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# Paraguay COVID-19 Response Project Summary of Achievements

#### July 2020–November 2024

The COVID-19 pandemic greatly affected Paraguay's public health system, similar to its impact on all health systems worldwide. Limited technical competencies to manage clinical cases, scarce supplies to provide medical care, and a high demand for medical oxygen were among the major challenges faced during the height of the pandemic. Although strong political will was demonstrated by the Paraguayan government and response interventions were implemented upon confirmation of the first COVID-19 case in the country, the public health system still faced great challenges in providing critical health services.

The Meeting Targets and Maintaining Epidemic Control (EpiC) project implemented COVID-19 activities in Paraguay between July 2020 and November 2024. Following the USAID donation of ventilators to the Paraguayan government, project activities were designed to strengthen the capacity of the Ministry of Health (MOH) to respond to the COVID-19 pandemic. In September 2021, a new workplan was designed by EpiC with the primary goal of assisting the Paraguayan MOH to strengthen the

### **KEY ACCOMPLISHMENTS**

- Developed first standard operating procedures for pressure swing adsorption (PSA) plants
- Trained over 100 PSA plant operators and administrators
- Delivered toolkits for PSA plants and provided consumables
- Developed and implemented a tracking system
- Trained over 3,000 health professionals on COVID-19related topics
- Completed an assessment of stress and burnout experienced by health professionals
- Produced videos to address stress and burnout among health personnel

oxygen ecosystem. The project was led by FHI 360 in collaboration with Population Services International (PSI) and the Paraguayan MOH. Over the past four years, EpiC and its partners have worked together to build the capacity of the health workforce in Paraguay to manage COVID-19 cases at the community, primary, and hospital levels; to strengthen the medical oxygen ecosystem; and to address burnout and stress among health care professionals at selected hospitals.

*EpiC is a global cooperative agreement dedicated to achieving and maintaining HIV epidemic control and to strengthening global health security. It is led by FHI 360 with core partners Right to Care, Palladium International, and Population Services International (PSI).* 





# **Activities and Results**



## IMPROVING THE MANAGEMENT OF COVID-19 CASES

EpiC conducted a rapid assessment across

75 hospitals to identify technical assistance (TA) and infrastructure needs at national and subnational levels to provide clinical care services for COVID-19 patients. As a result of the assessment, EpiC coordinated with the MOH to develop a workplan to:

- Provide clinical training to doctors and nurses to identify and manage COVID-19 cases, including the management of critically ill patients
- b. Strengthen the medical oxygen ecosystem by procuring and distributing key consumables to provide COVID-19 care
- c. Address stress and burnout among the health workforce



#### TRAINING THE HEALTH WORKFORCE TO MANAGE COVID-19 CASES

Over 3,000 health professionals benefited from the TA provided by EpiC. A combination of virtual and in-person training was conducted and led by international and local experts. Training sessions covered a variety of COVID-19related topics, including the use of medical oxygen for COVID-19 patients with hypoxemia, managing post-



Osmar Caceres, MOH PSA plant coordinator, provides on site technical assistance to oxygen-generating plant operators. Photo by Graciela Avila

COVID-19 complications, training on new COVID-19 management protocols, providing ambulatory care for COVID-19 patients, and identifying and managing COVID-19 cases in the primary health care setting. Additionally, consumables were procured and donated to the MOH.



# STRENGHTENING THE OXYGEN ECOSYSTEM

EpiC conducted an assessment in 2022 to identify gaps in oxygen availability, accessibility, needs, administration, and sustainability. The main conclusion of the assessment was that Paraguay had the capacity to produce enough oxygen to meet the estimated national need. However, there were critical gaps in terms of the accessibility and sustainability of the oxygen ecosystem.

