



Data Review Teams:

A Promising Practice to Improve
Data Use and Strengthen
Immunization Supply Chains

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Acknowledgements

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Executive Summary

Well-performing immunization supply chains (ISC) are critical to ensure vaccine availability, and rely heavily on data visibility and data use to function properly. As access to more and better quality data increases, Data Review Teams (DRTs) are an approach to ensure that data are used to make decisions. DRT meetings are an opportunity for stakeholders from across supply chain tiers to review key ISC performance indicators, identify and assess performance issues, and develop actionable solutions to address them. DRTs help build a culture of data use and improve supply chain performance.

In partnership with governments and communities, the **Clinton Health Access Initiative (CHAI)**, **John Snow, Inc. (JSI)**, and **VillageReach** have developed and implemented different types of data review teams across multiple health programs in a number of countries. The evidence from these interventions suggests that data review teams lead to improved data visibility, improved stock availability, and reduced wastage.

Making Data Review Teams Work: 8 Recommendations

I. Standardize the meeting structure and tools

- ✓ *Integrate DRTs into existing performance review and monitoring meetings to minimize start-up effort and promote sustainability.*

Integrating DRTs into existing meeting structures increases the likelihood that they are sustained. While there are tradeoffs to consider (such as the momentum generated by a new meeting versus making an already lengthy meeting longer), integration works best when iSC data review is incorporated into meetings that are well established, well attended and occur frequently. Planning for transition from a partner-supported model to a fully owned government meeting is essential to the long-term success of data review teams.

- ✓ *Create or enhance decision support tools that teams can use to measure performance, track progress, and identify problems.*

Implementers should invest time and effort in enhancing data analysis tools and standardizing presentation formats for use in data review team meetings. Decision support tools that are simple but efficient and align with existing team capacity may be adopted more quickly and used more consistently than overly complex ones.

- ✓ *Cover four essential processes during data review team meetings: Key Performance Indicator (KPI) review, problem identification, problem cause analysis, and action planning.*

All team meetings should prioritize Key Performance Indicators (KPI) review, problem identification, problem cause analysis, and action planning. Plan for how best to facilitate these activities and ensure that members have the information and tools required to carry them out. Refer to the Gavi Alliance's recommended KPIs [Dashboard for Immunization Supply Chain \(DISC\) indicators](#) for potential indicators.

II. Choose team members and orient them to their roles

- ✓ *Adapt team composition to the context and goals of the data review team intervention.*

Data review meetings work best when the participants are from multiple disciplines and include those who are close to the problems (e.g. local cold chain and logistics officers), and those with decisionmaking, financial and administrative authority (e.g. EPI managers and program directors).

Please note: In some instances, the presence of senior leadership inhibited candid discussion of issues. Discuss tradeoffs during the design phase and revise as you go.

- ✓ *Provide orientation to generate buy-in and build the capabilities of the data review team members.*

Training is essential to ensure that data review team members can successfully analyze data and develop solutions. During orientation, clarify roles, responsibilities, and expectations. Most importantly, tailor training to the skills and proficiencies of team members. Supplemental training may be required to address skills gaps that surface during implementation, so implementers should plan for it in advance to the extent possible.

- ✓ *Start with the data you have, and use the data review meeting to highlight and address data quality issues.*

Even if pre-existing data are limited, all data review processes must start somewhere. Implementers can call health facilities and collect data manually or verify the credibility of data by checking it against several different sources. Over time, scrutinizing imperfect data will improve both data quality and strengthen supply chain performance.

III. Nurture teams' motivation and accountability

- ✓ *Include strategies to build motivation and accountability in the DRT design.*

In order to be successful, data review interventions must include motivational and accountability mechanisms for driving behavior change. Some successful methods included rules, supervision, peer pressure, accountability, public declarations, peer recognition and financial incentives. No matter how it is generated, motivation is an essential component of these interventions and implementers

should choose the appropriate strategy for the given context. NB: Financial incentives should be carefully considered before implementation as they can have negative implications for sustainability of meetings during and after transition to government.

- ✓ **Cultivate Champions and Leaders Who Can Help Generate Buy-In for Data Use.** Leadership and champions who will advocate for DRT are essential, as they can validate and motivate stakeholder participation and empower decisionmaking. They should be included: (1) during the initial kick-off phase to promote and publicly support the intervention; (2) during regular check-ins to demonstrate continued interest and increase accountability; and (3) when support is required to unblock issues and address challenges beyond the authority of the DRT.

Figure: Key Components of Data Review Team Interventions



The Bottom Line

Data review teams alone are not cure-alls for strengthening vaccine supply chains. Governments and their partners must continue to make other critical investments in human resources, infrastructure, policies, and technology. But experience shows that data review teams—equipping individuals at all levels of the supply chain to work with and improve the information that they have—can have powerful and in some cases remarkably swift impacts that can ultimately help to ensure that we continue to close the gap on immunization coverage for the world’s poorest people.

