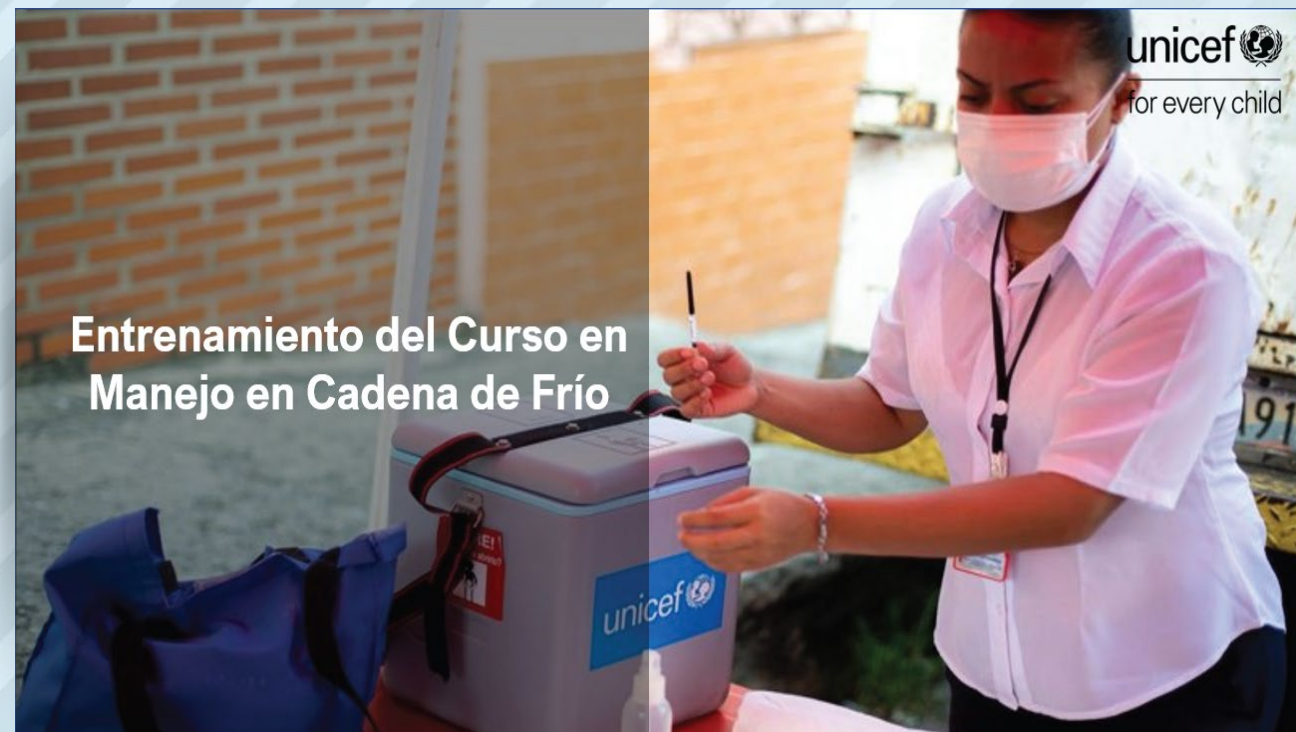


Cold Chain capacity strengthening through a digital training platform



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Introduction

The Bolivarian Republic of Venezuela (commonly referred to as Venezuela) is on the northern coast of South America. It has a territorial extension of 916,445 km² (353,841 sq. mi), and the World Bank estimated its population at 28.5 million in 2019. Venezuela has been facing a socio-political and economic situation that has negatively impacted its social, economic, and health indicators for years.

The Expanded Program in Venezuela (EPI) has been responsible for the mobilization, storage and distribution of more than 39 million doses of vaccines for the routine program and the response to COVID-19. Vaccines are biological products sensitive to variations in light, humidity, time and, fundamentally, temperature and need to be stored in perfect conditions to be effective when applied to children and pregnant women.

UNICEF provided more than one thousand new cold chain equipment to strengthen the vaccine cold chain capacity ensuring optimal temperature conditions during the storage and distribution processes.

With the arrival of the vaccines, the installation of new equipment and the COVID-19 restrictions, Venezuela faced a big challenge to ensure the rapid training of healthcare personnel in the handling of cold chain equipment (CCE) and Effective Vaccine Management (EVM) for more than 5,000 vaccination posts throughout the country. To mitigate this learning gap UNICEF in coordination with the MoH launched a Moodle learning platforms as innovative and cost-effective alternatives to train a large numbers of health workers on specialized content, including those in remote locations with poor connectivity through offline asynchrony modules.

