Cold Chain Data Review Meetings



Photo credit: Innocent Mainjeni

OVERVIEW

Cold chain maintenance systems generate substantial amounts of information through remote temperature monitoring (RTM) platforms, maintenance records, supervision visits, technician reports and routine facility reporting. However, the availability of information alone does not improve maintenance performance. Information must be routinely reviewed, translated into decisions and acted upon.

The **Cold Chain Data Review Meetings** were developed to strengthen the use of maintenance information in operational decision-making. While the name emphasizes data review, the primary purpose of the approach is to transform maintenance information into action through structured decision-making, accountability and follow-through. The approach provides a structured forum through which personnel responsible for cold chain management, maintenance, logistics and immunization services can review performance data, identify priority issues, assign responsibilities, monitor progress and escalate unresolved challenges.

Rather than functioning as a standalone intervention, Data Review Meetings serve as a **cross-cutting mechanism** that connects maintenance information to maintenance action and supports implementation of the broader R3 package.

Effective cold chain equipment (CCE) maintenance depends not only on collecting information, but also on using it to inform decisions and drive action. This technical brief describes the Rapid Response and Repair (R3) Data Review Meetings tested in Malawi to strengthen maintenance decision-making, accountability and follow-through.

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RATIONALE FOR THE DATA REVIEW MEETINGS

The prototype was piloted from Nov. 2025 to Feb. 2026 in 16 facilities across two districts and subsequently refined and expanded during scale-up activities from March 2026 to June 2026. During stakeholder consultations and prototype implementation, participants identified a gap between identifying maintenance issues and taking action to address them. Maintenance concerns were often documented through ColdTrace, maintenance reports, supervision activities, technician records and facility reporting systems but were not consistently reviewed, assigned for follow-up or tracked to resolution.

Stakeholders noted that maintenance issues could be identified repeatedly without clear mechanisms for assigning responsibility, monitoring follow-up actions or escalating unresolved issues. As a result, opportunities for timely intervention were missed and visibility into recurring challenges and system-wide priorities remained limited.

To address these challenges, the pilot introduced structured district-level Data Review Meetings involving cold chain technicians, district Expanded Programme on Immunization (EPI) coordinators, facility representatives and other maintenance stakeholders. Meetings were held on a routine basis and focused on reviewing maintenance information, identifying priority issues, documenting actions, assigning responsibilities and monitoring implementation of previous commitments. Supporting tools included meeting agendas, action trackers, issue logs and meeting minutes templates to strengthen accountability and follow-through. Implementation tested whether a structured review process could improve visibility into maintenance issues and create clearer pathways for action and escalation.

Meetings focused on reviewing maintenance information, identifying priority issues, documenting actions, assigning responsibilities and monitoring implementation.

"Thanks for the data review meetings. We now have better coordination between the district and health facility team which helps us to safeguard vaccine integrity. Health facilities now are able to know the status of their CCEs, their challenges and get immediate support when issues arise!"

- Health Facility EPI Focal Person



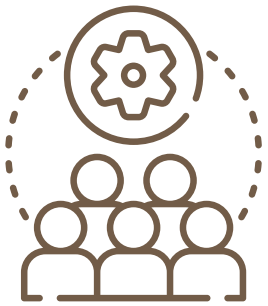
Photo credit: Paul Joseph Brown

APPROACH

The design principles were co-developed by VillageReach and Nexleaf based on findings from stakeholder consultations and implementation experience.

The Data Review Meetings approach was built around four principles:

- Information should drive action.
- Accountability should be clearly assigned.
- Follow-up should be routine and documented.
- Escalation pathways should be visible and understood.



Through a structured review process, the approach helps transform maintenance information into decisions, actions and accountability. Participants review maintenance data, identify priority issues, assign responsibilities, monitor progress and escalate unresolved challenges to promote timely resolution.

Compile maintenance information

Before each meeting, maintenance information is compiled from multiple sources, including ColdTrace dashboards, maintenance logs, technician reports, supervision findings, facility reports and Rapid Response Fund (RRF) requests. Bringing information together in a single forum provides participants with a more complete view of equipment performance, maintenance needs and unresolved issues.

Review and prioritize issues

Participants review available information to identify priority issues requiring attention. Discussions focus on equipment performance concerns, unresolved maintenance issues, emerging trends, resource requirements and progress on actions from previous meetings. This helps ensure that the most urgent or consequential issues are addressed first.