Data Review Teams: A Promising Practice to Improve Data Use and Strengthen Immunization Supply Chains

*Despite astonishing strides in expanding immunization coverage in low-resource settings, potent vaccines are not always available when and where they are needed. Well-performing immunization supply chains (iSC) are critical to ensure vaccine availability, and rely heavily on data visibility and data use to function properly. Access to more and better quality data is increasing, but the use of that data to make decisions has lagged behind. **Data Review Teams (DRTs)** are an approach and an opportunity for stakeholders from across supply chain tiers to review key iSC performance indicators (KPIs), identify and assess performance issues, and develop actionable solutions for improving iSC and immunization program performance.*

Based on our collective experience implementing DRT interventions for the Expanded Programme on Immunization (EPI) in seven countries over six years, the Clinton Health Access Initiative (CHAI), John Snow, Inc. (JSI), and VillageReach provide operational lessons learned in building a culture of data use. We jointly conclude that data review teams can improve stock data visibility, product availability and reduce wastage.

This report aims to help EPI managers, supply chain logistics staff and technical assistance partners to (i) recognize the role of data review teams in system strengthening efforts, and (ii) inform the design of data review teams, standards and processes, particularly in considering new data collection and reporting platforms.

Background

CHAI, JSI, and VillageReach are global leaders in public health supply chains, and have developed and implemented different types of data review teams across multiple health programs in partnership with governments and communities in a number of countries. The DRT interventions reviewed in this report were selected because vaccines were included among the products monitored and there was enough information to evaluate the results of the intervention.

These country experiences provide a useful overview of how DRT interventions are structured at different tiers of the supply chain, and important lessons for countries and partners to inform strategies around developing and implementing systems for improving data use, not only for immunization programs. Moreover, because DRT interventions share characteristics that are common to many other health systems strengthening approaches—that is, they focus on instilling and institutionalizing new practices and behaviors among stakeholders within the health system—lessons drawn from DRTs may be relevant to other types of interventions as well.

Introduction

Since the creation of the Expanded Programme on Immunization (EPI) in 1974, massive investments have been made in increasing immunization coverage in low- and middle-income countries. But despite significant long-term investments in research, financing mechanisms and new vaccine development, many countries still experience low coverage rates. In 2014, for example, 31 percent of low- and lower-middle-income countries reported stockouts at the national level, with 26 percent also reporting stockouts at the district level.¹

¹ WHO-UNICEF Joint Reporting Forum. Last updated: 25 February 2019

For immunization supply chains to be effective—for the right products to get to the right places at the right time—actors throughout the supply chain must produce and use data for decisionmaking. This data—on stock levels, consumption, wastage rates, order and re-supply frequency, and stock-outs, among other indicators—enables accurate resupply, inventory management, distribution planning, order fulfillment, and forecasting—and ultimately determines whether populations have access to the vaccines they need.²

Although countries have made significant investments in improving data availability—developing health logistics management information systems (LMIS), for example, and training staff to report using these systems—the increased *availability* of data has not automatically led to increased *use* of data.

In our experience, multiple factors are at play.³ Stakeholders at various levels of the supply chain may have limited time or skills to analyze data, or may not use data if they think it is incomplete, inaccurate or unreliable. In other instances, there may not be adequate structures or processes in place to identify and address supply chain problems. Technology and training are important, but instilling new behaviors and habits requires a more systematic approach that includes processes, feedback, and accountability for performance.

Data Review Teams

Data Review Teams (DRT) are a potential solution for building a culture of data use. Data review teams bring together program and immunization supply chain managers, and other relevant stakeholders and task them with carrying out improvement efforts. These stakeholders review supply chain performance data, identify supply chain problems, and develop and execute action plans for addressing these problems. Often implemented alongside other interventions such as upgrading supply chain infrastructure, implementing electronic logistics management information systems, and optimizing supply chain design, DRTs help build a culture of data use and improve supply chain performance.

Different data review team interventions have been implemented by CHAI in seven countries, by JSI in ten countries, and by VillageReach in three countries. The evidence from these interventions suggests that data review teams lead to improved data visibility, improved stock availability and reduced wastage. For example, stock adequacy increased from 67 to 98 percent over the course of a DRT intervention in Kano State in Nigeria. In Pakistan, the average percent of Union Councils with all seven primary routine vaccines in stock each month rose from 34 to 87 percent in intervention districts in the course of a year. Similarly, in Mozambique, stockouts dropped

Data Review Team interventions can...