Based on the findings and recommendations from the oxygen assessment, EpiC focused efforts on oxygen administration and sustainability from 2022 through November 2024. Strategic interventions were carried out to build technical capacity at all levels to operate and maintain pressure swing adsorption (PSA) oxygen-generating plants, which included the development of standard operating procedures (SOPs), training sessions, and job aids. All plant operators and administrators across all oxygen-generating plants in Paraguay were trained on the SOPs. This fundamental intervention helped all PSA plant operators and staff to follow the national technical guidelines for operations and maintenance. A maintenance kit was developed for hospitals with operational PSA plants, and items were procured and distributed to all 41 MOH plants, including



Osmar Caceres, MOH PSA plant coordinator, provides on site technical assistance to oxygengenerating plant operators. Photo by Graciela Avila

the first set of personal protective equipment (PPE) ever delivered to operators. Finally, an oxygen tracking system-Sistema de Monitoreo de Oxigeno (SIMOX)-was designed, developed, and implemented to monitor oxygen production. quality, and distribution. In March 2024, the MOH issued a resolution establishing the mandatory use of SIMOX in all hospitals with a PSA plant. In total, 41 tablets were procured and distributed to the hospitals to facilitate data collection, and a server was installed at the MOH to host SIMOX. The project provided on-site TA to PSA plant operators and administrators on the use of SIMOX, and manuals were printed and distributed to the 41 hospitals that implemented this system. Additionally, TA was provided to the MOH information technology (IT) department via a data collection software specialist to address issues related to SIMOX implementation.



# ADDRESSING STRESS AND BURNOUT AMONG HEALTH CARE WORKERS

In 2023, EpiC collaborated with the National Directorate of Mental Health to conduct a rapid assessment of stress and burnout among health personnel. The goals were 1) to obtain a general baseline for the prevalence of work-related stress and burnout, as well as selfreported information on the potential impact of stress and burnout on workforce attrition and service delivery and 2) to obtain a general idea about the drivers and barriers to the uptake of different types of interventions that will inform subsequent programmatic planning efforts.

The assessment was implemented in February and March 2023. Over 1,000 health personnel from all MOH regions from ages 25 to 55 responded to the survey (16 percent were administrative staff, 22.6 percent were doctors, 30.2 percent were nurses, and the remainder were other staff).



The assessment revealed that 40 percent of participants reported that their mental and psychological health had been greatly affected by stress and exhaustion in recent months, while 46.8 percent reported some level of impact. Almost 50 percent reported that their work performance was affected by these levels of stress and burnout, while 93.5 percent expressed a desire to use support resources to manage stress and job burnout if these were available to them.

Based on these findings, EpiC designed and implemented interventions to help health workers manage stress, reduce burnout, and improve their psycho-emotional conditions that impact health system performance. Interventions were carried out at three levels of the system: the central level of the MOH, the managerial level at the regional level, and in selected hospitals in the capital and central regions. The purpose of these interventions was to sensitize all stakeholders to the importance and urgency of addressing stress and burnout in public health personnel, provide concrete management tools that can be used at the level of health services, and offer specific spaces and tools to health workers to manage stress and burnout in the workplace. Follow-up support was provided to hospitals to help implement interventions with doctors and nurses. A series of four videos with key messages on how to address stress and burnout was produced jointly with the National Mental Health Directorate and the MOH's communication department. The videos have been disseminated through the MOH's social media channels as well as by hospital managers at the local level.

## **Future Directions**

While EpiC activities in Paraguay generated significant results that positively impacted the overall capacity of the MOH related to the oxygen ecosystem, challenges still remain and must be addressed by in-country authorities: ensuring the required financial resources to maintain the PSA plants, sustaining the newly developed SIMOX implementation nationwide, and

continuing to invest in the development of the workforce are some of the key aspects to sustain USAID's investment and the MOH's gains over time. The MOH continues to work on SIMOX implementation, conduct site visits, monitor data entry, and provide assistance to plant operators. The MOH also uses the costing tool developed with EpiC's support to advocate for the necessary resources to keep the plants operational.



Osmar Caceres, MOH PSA plant coordinator, provides on site technical assistance to oxygen-generating plant operators. Photo by Graciela Avila

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