



EVALUATION *of the* COLD CHAIN EQUIPMENT OPTIMIZATION PLATFORM:

MIDLINE FINDINGS




DECEMBER 2020



Introduction

The Gavi Cold Chain Equipment Optimization Platform (CCEOP) was established in 2016, recognizing that functional cold chain equipment (CCE) is a critical precondition to strengthening vaccine supply chains and ultimately to achieving the Alliance’s immunization equity and coverage goals, yet was a gap for many countries. Through the platform, Gavi jointly invests with countries to purchase and install equipment that meets specific technology requirements through Service Bundle Providers (SBPs).

The JSI Research & Training Institute, Inc. (JSI) led 2018-2020 CCEOP prospective evaluation in Kenya, Pakistan, and Guinea aims to assess progress of the CCEOP against its original objectives while also understanding details of the processes followed in the deployment process. This brief presents findings from the midline country evaluation from November–December 2018, emphasizing the CCEOP planning and deployment process and understanding the situation post-deployment in Kenya, Pakistan and Guinea, while also documenting any subsequent changes in CCE performance and management.

ACTIVITY	 KENYA	 PAKISTAN	 GUINEA
CCEOP Approval	March 2017, \$8.2 million	Nov 2016, \$41.1 million	Oct 2017, \$10.9 million
% Financing by country	50%	50%	20%
Year 1 Priority	Replace equipment in facilities with storage gaps in all counties and equip new facilities in 17 HSS priority counties	Replace malfunctioning equipment, furnish existing facilities with higher demand for vaccinations and to a lesser extent (deferred for later years) to equip new facilities	Equip health posts for the first time to expand immunization services by increasing the number of fixed posts for vaccination
Year 1 # CCE deployed	1,004 (500 ILR and 504 SDD); July – Nov 2018	6,828 (5859 ILR and 969 SDD); May – Oct 2018	2,896 (853 ILR and 2043 SDD), Dec 2018 – June 2019
Manufactures, service bundle providers, warranties	B-Medical, Sanica Limited, 3 years on AC powered, 10-year warranty on SDDs	Sure Chill, Technology Links, 2- year warranty	B-Medical, Soguimap, 10-year warranty on SDDs
	Vestfrost, Total Hospital Solutions, 2-year warranty	Vestfrost, Capri Medicals, 2-year warranty	Haier Medical, Menerga, 3-year warranty



Findings

Midline evaluation findings provide vital information for the continued deployment of CCE through CCEOP, as well as shaping the next iteration of CCE-specific Gavi funding. Based on these findings, the CCEOP evaluation team recommends Gavi and other stakeholders take immediate (in the next year) and long term (in the next strategy period) action steps to sustain existing efforts or to address concerns.



1.

CCEOP is responsive to country needs and priorities and is well coordinated by the PMT (Project Management Team) in-country with other donors and partners.

Overall, the PMT played an active and effective role in CCEOP deployment and coordination, demonstrating ownership and strategic thinking, and is valuable for long-term sustainability. Some concerns with documentation were evident during deployment; for example, the ODP did not always fit ground realities. To minimize deviations, stakeholders acknowledged that CCEOP preparation and deployment requires significant investment in time and budget throughout the entire process and should be planned for.

SHORT-TERM RECOMMENDATIONS

Ministry of Health (MOH) – To ensure proper installation and minimize deviations, stakeholders at all levels of the system should review and update the Operational Deployment Plan (ODP) at the beginning of the deployment year, and the MOH should develop the communications plan

for the CCE installation process and contingency plans and processes for deviations.

UNICEF Supply Division (SD) – SBP contractual agreements and terms of reference including Standard Operating Procedures (SOPs) and warranty agreements should be shared with the MOH soon as possible. The MOH should be involved from the outset in implementation discussions with the SBPs to better set expectations and as an opportunity to increase MOH ownership.

LONG-TERM RECOMMENDATIONS:

MOH – The MOH should continue to coordinate and align with all CCE stakeholders on the planning and deployment process for CCE from CCEOP and other donors.

Gavi – All countries applying for CCEOP should understand the level of effort required to implement CCEOP and have in place a system of collecting regular information on their health facilities and equipment inventory. To minimize deviations, Gavi could build in system strengthening activities such as requiring an updated CCE inventory after each year of equipment deployment that is a regular, systematic process within the regular monitoring system of the immunization program, and updating the maintenance plan.

UNICEF SD – A mechanism is needed for countries to provide continued feedback to manufacturers on the implementation of the SBP contract for installation, the performance of the CCE, the warranty and process for repairs so as to inform future awards. Promoting a community of practice for a vaccine cold chain maintenance and repair system may develop innovative approaches and solutions for countries to adopt.

2.

Not all implementation guidance, details of warranties, policies or plans are well communicated to stakeholders at all levels in the country. As a result, they were not consistently understood or implemented at the country level.

