

Building critical care capacity to manage COVID-19 patients in Nauru

From June 2020 to June 2022, the Meeting Targets and Maintaining Epidemic Control (EpiC) project, funded by the United States Agency for International Development (USAID), in partnership with the Pacific Community (SPC) provided technical assistance (TA) and capacity-strengthening support to ensure that health care workers at the one public hospital in Nauru could use ventilators donated by the U.S. Government (USG) safely and effectively. The USG, through USAID, donated 10 ventilators to the Government of Nauru for intensive care units to assist the country's fight against COVID-19. The donation delivers on the U.S. administration's pledge to provide these critically needed supplies and support Kiribati's ongoing efforts to mitigate the effects of the COVID-19 pandemic.

EPIC'S KEY ACCOMPLISHMENTS

- Installed 10 mechanical ventilators at Republic of Nauru Hospital
- Conducted one facility-level assessment to confirm hospital capacity and identify needs
- Trained 187 health care workers in attendance on COVID-19 clinical case management
- Built the capacity of three biomedical technicians to set up and use ventilators

COORDINATION WITH STAKEHOLDERS

EpiC and SPC collaborated with the Nauru Ministry of Health (MOH) to provide trainings on management of COVID-19 patients, deliver clinical TA, and provide the hospital with additional health supplies to support care for severely ill patients. Following consultations and preparatory discussions with the Nauru MOH in June 2020, SPC commenced implementation of the USAID-funded ventilator TA program with the goal of integrating efforts into the government's overall COVID-19 response.

FACILITY-LEVEL ASSESSMENTS

Nauru has one public hospital, the Republic of Nauru (RON) Hospital, and no private or community-based primary health facilities. EpiC worked with the Nauru MOH to first conduct a facility-level assessment at RON Hospital to determine appropriate placement of ventilators and identify TA needs for their maintenance and sustained use. The assessment found that RON Hospital met the criteria to receive a donation of 10 mechanical ventilators and had the technical expertise, ancillary support, and resources to manage additional mechanically ventilated patients. The assessment found that the top needs at the hospital were to improve electrical

power capacity and train additional personnel, specifically nurses and critical care physicians. Additionally, it found that the hospital would benefit from using protocols for approaches to care of critically ill patients and development of standard operating procedures (SOPs).

DEVELOPING A TRAINING PACKAGE AND STANDARD OPERATING PROCEDURES

Based on the facility-level assessment, EpiC and partner University of California, San Francisco, developed a virtual training package for RON health care workers that demonstrated practical simulation scenarios, provided guidelines and SOPs, and linked attendees to online resources for additional information and refresher trainings. The content of the training included appropriate handling and use of personal protective equipment (PPE), intubation and extubation of patients, and proning. SPC developed SOPs to provide guidance on cover doffing and donning of PPE, intubation and extubation, disconnection of the ventilator, and suctioning of suspected/confirmed COVID-19 patients.

DELIVERING TRAINING ON COVID-19 CLINICAL MANAGEMENT

Due to COVID-19-related travel restrictions, the training was designed to be delivered virtually. Throughout 2021 and into 2022, 187 attendees participated in virtual trainings, with international experts in COVID-19 critical care facilitating the trainings and additional support from SPC nursing, clinical services, and infection prevention control (IPC) advisors.



Photo credit: SPC

Virtual training sessions with on-site simulations take place at RON Hospital in November 2021.

The training package covered two required areas of support: (1) the setup and installation of ventilators for biomedical technicians and (2) clinical training focused on management of critically ill COVID-19 patients for health care workers at RON Hospital.

Trainings on ventilator installation and maintenance were delivered virtually in 2020 and 2021 by the manufacturer, with facilitation from a biomedical technician consultant based in Nauru. Following the trainings, the consultant provided ongoing repair and maintenance to the ventilators, mentoring for the biomedical technicians and clinicians at RON hospital, and organization of annual servicing of the ventilators in Australia. SPC also worked with the hospital to address the electrical power capacity needs.

Conclusions

The findings from the facility-level assessment at RON hospital indicated that Nauru would need trained staff skilled in the management of critically ill COVID-19 patients once COVID-19 reached the small country to address patient care and prevent an outbreak from spreading. In addition, the assessment identified the need for updated processes, protocols, and guidance on managing COVID-19 cases.

The EpiC project responded to these identified needs and made significant contributions through design and delivery of training packages on COVID-19 case management and donation of health supplies to strengthen the capacity of the health care system to manage COVID-19 and critically ill patients in Nauru. Additionally, specialized training and mentorship of facility staff have facilitated sustainable operation of the 10 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 United States Agency for International Development (USAID), is dedicated to achieving and maintaining HIV epidemic control and supporting global COVID-19 response. 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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