

EpiC Colombia: Providing Medical Oxygen Surge Support During the COVID-19 Pandemic

Background and context

Colombia is an upper-middle-income country with advanced health technology and a robust, stable medical oxygen supply system. However, as COVID-19 emerged, Colombian health facilities and the Ministry of Health (MOH) realized they did not have an adequate supply of medical oxygen to meet the sudden surge in demand driven by COVID-19 hospitalizations. Many facilities throughout Colombia had medical liquid oxygen (LOX) capacity on-site—in the form of vacuum-insulated evaporator tanks, oxygen cylinders, and concentrators—and established medical oxygen suppliers in the country had adequate supply, but the MOH and the facilities did not have surge support budgets in place for pandemic response.

EpiC intervention

In August 2021, the Meeting Targets and Maintaining Epidemic Control (EpiC) project received US\$2.1 million in COVID-19 American Rescue Plan Act (ARPA) funds to provide assistance in procuring medical LOX to stabilize the oxygen ecosystem in Colombia, as well as emergency support to the MOH and hospitals during the COVID-19 pandemic. EpiC coordinated with the MOH to determine priority public hospitals needing support, and the MOH conducted a rapid assessment to gain an understanding of nationwide shortages in oxygen supply.

The assessment identified 68 public hospitals, known as state social enterprises (ESEs); EpiC was able to support 59 of these facilities with the available funding. To speed the response, the Ministry of Health and Social Protection (MOHSP) determined that LOX donations would be made directly to ESEs and not pass through MOH inventory. EpiC then contracted directly with six LOX vendors that held existing MOH supply agreements to increase the volume of LOX delivered based on the needs determined during the rapid assessment.

EpiC's LOX deliveries were broken into two rounds. Round I took place from June 2022 to January 2023, with the delivery of 1.02 million kg of LOX to 59 facilities. Before Round II, the MOHSP reassessed the delivery volumes based on the needs submitted by facilities and 2022 Q4 consumption reporting. Cost savings on deliveries from Round I made it possible to add another facility. During Round II, from February 2023 to June 30, 2024, almost 1,982 million kg of LOX was delivered to 60 facilities.

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Reflections and lessons learned

- LOX supply is highly variable based on the supplier landscape in every country. In public hospitals in Colombia, almost all LOX is delivered in cryogenic tanks. Most of the tanks are owned by suppliers who do not allow other vendors to fill them with LOX. This requirement is very limiting in a surge support scenario such as COVID-19 and leaves the MOH and ESEs with no power to negotiate better pricing or switch vendors if they are not satisfied with a supplier's service. The MOH could benefit from carrying out a risk analysis and developing contingency planning and backup stores for different supply and access scenarios.
- USAID Colombia identifying initial points of contact within the MOH early on was critical to the success of this activity. As the activity progressed, EpiC was referred to different MOH directorates to follow up with different ESEs. Having central points of contact in the MOH dedicated to this activity to facilitate introductions to other directorates allowed EpiC to secure timely approvals of LOX deliveries at all selected facilities.
- USAID originally planned to treat this procurement as a donation and began drafting a legal agreement with the MOH to provide a large donation managed through one international vendor, Linde. Drafting the agreement proved to be very time-consuming and expensive, delaying the startup of deliveries. Upon further discussion with the MOH, we agreed that the donations would be made directly to each ESE rather than the MOH. Because the donation was not being received by the government, a legal agreement was no longer necessary.
- With this shift, EpiC released a request for proposals and discovered local production capacity within Colombia that could meet the increased demand for LOX. It was logistically more straightforward and less expensive to split the procurement among several local vendors, based on their existing agreements with ESEs and geographical coverage, rather than manage one large international procurement through Linde.

Recommendations

- EpiC worked with a contracted operational point of contact at the MOH for the first round of LOX deliveries. After that contact's contract was completed, nobody within the MOH knew the internal procedure to officially communicate LOX donations to the beneficiary entities. A set of standard operating procedures (SOPs) for donations/donor and beneficiary management, as well as general operations as they relate to external stakeholders, would be helpful to ensure continuity despite employee turnover.
- The MOH was not tracking and storing historical LOX consumption data; this information was obtained directly from the suppliers. The MOH could benefit from bolstering internal data systems and adding centralized tracking of facilities' LOX supply and consumption to routine data collection. Tracking this information would give the MOH and facilities a better grasp of their consumption practices and allow them to streamline LOX procurement. If consumption and ordering habits were better understood internally and not managed exclusively by the supplier, the MOH and facilities could also potentially identify budget savings.