- ✓ Build the **necessary skills** for analyzing and using data, thereby building confidence in data
- ✓ Improve **data quality** (e.g., data completeness, timeliness, and accuracy of reporting, etc.) by conducting data checks during analysis and flagging inaccuracies and inconsistencies
- ✓ Strengthen the use of **data for operational decisionmaking** and identifying areas of weakness at multiple levels of the supply chain
- ✓ Trigger a **virtuous cycle** by demonstrating how data can be successfully used to improve supply chain performance, which in turn increases demand for data and motivation to use data

² John Snow, Inc. 2017. *The Supply Chain Manager's Handbook, A Practical Guide to the Management of Health Commodities*. Arlington, Va.: John Snow, Inc.

³ *Immunization Data: Evidence for Action. A Realist Review of What Works to Improve Data Use for Immunization, Evidence from Low- and Middle-Income Countries*. Seattle: PATH; Washington, DC: PAHO; 2019.

from 36 to 5 percent over five years in provinces where data review teams were implemented (See [Figure 2](#) for details).

Cross-Case Comparative Review of Data Review Team Interventions

Approach

To uncover insights into factors that contributed to or hindered success of data review teams, we conducted in-depth interviews with DRT program managers, reviewed program documents, and documented diverging and converging practices and operational tactics. To generate the findings and recommendations that follow, we further analyzed the different DRT design elements to surface successes, challenges, and key considerations for future implementation of data review team interventions. The [portfolio](#) of cases reviewed is summarized in [Figure 1](#). A detailed methodology, including analytical framework, primary data collection template, and interview guide, is included in [Annex A](#).

Data review teams are not a static, one-size-fits all intervention. Each country, with support from the respective organizations, designed and tailored the approach in various ways, over varying time periods and health system levels. The similarities and differences are summarized in the [Design Elements Matrix](#) below ([Figure 3](#)).










Most of the DRT interventions were structured similarly—routine meetings of multi-level and multifunctional stakeholders, who use supply chain data and improved data analysis tools to identify problems, develop solutions, and follow up on progress—with support from implementing partners. While interventions varied in terms of meeting structure (e.g., detailed Standard Operating Procedures and process-support tools) and the frequency with which teams met, there were many common design elements across interventions:

- The teams typically included stakeholders from different tiers of the supply chain (e.g., districts and health facilities), and actors who had different functions in the health system (e.g., EPI managers, logisticians, and regional health officers).
- Most teams used enhanced tools for data analysis, and held structured meetings that emphasized data presentation, problem identification, and solution generation.
- Most interventions included strategies to motivate the DRT members, including peer recognition platforms, financial incentives, or other reward mechanisms.

Figure 1: Portfolio of Data Review Team Interventions implemented by CHAI, JSI and VillageReach

| | | VillageReach | | | CHAI | | | JSI | | |
|------------------------------|---|--|--|--|---|--|---|---|--|---|
| Components | |  Mozambique Phase 1 |  Mozambique Phase 2 |  Mozambique Phase 3 |  Cameroon |  Nigeria |  Tanzania |  Guinea |  Kenya |  Pakistan |
| Level | Level of supply chain | Province | Province | Central, District | Central | State and Local Government Areas (LGAs) | Regional, District & Health Facilities | District | County, Sub-county, Facility | Province, District, Taluka |
| Period | Period of intervention implementation | 2013 - present | 2015 - present | 2017 - present | 2015 - 2018 | 2016-2018 | 2015 – present | 2016 - 2018 | 2016 – 2018 | 2016 - 2017 |
| Scale | Presence / total number of geographic units | 4 out of 11 provinces | 9 out of 11 provinces | Central level | Central level 10/10 regions | 5 out of 36 states 13-44 LGAs per state | 5 out of 26 regions 35 districts | 6 out of 34 districts | 10 out of 47 counties | 3 out 29 districts |
| Data Review Team Composition | Critical members of data review team | Core EPI Logistics Team, Provincial Medical Chief and VillageReach Provincial Immunization Officers | Core EPI Logistics Team, Provincial Medical Chief and VillageReach Provincial Immunization Officers | Central level EPI stakeholders, including the M&E Focal Point, EPI Data Manager, Central Logistician, EPI Manager, reps from financial & technical partners and the VillageReach VAN Advisor | National Logistics Working Group members, EPI logistics section, Gavi-AMP, WHO, UNICEF | State and LGA cold chain and immunization officers, M&E officers, PHC representatives | Regional & District vaccine and medical officers, Executive directors, RCH coordinators, Health secretaries, Regional admin. secretaries & council chairmen | District level program reps, pharmacist, health chief, facility staff | County and sub-county program (e.g. EPI, FP), pharmacy, and M&E staff, facility in-charges | Province, District and Taluka (sub-district) EPI staff, Medical Coordinator, Data Manger |

