

Strengthening capacity of health care workers in Nigeria to provide high-quality clinical case management for COVID-19

From August 2020 through November 2021, the Meeting Targets and Maintaining Epidemic Control (EpiC) Nigeria project, supported by the United States Agency for International Development (USAID), provided technical assistance (TA) and capacity strengthening in critical case management to health care providers and facilities. The United States Government (USG) provided the Government of Nigeria with a donation of 200 ventilators for intensive care units to assist in its fight against COVID-19. The donation delivered on the USG's pledge to provide these critically needed supplies and support Nigeria's ongoing efforts to mitigate the effects of the COVID-19 pandemic in the country.

In total, 88 health facilities (including 45 federally owned level 3 care hospitals and 43 state-owned level 2 care hospitals) were selected by the Federal Ministry of Health (FMOH) to receive the ventilators across all 36 states and the Federal Capital Territory (FCT). Facilities were selected based on burden of COVID-19, access to relevant personnel for ventilator utilization, and designated level of care for COVID-19 response.

EpiC then collaborated closely with the FMOH to conduct facility-level assessments on the capacity of selected facilities to install and use the USG-donated ventilators and provide clinical TA to improve care for COVID-19 patients.

Activities and Accomplishments

STAKEHOLDER ENGAGEMENT AND ADVOCACY

EpiC engaged relevant stakeholders through the duration of the project, from facility selection to assessment and capacity building. EpiC participated in the weekly national COVID-19 partners coordination meeting hosted by the Department of Hospital Services at the FMOH.

EPIC'S KEY ACCOMPLISHMENTS

- Supported installation of 200 mechanical ventilators at 88 health facilities
- Conducted a facility-level assessment for 88 health facilities to confirm hospital capacity and identify technical assistance needs
- Trained 995 health care workers in COVID-19 clinical case management, 120 health care workers on critical care, and 80 biomedical engineers on use and maintenance of ventilators

As part of project closure, EpiC conducted several advocacy visits to relevant stakeholders, sharing lessons learned from the project on sustainability and strengthening preparedness for future public health emergencies.

FACILITY LEVEL ASSESSMENTS

EpiC conducted facility level assessments (FLAs) at 88 health facilities to determine their readiness to receive, use, and maintain the USG–donated ventilators, identify infrastructure and human resource needs to provide critical care services, and identify TA needs across the health facilities. The FLA revealed gaps in ventilatory care training for health workers, lack of critical care protocols, inadequate infrastructure (including previously owned ventilators, critical care commodities, and consumables), recurring stock-outs of essential medicines, and the need for improved capacity for case management and critical care services.

TRAINING ON COVID-19 CASE MANAGEMENT AND VENTILATOR USE

To build the capacity of health care workers on case management, EpiC delivered trainings (virtually due to interstate travel restrictions) to 995 intensivists. Critical care physicians were trained using the COVID-19 Adult Case Management Series Training Curriculum developed by EpiC with input from the University of California at San Francisco’s Anesthesia Division of Global Health Equity, the Institute for Global Health Sciences, and the Johns Hopkins University School of Medicine.

As part of the installation process for the ventilators (and due to restrictions in movement across the country), a training of trainers (TOT) was conducted by ventilator manufacturer Medtronic for 44 critical care physicians and intensive care unit (ICU) staff on the installation, use, and maintenance of the ventilators. EpiC subsequently supported the master trainers to conduct a step-down training of 500 health care workers across the 88 health facilities.

SUPPORTIVE SUPERVISION AND CLINICAL MENTORING

Following the training on COVID-19 case management and ventilator installation, use, and maintenance, clinical mentors were selected across six geopolitical zones to provide on-site mentoring, sustain capacity, and provide guidance as the pandemic evolved. EpiC and the FMOH staff and clinical mentors periodically conducted supervision (virtually through a community of practice during periods of lockdown, and then on-site when restrictions on movement were lifted). Clinical mentors provided feedback through phone calls and text messages as well as a virtual monthly question and answer session. Feedback from the visits guided adjustments in the TA plans.

CRITICAL CARE COMMUNITY OF PRACTICE

EpiC established a critical care community of practice (COP) comprised of 178 intensivists and biomedical engineers from the supported health facilities, representatives from the FMOH, and EpiC staff. The COP was established in a WhatsApp group to ease dissemination of information, provide clarifications, and offer peer-to-peer learning. Some of the topics covered included management of critically ill COVID-19 patients, troubleshooting of critical care equipment including ventilators, and infection prevention and control strategies in COVID-19 case management. It provided an opportunity for the FMOH to give and receive feedback directly with health care workers. The COP was co-led by EpiC and clinical mentors. At the end of each month, Epic conducted a question-and-answer webinar session, including a discussion of major challenges and best practices among specialized critical care practitioners.

TRAINING ON FUNDAMENTAL CRITICAL CARE SUPPORT

The evolving COVID-19 pandemic highlighted the need to strengthen facility critical care services and expand a pool of critical care practitioners with updated knowledge on evolving critical care protocols and services. EpiC addressed this need by providing advanced training for 80 health care workers who completed a training conducted by the Society for Critical Care Medicine (SCCM), including modular and skills-building sessions.



The Fundamentals of Critical Care course helped non-intensivists to make better clinical decisions.

– Job Otokwala, University of Port Harcourt Teaching Hospital

CASE MANAGEMENT SERIES WEBINAR

To showcase lessons learned and sensitize relevant stakeholders on the need to further strengthen case management and critical care, a three-day webinar series was conducted for policymakers, the private sector, health care managers, and health care workers. Facilitators for the webinar included USAID, the FMOH, and private sector representatives. The webinar covered a variety of topics, including opportunities for a stronger COVID-19 case management and critical care infrastructure in Nigeria through the private sector, positioning health workers to deliver the best quality COVID-19 case management and critical care services in Nigeria, and

opportunities for the best patient engagement in COVID-19 case management and critical care in Nigeria.

END-OF-PROJECT DISSEMINATION AND NATIONAL DIALOGUE ON STRENGTHENING CASE MANAGEMENT IN NIGERIA

EpiC convened a dissemination event to share achievements, best practices, and lessons learned from project implementation as well as to discuss challenges, strategies, and innovations for strengthening case management and critical care ahead of public health emergencies in Nigeria. Among the participants were representatives from the FMOH, USAID, the World Health Organization (WHO), Clinton Health Access Initiative (CHAI), and other relevant stakeholders including supported health facilities. [Recommendations on strengthening critical care](#) from the dialogue sessions were shared with the FMOH. These included increased public-private partnerships and capacity building and addressing infrastructural deficits.

Conclusions

The EpiC project has collaborated with national stakeholders to strengthen capacity to provide critical care and COVID-19 case management in Nigeria. Engagement with relevant stakeholders and collection of lessons learned has highlighted the need to further strengthen case management through innovative resource mobilization, potentially through inclusion of the private sector in public health emergency programs, strengthening virtual platforms for trainings and coordination, and strengthening the national oxygen ecosystem to improve the quality of critical care services.

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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