

STRENGTHENING THE COLD CHAIN IN PARAGUAY IN RESPONSE TO THE COVID-19 PANDEMIC:

Implications for the autonomy of immunization programs

BACKGROUND CORONAVIRUS PANDEMIC

- There was a high incidence of cases in the population.
- Insufficient healthcare infrastructure.
- Lack of vaccines and weak cold chain infrastructure for vaccine storage.
- Overload of health services.
- Shortage of medicines and supplies



MOH'S VACCINATION PLAN:

- Established a priority order for population groups to be vaccinated, considering scientific, ethical, legal, and economic criteria and based on WHO recommendations.
- Outlined cold chain equipment and vaccine management, logistics, and distribution.
- Prioritised the surveillance of potential risks and the development of a social communication strategy aimed at healthcare personnel and the general population.

HOWEVER,

MAJOR ISSUES AT THE NATIONAL LEVEL:



Lack of adequate vaccines required for population coverage.



Lack of storage facilities, especially those of mRNA platforms that required ultracold freezers.

Storage centralisation and distribution before the pandemic: The PAI had only 12 cold rooms nationwide, and 50% were concentrated at the National Vaccine Centre in Asuncion, making distributing vaccines promptly and efficiently challenging.

Hiring of private sector providers for storage and transportation.
Therefore, **THE PAI, UNICEF AND THE GOJ PROPOSED THIS INITIATIVE**

STRATEGIC OBJECTIVES AND RESULTS:

Aim SUPPORT FOR COLD AND SUPPLY CHAIN SYSTEM

Components

Component A. Supply of Cold Chain Equipment (CCE)

Component B. Strengthening of institutional capacity and human resources competencies.

Objectives

Install Walk In Cold rooms at the National Vaccine Center and in three priority Sanitary Regions: Asunción, Central, and Itapúa.

Provide ultra-low temperature freezers, solar-powered refrigerators, ice-lined refrigerators, and remote temperature monitors for biological and vaccine storage.

Strengthen the capacity of government staff, including technicians, on operation and maintenance of CCE for COVID-19 vaccines.

Strengthen the capacity of health care facility staff on the use and monitoring of the CCE and COVID-19 vaccines.

Support the cold chain strengthening and vaccine management with coordination/consultation, data collection/analysis, and/or policy/regulatory formulation.

"The received CCE is historic for the country. Today, we have exclusive equipment for vaccine storage and devices that can guarantee optimal vaccine conservation. This equipment is a great ally for the personnel handling vaccines" Alcides Mereles (PAI-National Technician).

COMPONENT A.

Supply of Cold Chain Equipment (CCE)

- Procure CCE to support the rollout of COVID-19 vaccines and provide logistical support for the installation of CCE.

Result: 973 health facilities strengthened with new CCE.

COMPONENT B.

Strengthening of institutional capacity and human resources competencies.

- Strengthen the capacity of government staff, including technicians, on the operation and maintenance of CCE for COVID-19 vaccines.

Result: 212 PAI technicians (85 men and 127 women) from regional and district warehouses were trained in the operation and maintenance of CCE.

- Strengthen the capacity of health care facility staff's capacity to use and monitor the CCE and COVID-19 vaccines.

Result: 1,129 vaccinators and health staff members (508 men and 621) - at regional and local levels have the technical capacity to respond to the management and maintenance of CCE and properly implement PAI protocols.

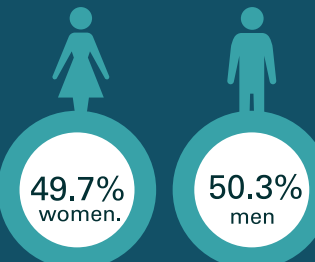
- Support the government's COVID-19 cold chain strengthening and vaccine management with coordination/consultation, data collection/analysis, and/or policy/regulatory formulation.

Result: Mapping of cold chain capacity in Paraguay. Baseline and results of the strengthening by the project. (National inventory of the cold chain in 1,468 health services) Drafting of the Cold Chain Management and Maintenance Guide.

BENEFICIARIES

GoJ and UNICEF contributed to improving the quantity and quality of CCE in 973 healthcare facilities under 106 municipalities.

Indirect beneficiaries: 5,996,000 people (80% of the total population)



The vaccine storage capacity of the PAI was increased by 4,453,867 doses through the provision of all the CCE.

CHALLENGES

- ▶ A global shortage of supply items and limited logistics capacity at the early stage of COVID-19 response.
- ▶ Market and international transportation system's limitations aggravated by the Pandemic restrictions.
- ▶ Fluctuation of international air freight costs and exchange rates. Therefore, UNICEF purchased additional cold chain equipment, further strengthening CCE capacity.
- ▶ Installation of Ultra-freezers and cold rooms in sites where physical infrastructure, energy and voltage requirements were not met. UNICEF purchased transformers and generators that strengthened the electrical network of the National and Regional Vaccine Warehouse.
- ▶ The weak or non-existent distribution of the electrical network at the points where the equipment was to be installed. The provision and installation of generators and transformers eased this situation in eleven Sanitary Regions (Caazapá, San Pedro Norte, Canindeyú, Ñeembucú, Boquerón, Alto Paraguay, Itapúa, Caaguazú, Misiones, Alto Paraná and Asunción).
- ▶ Government investment is essential to ensure quality sustainability of immunisation services, strengthening primary health care to increase coverage and the joint work of ministries, local government, civil society organisations, communities and international cooperation.



Authors: Avalos S. (savalos@unicef.org), Ritter M., Obregon R., Cousirat L., Von Horoch M., Mereles A.
UNICEF Paraguay - Programa Ampliado de Inmunización (PAI)

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