Assign actions and responsibilities

For each priority issue, participants agree on the actions required, who is responsible for completing them and the expected timeline for follow-up. Any issues requiring escalation are identified and documented. Agreed actions are recorded using standardized action trackers and meeting records to support accountability.

Monitor follow-up

Subsequent meetings review progress against agreed actions, identify barriers to implementation and determine whether additional support or escalation is needed. This creates a continuous cycle of review, action and accountability.

Audience

In Malawi, participants included district EPI coordinators, cold chain technicians, facility representatives and other stakeholders involved in cold chain management and maintenance oversight. Depending on the issues under discussion, meetings may also include representatives responsible for logistics, procurement, finance, supervision or maintenance planning.

How it Can Be Used and Sustained

To be effective over time, Data Review Meetings should be integrated into existing maintenance and EPI management structures. Holding meetings at regular, predictable intervals alongside other coordination activities helps ensure continuity and reduces the risk that they become ad hoc or deprioritized. Success also depends on engaging the right stakeholders. Meetings should include individuals who generate maintenance information as well as those with the authority and capacity to act on it. Maintaining a stable core group of participants, while allowing flexibility to involve others as needed, helps strengthen ownership and coordination.

Discussions should move beyond reviewing data to identifying actions, assigning responsibilities and setting timelines. Simple tools such as action trackers, meeting minutes, agendas, presentation templates and issue logs should be routinely updated and reviewed to support accountability, monitor progress and keep unresolved issues visible until they are addressed.

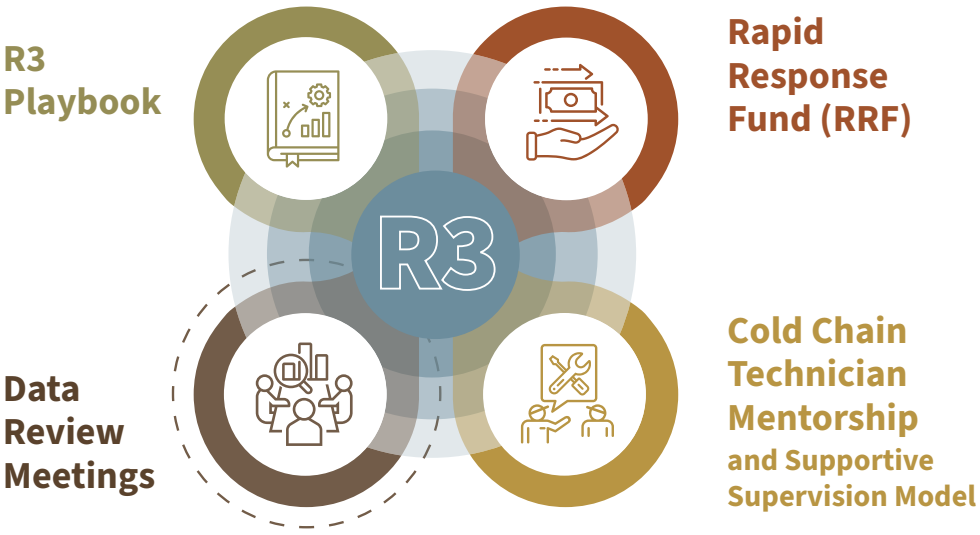
The Data Review Meetings approach and supporting tools were shared with the Malawi Ministry of Health (MoH) for consideration within routine maintenance and EPI management processes. While long-term implementation decisions remain with the ministry, the approach and supporting tools were shared for consideration within routine maintenance and EPI management processes.

Relationship to Other R3 Components

Data Review Meetings serve as a cross-cutting coordination mechanism within the broader R3 approach, linking information, decision-making and action across its different components. Within these meetings, stakeholders can review how maintenance processes and responsibilities outlined in the Playbook are being followed in practice, creating a space to reflect on adherence and identify gaps. Additionally, the meetings help surface maintenance issues that require additional resources, allowing participants to determine when support from the RRF may be needed and to track the progress of actions financed through it. They also provide an opportunity to identify facilities or technicians who may benefit from additional mentorship or supportive supervision, ensuring that technical support is directed where it is most needed. In this way, Data Review Meetings create a continuous link between information and response, helping ensure that insights generated in one part of the system can prompt timely action in another.