Methodology

PRELIMINARY PHASE:

- Identification of trainings gap in the handling of cold chain equipment (CCE) and Effective Vaccine Management (EVM).
- Elaboration of official regulation "Cold chain Manual of Venezuela" led by UNICEF and MoH.
- Agreement with MoH to use the digital platform (Moodle) to accelerate the capacity building for health workers of EPI
- Coordination with UNICEF LACRO on digital training platform experiences in the region

PREPARATORY PHASE OF THE COURSE:

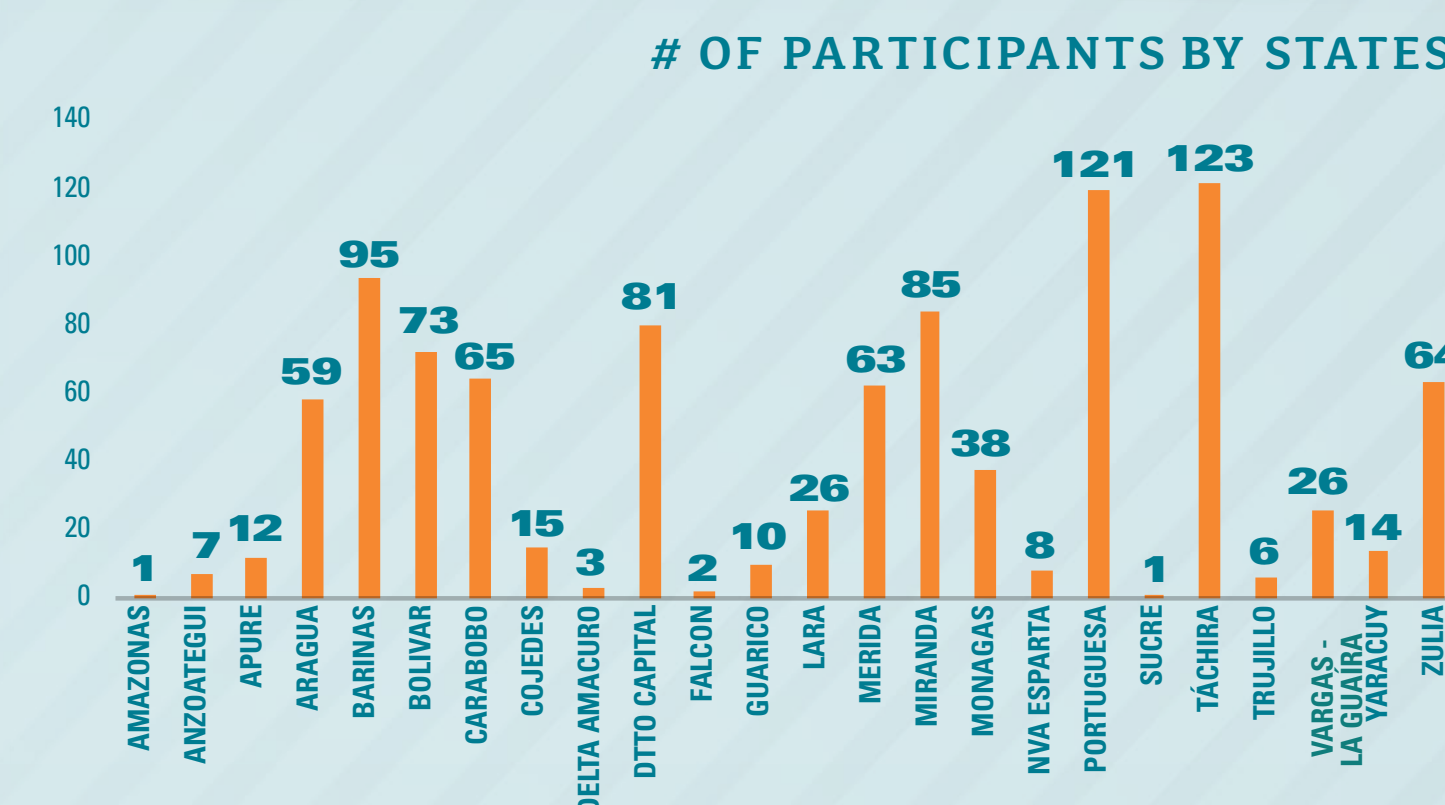
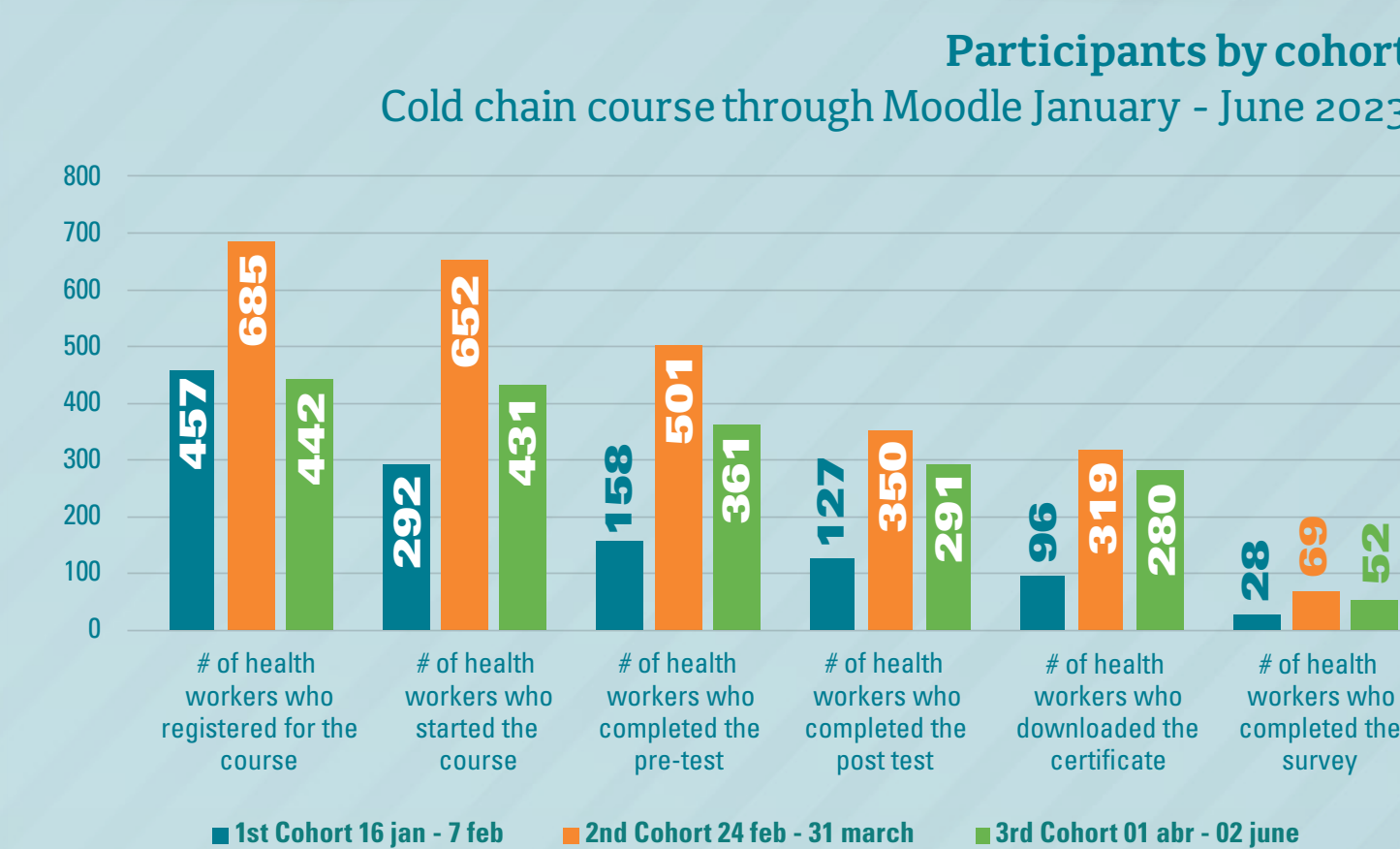
