

Increasing capacity to provide high-quality care for critically ill COVID-19 patients in Zimbabwe

Between November 2020 and April 2022, EpiC provided technical assistance (TA) and capacity strengthening support for critical case management to health facilities and providers in Zimbabwe. In May 2023, EpiC Zimbabwe obtained USAID approval for a no-cost extension to continue implementing these TA activities through November 30, 2023. The United States Government (USG), through the United States Agency for International Development (USAID), provided more than 15 countries with donations of ventilators for intensive care units in the fight against COVID-19. Zimbabwe was the only country in which ventilators were donated through local NGO Solidarity Trust, rather than to the government directly. Solidarity Trust was specifically selected based on its good relationship with the Government of Zimbabwe. Due to the restrictions placed on direct support from USG to the Government of Zimbabwe, Solidarity Trust was well-positioned to manage the project.

A total of 20 ventilators were directed to the intensive care units of five supported referral facilities. The donation delivered on the U.S.

Administration's pledge to provide critically needed supplies and to support Zimbabwe's ongoing efforts to mitigate the effects of the COVID-19 pandemic in the country.

EpiC collaborated closely with the Ministry of Health and Child Care (MoHCC) to strengthen the capacity of the government to receive, install, and use the ventilators. EpiC led an assessment of TA needs for the clinical management of COVID-19 in 16 facilities, from which the MoHCC and USAID jointly selected five facilities that had adequate infrastructure to receive the ventilators and ongoing clinical TA.

EPIC'S KEY ACCOMPLISHMENTS

- Conducted facility level assessments in 16 facilities, of which five were selected to receive USG-donated ventilators.
- Facilitated the installation of 20 ventilators at the five selected health facilities.
- Provided TA and training on case management of COVID-19 patients requiring advanced and critical care to 620 health care workers.
- Installed five Remote Area Community Hotspot for Education and Learning (RACHEL) devices in facilities and trained 76 health care workers to use them.
- Procured and distributed 10 LTV lung test kits to the five supported health facilities.

Through a competitive bidding process, Epic identified [Healthyard](#), a local medical equipment supplier, to facilitate procurement of ventilator supplies in the selected health centers. In addition, EpiC distributed 10 LTV Lung Test Kits to help calibrate the ventilators for the five facilities. Through a donation received from [World Possible](#), the University of California at San Francisco (UCSF) made five Remote Area Community Hotspot for Education and Learning (RACHELs) available to support remote online learning. These devices were distributed to the five supported health facilities.

Activities and Accomplishments

FACILITY LEVEL ASSESSMENTS

EpiC conducted a Facility Level Assessment (FLA) in 16 facilities. The FLAs used the standard tool designed by the USAID partners to obtain knowledge of each facility's intensive care and oxygen infrastructure (including medical officers, surgeons, anesthesia or intensive care medicine providers, biomedical engineers, etc.). The FLAs also collected information on facility readiness to use ventilators in the care of patients with COVID-19. The findings demonstrated the need to strengthen the capacity of providers in COVID-19 case management and to make protocols for critical care and ventilator management available. The results of these rapid assessments were used to select five facilities to receive the ventilators and informed EpiC's clinical TA plan.



Health workers undergoing practical training in Vyair ventilator usage at United Bulawayo Hospital, led by EpiC's Consultant, Dr. Musvo Mapfanyangira. Photo by EpiC Zimbabwe.

TRAINING IN VENTILATOR INSTALLATION AND USE

Twenty Vyair 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 five health centers. To ensure the best use of the ventilators, EpiC engaged the medical equipment supplier Healthyard and provided onsite training for critical care physicians and intensive care unit (ICU) staff on the installation, use, and maintenance of the ventilators. EpiC also provided the facilities with 10 LTV Lung Test kits that are used to check the ventilator efficacy before connecting them to patients.

TRAINING ON COVID-19 CLINICAL MANAGEMENT

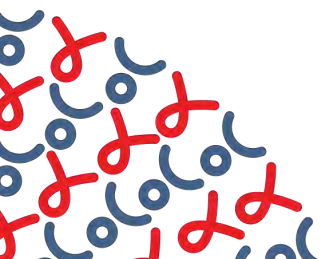
EpiC conducted both virtual and physical trainings for health workers in the five supported facilities. The trainings focused on pediatric and adult COVID-19 case management, including management of ventilated patients for critical care physicians and other ICU staff. EpiC also adapted critical care tools and job aids and disseminated them to facilities during site visits and to health workers during training sessions. The trainings were complemented by the installation of a RACHEL device at each of the five supported facilities. The RACHEL device is preloaded with intensive care training material that users can access from their mobile devices. RACHEL is user friendly and works well in resource-constrained settings. The EpiC team received positive feedback from the participants who indicated that the RACHELs will go a long way in empowering health care workers with information necessary for the management of COVID-19 patients.

In July 2022, USAID requested that EpiC conduct site visits to the supported health facilities and assess the condition of the donated LTV 2,200 ventilators, review their usage at each facility and provide a report. An EpiC consultant conducted site visits to the health facilities between July 28 and August 4, 2022. Of the five supported facilities, four had used the ventilators. Only one hospital had not used the ventilators, as it was still setting up its ICU. During the assessment visit, the health authorities indicated that the donated LTV 2,200 ventilators have improved service delivery, and the technical assistance prepared them for any future pandemics.

In May 2023, EpiC received an extension to provide refresher training for staff in the five supported health facilities. The trainings were necessary due to the high rate of health care worker staff turnover in Zimbabwe during and after the COVID-19 pandemic. The trainings took place from August to November 2023 and focused on principles of critical care patient management, targeting respiratory management, as well as other relevant ICU topics. New staff and staff that previously participated in the training benefited from the trainings. A total of 620 health care workers were trained on COVID-19 case management over the project performance period.

DISTRIBUTION OF SUPPLIES

EpiC procured and distributed additional supplies necessary for using the ventilators: adult breathing circuits, HME filters, high flow nasal oxygen cannula, CPAP masks and harnesses, single limb adult heated wires, and respiratory humidifier kits.



CONCLUSION

EpiC's ventilator TA initiative in Zimbabwe has increased the country's capacity to provide high-quality clinical management of COVID-19 cases. The Provincial Medical Directors gave positive feedback and specifically requested support with RACHELs at other district health facilities to enable remote learning. They further elaborated that the project had equipped the health facilities and strengthened the ability of their staff to respond to the COVID-19 pandemic.

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 TA to governments and specific health facilities that received USG-donated ventilators, and to health providers on COVID-19 clinical case management.

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