Figure 2: Outcomes of Data Review Team Interventions implemented by CHAI, JSI and VillageReach

| | VillageReach | | | CHAI | | | JSI | | |
|-----------------------------------|--|--|---|---|---|---|---|--|---|
| |  Mozambique Phase 1 |  Mozambique Phase 2 |  Mozambique Phase 3 |  Cameroon |  Nigeria |  Tanzania |  Guinea |  Kenya |  Pakistan |
| Performance Year | 2015 | 2017 | 2017 | 2018 | 2018 | 2017 | 2018 | 2017-2018 | 2017 |
| Performance across key indicators | <p><u>Avg across 4 provinces</u></p> <p><u>Distribution</u></p> <ul style="list-style-type: none"> □ Direct delivery health facility visit rate: 74% <p><u>Stock availability</u></p> <ul style="list-style-type: none"> □ Vaccine stock out rate at visited health facilities: 5% | <p><u>Avg across 8 provinces</u></p> <p><u>Distribution</u></p> <ul style="list-style-type: none"> □ Direct delivery health facility visit rate decreased to 57% <p><u>Stock availability</u></p> <ul style="list-style-type: none"> □ Vaccine stock out rates increased, but remained low at 24% in visited health facilities | <p><u>Reporting</u></p> <ul style="list-style-type: none"> □ Health facilities DHIS-2 reporting rate: 89% <p><u>Data Quality</u></p> <ul style="list-style-type: none"> □ Data consistency in DPT3 and PCV3 coverage: Most provinces stayed within the 33% accuracy target set by WHO <p><u>Stock availability</u></p> <ul style="list-style-type: none"> □ Vaccine stock out rate: 24% | <p><u>Stock availability</u></p> <ul style="list-style-type: none"> □ Central store stocked w/ 5 out of 9 Vx above min. stock levels: 100% □ Regional stores stocked w/ 6 out of 9 Vx above min. stock levels: 100% | <p><u>Stock availability</u></p> <ul style="list-style-type: none"> □ Kano State: Stock adequacy increased from 67% (2015) to 98% □ Lagos State: Stockouts eliminated at LGA & state level (from 27% and 50% in 2016, respectively) □ Nasarawa State: Stockouts were eliminated at State & LGA level □ Niger State: Stock adequacy improved from 30% (2016) to 68% | <p><u>Stock availability</u></p> <ul style="list-style-type: none"> □ Number of districts with adequate stock levels for more than 10 days per month increased from 6/33 (18%) in 2015 to 22/33 (66%) in 2017 | <p><u>Reporting</u></p> <ul style="list-style-type: none"> □ Facility reporting rate: 100% by mid-year □ On-time reporting improved from 78% (2016) to 91% (avg across the 6 districts with all showing improvement) <p><u>Stock availability</u></p> <ul style="list-style-type: none"> □ Decreased stockouts and improved stocked according to plan rates in most districts *(depending on district and product category) | <p><u>Reporting</u></p> <ul style="list-style-type: none"> □ Total reporting rates improved from 86 to 90% on average □ Timely reporting rates improved from 74 to 83% <p><u>Stock availability</u></p> <ul style="list-style-type: none"> □ Reduced stockouts by up to 26% <p><u>Stock storage</u></p> <ul style="list-style-type: none"> □ % of time vaccines spent in correct temperature range improved for the three counties that implemented RTM devices and teams | <p><u>Stock availability</u></p> <ul style="list-style-type: none"> □ Avg % of UCs with all 7 primary routine vaccines in stock each month across the 3 QIT districts rose from 34% (Q1 / Q2 2016) to 87% in Q2 2017 □ Avg % of health facilities reporting on all vaccines each month increased from 36% (Q1/Q2 2016) to 91% (Q2 2017) □ Avg stockouts decreased in all implementation districts |

Recommendations

Our cross-organization review yielded the following recommendations for implementing data review teams. These are grouped under three program principles:

- I. **Standardize the meeting structure and tools**
- II. **Choose the people and orient them to their roles**
- III. **Nurture teams' motivation and accountability**

Figure 4: Summary of Recommendations for Data Review Team Implementation

| I. Standardize the meeting structure and tools |
|---|
| ✓ Integrate DRTs into existing performance review and monitoring meetings to minimize start-up effort and promote sustainability. |
| ✓ Create or enhance decision support tools that teams can use to measure performance, track progress, and identify problems. |
| ✓ Cover four essential processes during data review team meetings: Key Performance Indicator (KPI) review, problem identification, problem cause analysis, and action planning. |
| II. Choose team members and orient them to their roles |
| ✓ Adapt team composition to the context and goals of the data review team intervention. |
| ✓ Provide orientation to generate buy-in and build the capabilities of the data review team members. |
| ✓ Start with the data you have, and use the data review meeting to highlight and address data quality issues. |
| III. Nurture teams' motivation and accountability |
| ✓ Include strategies to build motivation and accountability in the DRT design. |
| ✓ Cultivate champions and leaders who can help generate buy-in for data use |