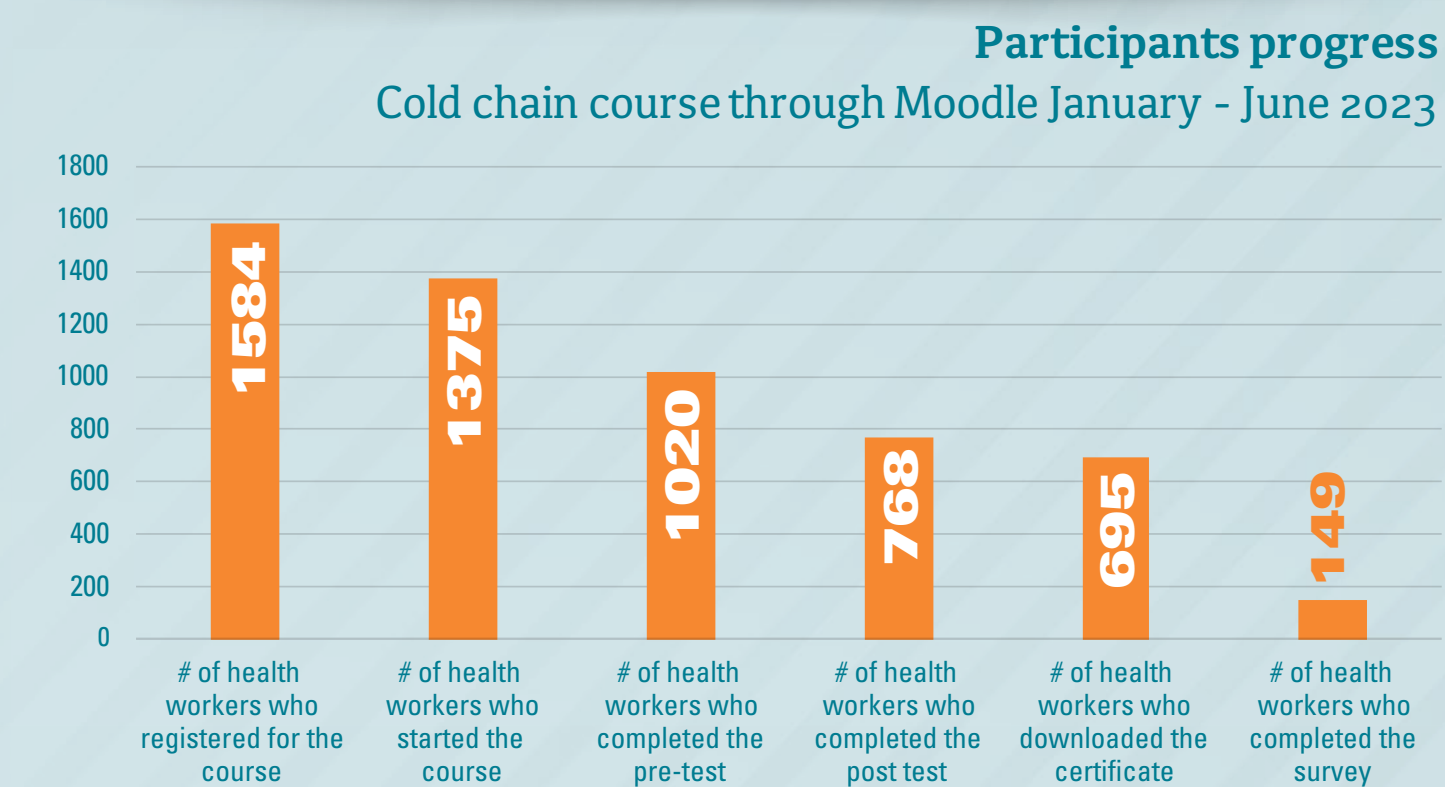
- Technical advisory meetings between the Digital Health Center of Excellence (DICE) team, EPI/MoH and UNICEF Venezuela immunization staff
- Review of technical content for the virtual training based on "Cold chain Manual of Venezuela"
- User registration validation tests to evaluate the functionality of the Moodle platform.
- Approval by the MoH authorities
- Design of the validated course content in the Moodle platform, with engaging modules
- Course advertising on MoH and UNICEF platforms.

