave of COVID-19 cases in Fiji in November 2021, EpiC procured additional consumables to ensure that the facility ICUs had an adequate supply of the accessories needed to operate the ventilators.

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*“The workshop was very informative and educational. It enabled me to have a better understanding of aerosol-generating procedures and how the SOPs presented and discussed can be assimilated into our own working environment while we are looking after the suspected COVID-19 patients in the CWM Suva facility, since we do not have negative pressure rooms.” —CWM health care worker*

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## Conclusions

The findings from the FLAs indicated that as Fiji experiences waves of COVID-19 cases, more ventilator consumables, trained staff skilled in the management of critically ill COVID-19 patients, and medications will be needed to address and manage these surges. In addition, the FLAs identified the need for updated processes, protocols, and guidance on managing COVID-19 cases.



Photo credit: Evlyn Mani

*Joseph Cella, U.S. ambassador to Fiji, Kiribati, Nauru, Tonga, and Tuvalu, visited Colonial War Memorial Hospital in September 2020, to meet with participants of a training on ventilator set-up and operation.*

The EpiC project responded to these identified needs and made significant contributions to strengthening the capacity of the critical-care workforce to manage COVID-19 and critically ill patients in Fiji. Additionally, specialized TA and mentorship of facility staff have facilitated sustainable operation of the 30 ventilators to provide life-saving support for COVID-19 patients, as well as other patients requiring breathing support.

*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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