I. Standardize the meeting structure and tools

- ✓ *Integrate DRTs into existing performance review and monitoring meetings to minimize start-up effort and promote sustainability.*

Effective data review teams require a specific forum for the team to cover its standard agenda. Building on existing meetings is one way to ensure that data review as a practice is considered part of routine operations. This also builds government ownership and limits reliance on a partner.



Findings:

Some data review teams, such as those in Tanzania, established a new meeting dedicated to data review in instances when there was no pre-existing meeting at the district level. This tactic was successful but required inviting more people, using more time, and allocating more resources. Other countries (e.g., Mozambique Central Level DRT, and Kenya) leveraged existing meetings that convened the appropriate attendees and/or focused on performance management. Leveraging existing meetings lowered the effort needed to routinely convene the team, and also minimized the time taken away from the team's other responsibilities. However, in some instances, integrating DRT into a pre-existing meeting was challenging, as meeting coordinators were hesitant to prolong an already lengthy meeting.



Implementation Considerations:

Consider these trade-offs when deciding whether to create a new data review team meeting, or to add data review to an existing meeting:

- **Adding data review as a new agenda item** in a pre-existing meeting helps capitalize on already-committed time and resources, but may require additional effort to incorporate relevant members and new data review-specific agenda items. It may also run the risk of prolonging a meeting and diluting its focus. This strategy works particularly well when iSC data review is incorporated into meetings that are well-established, well-attended, and occur frequently, such as a national logistics working group.
- **Creating a new meeting** allows for full dedication to the data review team's agenda and can potentially generate greater momentum because of its novelty, but requires time and resource investments. This approach works well in contexts where routine health-related data review meetings are not occurring and health professionals are aware of iSC performance issues.

✓ *Create or enhance decision support tools that teams can use to measure performance, track progress, and identify problems.*

Data should be presented in a way that fosters understanding and facilitates problem solving and action planning. Standardization of key performance indicator (KPI) tracking enables comparison across time, geographies, supply chain tiers, and performance standards.



Findings:

Most data review meetings featured decision support tools to help team members better visualize and understand the state of their facility's supply chain performance indicators. These ranged from PowerPoint presentations to sophisticated dashboards with drill-down capabilities. In some countries, there were no pre-existing visualization tools (e.g., Mozambique), while in others, existing LMIS dashboards did not meet teams' analysis needs at the district or health facility levels (e.g., Guinea, Pakistan).



Implementation Considerations:

Implementers should invest time and effort to enhance a data analysis tool or standardized presentation format that can be used by a data review team. Implementers should:

- Ensure there is an **iterative feedback cycle** on the visualizations to serve the evolving needs of the DRT and the problems being addressed.
- Take into consideration the **level of effort** and skill required to use the tool; if generating the visualizations is too challenging and time-consuming, it may not be sustained.
- To encourage uptake and use, decision support tools should not be overly complex and should align with **existing team capacity**.

Packaging LMIS Data for District-level Indicator Tracking

Country:  Pakistan,  Guinea

Organization: JSI

In both Pakistan and Guinea, new electronic LMIS promised to make data more available and reliable. However either the systems were not built with visual dashboards or reports designed for district-level performance monitoring and decisionmaking, or the dashboards intended for district level use did not support easy analysis of the data review team’s indicators, e.g., over time, or across subnational geographies. In Guinea, the data review teams developed and iterated data analysis tools in Excel to support teams’ data review and problem identification. Initially, central-level MOH staff members extracted the eLMIS data into the analysis tool; later, district-level staff took on this task. In Pakistan, project staff extracted the indicators from the eLMIS and packaged them in a PowerPoint presentation for the team’s review. These teams used a tally sheet to track progress against targets. In both countries, these tools served as prototypes for recommended reports or dashboards to build back into the respective electronic LMIS.

Enhancing the Familiar for Decision Support

Country:  Nigeria

Organizations: CHAI

CHAI supported the design, deployment and use of data visualization tools, which were simple in nature and completed regularly by government staff. In Nigeria, review of stock performance is carried out during national, state and Local Government Area (LGA)-level data review meetings using the Vaccines Stock Performance Management (VSPM) dashboard, a tool most team members were already familiar with. To improve visibility into stock performance at the health facility level, CHAI deployed NLMIS (a real-time stock management tool for ordering and allocation) in three focal states: Lagos, Nasarawa and Rivers. The NLMIS dashboard provides a clear and concise summary of health facility-level stock performance that is ready to use for immunization supply chain decisionmaking. Recently, requests have been made at data review meetings to improve the sensitivity of these tools by increasing the use of “traffic-lighting” of key indicators and incorporating more specific measures, such as how long available stock will last. The demands for continued refinement of these data visualization tools highlights that (i) participants rely on and use these tools and (ii) that these tools are important for achieving improved stock availability.