EXECUTIVE PHASE

- Participant registration in Moodle platform
- Technical assistance to solve problems in the registration process or in the use of the platform.
- Progress monitoring by UNICEF team
- Sending reminders by e-mail
- Analysis completion by participants and results of Pre-test, post-test, download of certificate
- Course duration: 3 weeks



Results



1584 health workers registered through the course, **87%** started the course, **74%** completed the pre-test, **56%** completed the post-test and **51%** managed to download the approval certificate. Only **11%** of those who took the course completed the evaluation survey.

Course content

- 12 modules
- Video content, pre-test, short tests of progress, post-test, evaluation of the course
- Topics: generalities of vaccines, components and levels of the cold chain, cold chain equipment, refrigeration capacity, logistic supply chain, open vial policy, biosafety and waste disposal, supply chain information system (SIBO), maintenance of cold chain equipment at different levels, cold chain' human resources, preparation of a contingency plan, storage and distribution good practices
- All materials available to download by users



Conclusion

- Digital platforms are effective for mass training of health workers in specialized contents such as the handling of cold chain equipment (CCE) and Effective Vaccine Management (EVM)
- Was possible to reach the 24 states of the country with this course in accelerate the diffusion of "Cold chain Manual of Venezuela"
- UNICEF and the Ministry of Health focused training quotas on health workers responsible for managing newly delivered cold chain equipment and vaccines administration.
- This initiative for capacity building contribute to reaching unvaccinated and zero dose children, in compliance to the Immunization Agenda 2030
- The remote training has brought substantial added value to the healthcare system by ensuring the correct handling of cold chain equipment.
- UNICEF and the Ministry of Health are expanding the use of the platform to other maternal and newborn care training priorities.

References

Video of the digital training course on CCE in Venezuela