"The WhatsApp groups have been helpful in helping us open up and willing to learn as well as being eager to support one another on the common issues that we encounter. The data review meetings have been more like a refresher training opportunity for me."

- Health Facility EPI Focal Person



EXPECTED OUTPUTS AND RESULTS

Implementation of the approach generates:

- Meeting agendas that guide discussions and ensure key topics are consistently addressed.
- Meeting minutes that capture decisions, discussions and agreed next steps.
- Action trackers that document responsibilities and timelines for follow-up.
- Issue logs that record ongoing maintenance challenges and their status.
- Escalation records that track issues requiring higher-level attention.
- Maintenance performance summaries that provide an overview of trends and priorities.

Together, these tools support a structured process for reviewing maintenance information, documenting decisions and monitoring progress on agreed actions. The approach is intended to improve visibility into maintenance priorities, support more informed decision-making and strengthen follow-up on unresolved issues.

LESSONS FROM MALAWI

Implementation of the Data Review Meetings approach generated several lessons that may be useful for countries seeking to strengthen maintenance decision-making and accountability systems.

KEY LESSON 1

Accountability is more valuable than data alone.

Stakeholders consistently reported that the greatest value of the meetings was not the discussion of data itself, but the creation of clear accountability for follow-up actions. Assigning responsibilities and reviewing progress against previous commitments helped ensure issues remain visible until resolved.

KEY LESSON 2

Clear documentation supports action.

Action trackers, meeting minutes and issue logs helped ensure that maintenance concerns translate into tangible actions. Participants emphasized that meetings were most effective when focused on problem-solving and implementation rather than reporting alone.

KEY LESSON 3

Routine review processes help identify broader system challenges.

The meetings created opportunities to discuss recurring issues affecting CCE performance, including challenges such as limited maintenance financing and resource constraints. This helped stakeholders address root causes rather than only responding to individual equipment failures.

KEY LESSON 4

Bringing the right stakeholders together improves coordination.

Bringing together district leadership, EPI personnel, technicians and other system actors improved visibility into maintenance issues and promoted shared responsibility for resolving them. This created stronger alignment between decision-makers and those responsible for implementation.

ASSOCIATED TOOLS AND TEMPLATES

The tools listed below were developed or adapted to support implementation in Malawi and include structured supervision resources, maintenance data systems and peer-learning mechanisms used to strengthen field-based capacity. While some tools are specific to Malawi's context, they illustrate the types of resources countries may consider when adapting a similar mentorship approach.

Core Implementation Tools	Purpose
CCE Supervision and Mentorship aQChecklist	Guiding questions and an accompanying guidance narrative of the foundational elements that need to be considered in supervision execution.
Mentorship Visit Planning Guide	A compilation of key issues that need to be considered in planning for the mentorship visit.
Pre- and Post-Mentorship Assessment Tools	Highlights key expectations before mentorship visit and how those expectations are met by facility staff including any existing gaps.
Mentorship Visit Report Template	Provides a snapshot into the major highlights of how the visit was received by the CCTs.
Facility Action Planning Tool	Captures identified actions, accountability and execution timelines.

Data Sources Used to Guide Mentorship	Description
ColdTrace Dashboard	A real-time temperature monitoring platform managed by Nexleaf Analytics.
IMT Equipment Database	An Inventory Management Tool which compiles the list of all CCEs in an ecosystem and its related spares and accessories and their quantities.
QR-Code CCE Tracking System	A system that is designed to keep all critical information about CCEs (e.g. installation year, location of installation, manufacturer details, maintenance and repair history) and this information can be retrieved upon scanning a unique QR code assigned to any individual CCE.
DHIS2 Data Sources	Digital Health Information System, which contains service data which could also include cold chain related information.
CCE Maintenance Log	A manual document physically attached to each CCE, documenting when fixes occurred and any spare parts replaced.
Monthly CCT Reporting Form	Documents key CCE technical areas for progress consideration.

Peer-Learning and Follow-Up Mechanisms	Description
CCT WhatsApp Learning Group	A WhatsApp group that has all CCTs from different districts, set up as a platform for peer-to-peer learning.
EPI Focal Person Learning Group	A WhatsApp group that has all EPI focal persons from different health facilities, set up as a platform for peer-to-peer learning.
Progress Monitoring and Follow-Up Tools	Documents designed to track the progress made on any agreed actions after scheduled visits to different health facilities.

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