Pros and Cons of Tableau for Decision-Support

Country:  Mozambique
Organizations: VillageReach

In Mozambique, vaccine distribution data collected through the DLS direct delivery re-supply model was transformed into compelling graphs and heat maps on a Tableau Dashboard by a national-level VAN advisor. This gave data review team members the ability to customize report views by geography or disaggregate the performance of specific provinces, districts or health facilities, for specific months or time periods. The dashboard could also be downloaded and viewed offline. Tableau was a powerful tool for making data available, visually appealing, and intuitive to analyze. The ability to turn data from generic numbers in a table to visually compelling stories generated a high level of enthusiasm among DRT members to meet routinely and see where “the story” was going. In short – Tableau helped create an appetite for more data.

The willingness to access the interactive version of the reports however varies at the provincial level. While some data-inclined stakeholders enjoy exploring logistics data using Tableau Reader, other stakeholders prefer to review static PDF versions of the Tableau Reports or use Excel to analyze the data. This suggests that a lighter touch data reporting tool may be important for different stakeholders.

✓ *Cover four essential processes during data review team meetings: Key Performance Indicator (KPI) review, problem identification, problem cause analysis, and action planning.*

Used together, these four essential processes are aligned with continuous improvement best practices and will produce tangible, measurable results.



Findings:

All data review teams undertook these four key activities. The KPIs reviewed varied, as did the degree of structure (both in approach and in tools) applied to problem identification, problem cause analysis, and action planning. Most meetings lasted less than half a day (those covered in this review ranged from two hours to two days), depending on the product portfolio and geographical scope included. Working on indicator improvement across geographies provided a valuable opportunity for collaboration with colleagues toward a common goal.

- **KPI review:** Review of supply chain KPIs showed team members where they were improving and where more work was needed. Key indicators included reporting rate and product availability, among others. Some of the interventions used an initial stakeholder workshop to articulate the teams’ goals, define indicators, and set targets. All interventions relied on some pre-meeting data analysis or preparation. In Guinea for instance, a subset of the team analyzed the data prior to discussion by the full team. KPI review allowed members to benchmark their geography’s performance even if the focus of the team was indicator improvement (and problem solving) across geographies and levels.
- **Problem identification:** Teams focused on indicators that were not progressing toward targets to identify and prioritize problems to work on.

- **Problem cause analysis:** Problem cause analysis then allowed DRTs to clarify and address the fundamental causes of a supply chain challenge. The extent to which teams followed a highly structured problem-solving approach varied across interventions. One implementing partner used a prescribed, step-by-step problem solving process (e.g., scripted data review and root cause analysis) for each meeting, whereas another implementer encouraged free discussion about problem solving after each data presentation.
- **Action Planning:** All meetings generated action items for addressing problems. Meetings regarded as effective by members and implementers had action items that were time bound, assigned to one individual, and followed up on at the next meeting. When action items were beyond the control of the team, they could be escalated. Action planning was a key part of the process that produced tangible results and solved problems. One implementer used a standard action-planning template, and review of progress on the action items was a standing agenda point at each meeting.



Implementation Considerations:

Agendas for DRT interventions should prioritize Key Performance Indicator (KPI) review, problem identification, problem cause analysis, and action planning. Consider and plan for how best to facilitate these activities and ensure members have the information and tools required to carry them out. Implementers might develop or adapt tools or scripts to support the meeting elements and to ensure a consistent level of quality and standardization.

- **KPI review and problem identification:** The setup of DRTs should define key performance indicators aligned with the team’s supply chain improvement goals, and set targets. Teams should routinely review KPIs to monitor progress and identify challenges or problems to work on. Refer to the Gavi Alliance’s recommended KPIs [Dashboard for Immunization Supply Chain \(DISC\) indicators](#) for potential indicators.
- **Problem cause analysis:** In-depth, high-quality problem cause analysis identifies actions that can be taken to address fundamental supply chain challenges and ensure that they do not recur. Regardless of the approach, problem cause analysis is fundamental to addressing the underlying causes of systemic challenges in the supply chain, and should be a standard element of DRTs. Problem-cause analysis approaches include the Five Whys and the Fishbone.