This was particularly true for CCE warranty details, type of corrective maintenance/repair covered, and how those services could be accessed by health facility staff. Although the SBP followed deployment guidelines specified by UNICEF SD, there was little country engagement in the details of this process.

SHORT-TERM RECOMMENDATIONS:

MOH – Good communication and transparency is essential with sub-national level stakeholders and particularly facility level staff to coordinate installation and any necessary changes to the ODP. For this, the MOH should see that the following documents are drafted:

- » A communications plan for the installation process and contingency plans and processes for deviations.
- » The maintenance plan should incorporate details of the warranty and services provided by SBPs and a transition plan for the best way to maintain CCE after the warranty ends. This could include developing an optimum staffing structure for long term maintenance.
- » A decommissioning plan for old, unusable equipment when not available is also needed.

UNICEF SD – Clarity and communication with the MOH is needed in the following areas:

- » Stabilizer expectations/local voltage levels for CCE in the country need to be clarified with the MOH during

the application and product selection process so that there is clear communication of requirements to manufacturers.

- » SBP contractual agreements and terms of reference including Standard Operating Procedures (SOPs) and warranty agreements should be shared with the MOH as soon as possible.
- » Service warranty details should be clarified with the manufacturers and SBPs and explained to all country level stakeholders.
- » The MOH should be involved from the outset in implementation discussions with the SBPs to better set expectations and as an opportunity to increase MOH ownership.

LONG-TERM RECOMMENDATIONS:

Gavi – Gavi should establish systems to institute the following practices in countries:



- » Gavi should consider financially supporting planning for transition from SBP deployment, updating maintenance plans, and longer term human resource capacity building for CCE technicians in countries.
- » Gavi guidelines for CCEOP may also be used as the mechanism to incorporate more system strengthening activities such as developing a systematic approach to updating inventory or updating the maintenance plan.

3.

Stakeholders were generally satisfied with the SBPs' installation of equipment and recognized the trade-off between the speed and effectiveness of SBPs deploying CCE and value for money considerations.

For the most part, staff commended the promptness and reliability of the SBPs, quality of installation, documentation of deployment and the reduced burden on the MOH for delivery and installation. In Kenya, however, stakeholders were concerned that the cost was too high for a service the MOH felt they could provide.

SHORT-TERM RECOMMENDATIONS:

SBP – Continue to ensure communication and transparency with sub-national level stakeholders and particularly facility level staff to coordinate installation and any necessary changes to the ODP. Maintain the high level of flexibility and adaptability for minor changes in the ODP.

LONG-TERM RECOMMENDATIONS:

MOH – To ensure continued success of the SBP model, continue to coordinate and align with all CCE stakeholders on CCE planning and deployment through CCEOP and other donors to determine the need in the country, the costs involved and the role of different organizations at each stage.

MOH and UNICEF SD – As Gavi is reconsidering the structure of the system of CCE deployment by SBPs, any revisions must take into account the effectiveness of the SBP approach and the specific complaint of it being too expensive and having the effect of reducing the pieces of equipment that can be procured. Specific details on these aspects should be communicated.

Gavi – For countries that have sufficient technical capacity, consider different models for service bundle requirement – tiered levels of support, opportunity to choose from an a la carte menu (e.g., outsourcing distribution/transport of equipment to facilities, SDD installation versus ILR “plug and play” equipment, etc.) based on the most prominent need of the country, and allow 3rd-party bidding (one SPB for all CCE suppliers in a given country, not supplier-relationship dependent).

4. | *The SBP monitoring system for deployment was effective and allowed for minor deviations.*

Furthermore, SBPs were able to react to changes in a timely manner and adjust with no additional costs charged to the MOH.

SHORT-TERM RECOMMENDATIONS:

MOH – Although SBPs were flexible during the deployment process, continued success of the model suggests the MOH develop a communications plan for the installation process and develop contingency plans and processes for deviations. The deviation protocol should be clarified with SBPs and sub-national stakeholders who are most directly involved during deployment and installation. The protocol should be flexible enough to respond to changing needs.

UNICEF SD – When setting up the deployment process, UNICEF SD should clarify the procedures for deviation in deployment and expectations to ensure that there are no surprises in the future. Quality checks of installation should be included as part of post installation inspection plans and systems need to be in place to provide feedback on quality back to UNICEF SD to inform future SBP awards.

LONG-TERM RECOMMENDATIONS:

MOH – The MOH should continue to meet regularly to monitor the progress of CCE installation, SBP performance, and CCE performance throughout the warranty period. Additional processes are needed to ensure that data on deployment and installation are captured and incorporated into regular review processes.

UNICEF SD – A mechanism is needed for countries to provide continued feedback to manufacturers on the implementation of the SBP contract for installation, the performance of the CCE, the warranty and process for repairs so as to inform future awards.

Gavi – Gavi guidelines for CCEOP may also be used as the mechanism to incorporate more system strengthening activities such as developing a systematic approach to updating inventory. This would provide a more accurate picture of the current situation with CCE and the country's ability to assess needs.