Uncovering the Root Cause of Long-standing Problems

Countries:  Mozambique
Organization: VillageReach

Erratic re-supply schedules can lead to poor vaccine availability, higher stockout rates, and wastage at health facilities. In Mozambique, soon after the launch of SELV, an electronic logistics management information system, a data review team convened to review the Tableau-based provincial logistics dashboard to understand what was driving the long vaccine re-supply intervals and erratic stock availability in health facilities in Niassa Province. Upon reviewing KPIs such as re-supply visit rates, number of days between delivery intervals, and stock availability, the team applied a structured root cause analysis to get to the heart of the problem. This analysis revealed that the delays were due to vehicles not being sent for maintenance in a timely fashion. The structured root cause analysis helped to illuminate the domino effect of one-day delays for vehicle maintenance: two-week delays in the delivery cycle and higher stockout rates at health facilities in the province. The solution was simple: switching the vehicle service period to immediately upon return from distribution. But the team did not just solve this proximate problem; their deep review of data also gave them a better understanding of the benefits of data to support their activities.

Structured Problem-solving—and Local Action

Countries:  Guinea,  Kenya,  Pakistan

Organization: JSI

JSI developed and adapted, in consultation with stakeholders in each country, a set of standard operating procedures (SOPs) and training curriculum for data review teams. The SOPs specify a structured approach to: indicator analysis across the geography covered by the team; problem identification; root cause analysis; and action planning/tracking. These team process elements, supported by such tools as an indicator tracking tool (dashboard), tally sheet for comparing indicators to targets, and action planning template, were meant to guide teams in using data to prioritize and select problems to work on, circumscribing the scope and focusing their efforts on issues within their manageable interest. After reviewing indicators across the covered geographies (districts or counties) to identify problems and prioritize which to work on, teams in Kenya, Guinea, and Pakistan undertook a structured root-cause analysis exercise to guide development of appropriate solutions or actions to pursue.

For instance, if the team identified supply imbalances as a problem in facilities in the district (some overstocked, some understocked), arranging redistribution might be a necessary and reasonable action. Redistribution does not address the underlying cause of the imbalances, however. The SOPs prompted team members to keep asking “why” the problem was occurring until they got to the root cause(s). Pursuing local solutions aligned with the problem’s underlying cause is more likely to ensure the problem will not recur. Despite the structured approach, some teams struggled to identify the true root cause due to a lack of understanding of how the larger supply chain works. For example, one common action identified was supervision, but while this may have helped improve reporting in the short term, it was unlikely to address systemic root causes. In Pakistan, team members participated in capacity building on supply chain concepts as one way to better prepare them to develop solutions that would stick.

II. Choose team members and orient them to their roles

- ✓ *Adapt team composition to the context and goals of the data review team intervention.*

For DRTs to problem-solve effectively and take concrete action, the right people need to be in the room for the discussions. This means ensuring a mix of those close to the ground, who understand the challenges, and those in positions of authority, who can drive action. However, DRTs should be mindful to balance these two stakeholder groups to ensure that transparent and frank communication among members can take place without fear of retribution.



Findings:

The team makeup and number of team members varied among countries. Some teams included members from multiple supply chain tiers (e.g., regional and district level) and/or multiple disciplines (e.g., program managers such as health officers, commodity managers such as pharmacy officers, and data managers such as M&E officers), whereas other meetings comprised EPI program representatives and immunization officers only. Teams varied in size depending on the product portfolio and geographies covered. Most teams included 4-15 members—enough to generate ideas and fruitful discussion, but not too many so as to lose the focus on action. (There were exceptions: one country’s meeting convened upwards of 60 people.)

Despite these differences, teams benefited from the presence of staff members from subnational levels (e.g., vaccine officers/field coordinators or sub-district/facility staff members), likely because they are "closer to the problem," with an understanding of the stock situation, the reasons for improving or declining performance, and a sense of potential local solutions.

Teams also benefited from the presence of someone in a leadership role, either with the financial and administrative authority to mobilize and allocate resources, or with the discretion to elevate such requests. However, some team members found it more difficult to speak frankly about the issues they were facing when someone they directly or indirectly report to – e.g. a supervisor or senior official – was present.



Implementation Considerations:

When designing DRT interventions, the government (e.g., program managers for the health programs covered) should identify attendees. This team should include members who can facilitate problem solving, action planning and execution of action items, specifically:

- **Include those who are close to the issues:** To ensure discussions are anchored in local realities, include members from the operational level (e.g., district-level cold chain officers). These members can explain the drivers of low performance, and help develop practical solutions.
- **Include those with decisionmaking authority to enable action:** To ensure that sufficient resources are allocated to address the problems identified in the meetings, include members with decisionmaking, financial, and administrative authority or those who have direct communication lines to these individuals.
- **Balance the benefits of having senior leaders on the team, with the need to ensure team discussions are candid:** In some contexts, the presence of senior leaders can inhibit transparent problem solving, whereas in others it drives the culture of accountability. To find this balance, stakeholders should discuss tradeoffs during the design phase, and should consider what accountability structure will be most effective.
- **Include team members from multiple disciplines:** Representatives from program, logistics, and data management or monitoring units, etc., bring additional insight and context to the issues and potential solutions being discussed.