5.

SBPs provided training to health facility staff also communicating maintenance and repair protocols. Training was also provided at the national level. Yet, the training was found to be insufficient with the need to clarify training needs and topics.

The capacity of technicians was insufficient to ensure long term CCE maintenance. A long term mechanism to monitor CCE performance (after installation check) and provide feedback to manufacturers did not exist.

SHORT-TERM RECOMMENDATIONS:

MOH – Good documentation and communication of resources and processes is needed in the following areas for example:

- » The maintenance plan should incorporate details of the warranty and the services provided by the SBPs and a transition plan for the best way to maintain CCE after the warranty ends. This could include developing an optimum staffing structure for long term maintenance.
- » The SOP of the SBP needs to be clearly disseminated at all levels, while communicating expectations regarding installation standards.
- » A training plan should be developed together with the SBPs to ensure a high level of satisfaction of training for each cadre of health worker.

UNICEF SD – Following contracting with the SBP, the suppliers should ensure SBP contractual agreements and terms of reference are shared with the MOH, including SOPs and warranty agreements. UNICEF SD should involve the MOH early on in discussions of implementation with the SBPs to better set expectations and as an opportunity to increase MOH ownership. Specific areas of discussion are:

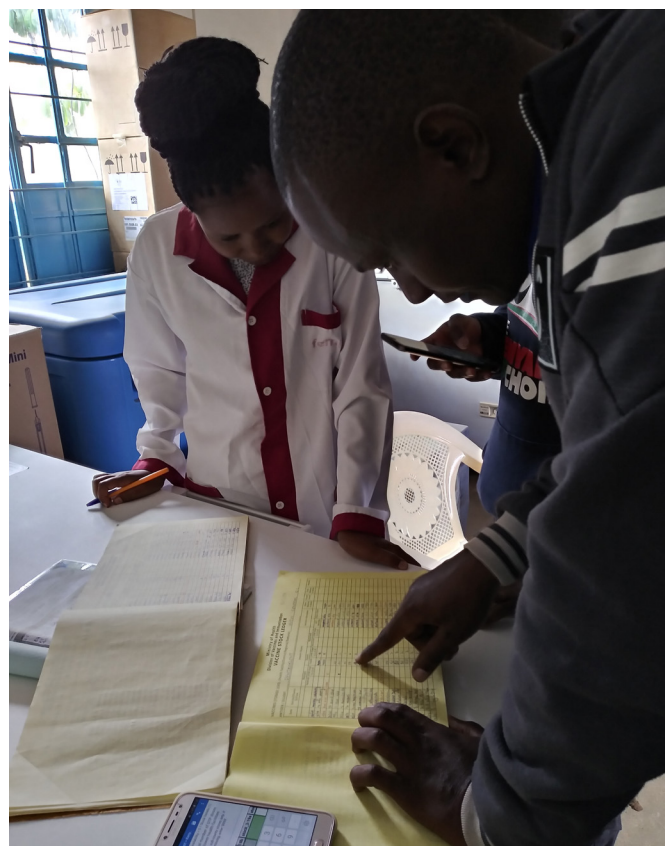
- » Clarifying training details with manufacturers, SBPs and the MOH.
- » Clarifying deviation procedures and expectations to limit surprises in the future.
- » Quality checks of installation should be included as part of post installation inspection (PII) plans and feedback on quality flows back to UNICEF SD to inform future SBP awards.

SBP – Training and installation SOPs should be aligned with MOH needs and expectations. Training should include warranty and processes for reporting maintenance issues agreed upon with MOH. Training and supporting materials and equipment manuals should be available in local languages when feasible.

LONG-TERM RECOMMENDATIONS:

Gavi – Activities such as planning for transition from SBP deployment, updating maintenance plans, and longer term human resource capacity building for CCE technicians may need financial support.

UNICEF SD – UNICEF SD should institute a mechanism to receive country feedback on the implementation of the SBP contract for installation and training as well as on the warranty and process for repairs which will also be useful to inform future awards. A community of practice for a vaccine cold chain maintenance and repair system may be promoted to develop innovative approaches and solutions for countries to adopt.



In each country, we appreciate the guidance and support of Ministries of Health, UNICEF, WHO, CHAI, Program Management Teams, National Vaccine and Initiatives, and other stakeholders. We extend our gratitude to all respondents at the national, regional, district, and health facility levels who gave up their time to contribute to this evaluation with critical information. We would also like to thank the Gavi secretariat for its feedback and advice throughout the evaluation.

The CCEOP Evaluation Team is led by JSI Research & Training Institute, Inc. (JSI) and includes research partners from JaRco Consulting, Research and Development Solutions (RADS), and Stat View International.

JSI exists to improve the health and well-being of underserved and vulnerable people and communities throughout the world, and to provide an environment where people of passion and commitment can pursue this cause.

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