✓ *Provide orientation to generate buy-in and build the capabilities of the data review team members.*

Orientation sets the stage and engages data review team members to ensure their full participation. It also ensures that the members are well versed with the tools, processes, and responsibilities associated with the team's function, and sets the team up for independent operation.



Findings:

The majority of the interventions reviewed included training focused on orienting members to the goals, tools, and processes associated with carrying out data review meetings. Such training also built in-country support and ownership over the data review meetings activities. In some cases (e.g., Nigeria, Pakistan, and

Guinea) supplemental trainings were needed to address fundamental skill gaps in areas such as data analysis, supply chain concepts, and computer literacy.



Implementation Considerations:

Well-trained data review team members will have the necessary knowledge and proficiency, including data analysis and leadership skills, to appropriately carry out activities. When planning and conducting effective training, implementers should:

- **Consider existing capabilities and plan accordingly:** Since data review team members are chosen primarily based on their role within the immunization supply chain, they may not have the requisite capabilities needed to participate in the data review team. In orientation, consider the existing skills and proficiencies of DRT members. Mapping DRT members' skills and tailoring training and orientation activities can promote independent functioning of the DRT. Supplemental trainings may be required to address gaps that surface during implementation.
- **Make roles, responsibilities and expectations clear:** Ensure orientation includes a discussion of roles, responsibilities and expectations of DRT members. Ways to codify roles and responsibilities include use of support documentation such as a Terms of Reference (ToRs), Standard Operating Procedures (SOPs), or Memoranda of Understanding (MoUs).
- **Nurture leadership:** As part of training, build and nurture the leadership skills of DRT members.
- **Take into consideration knowledge retention & transfer:** Take into consideration how knowledge provided at onset trainings will be retained and transferred to new DRT members in the case of team shakeups and/or workforce attrition.

Encouraging Candid Discussions

Country:  Tanzania

Organization: CHAI

Data review meetings in Tanzania normally consisted of 10-15 members (5-8 members per council and 6 members from the regional level). While the immunization and vaccine officers' attendance was extremely important for these meetings, the presence of the District Executive Director was invaluable, as he/she was capable of signing off on many important financial and resource-related issues. These meetings helped shift the participants' ISC focus from avoiding stock-outs to using "stocked according to plan" as their performance standard, as well as addressing distribution and wastage issues. The data review meetings served as the sole forum for voicing critical issues to those with financial, operational and logistical capacity, however the meeting dynamics did not always lend themselves to highlighting root causes directly. Some members in certain meetings noted that it was difficult at first to discuss poor performance or management issues in the presence of senior-ranking officials and supervisors. While participants did not try to hide problems linked to supply chain performance, they also did not try to assign blame. Rather, the participants indirectly referred to some root causes by highlighting how the problems linked to poor performance and framing their statements as "If I had 'x', I could accomplish 'y'".

This indirect approach to discussing the cause of problems facilitated freer discussion between vaccine officers and their supervisors. As national level stakeholders began speaking freely about performance issues, so too did members at lower levels. Support for people to raise issues increased as the meetings gained momentum. In instances where this open discussion was not possible, others successfully leveraged side discussions and coffee breaks as a channel for discussing sensitive issues in a more private manner when possible. No matter how the issues were addressed, convening the correct team members led to effective problem management.

Creating a Sense of Connectedness

Country:  Kenya

Organization: JSI

In Kenya, when county teams initially viewed their data in the indicator-tracking tool, some members were skeptical that it was really their own data. They were not accustomed to seeing it analyzed and presented visually over time. Over and above using the visualized indicators for the team's data review processes, team members found value in interacting with the data in its analyzed, visual form. Scrutinizing the data prompted them to recognize that the data – which in some cases team members themselves may have entered– was used for decisionmaking by many actors, and encouraged them to improve the timeliness and completeness of the data they submitted.

A push from donors to improve data quality also encouraged deeper and more meaningful interaction with data. In Mozambique, Gavi and WHO signaled to EPI stakeholders that future funding would depend on high quality data, giving stakeholders added incentive to invest in the data review meetings. Financial implications tied to the use of data in decisionmaking can be a powerful motivator. Though this pressure emanated from the central level, program personnel believe it is trickling down to the sub-national level, with central stakeholders slowly demanding information and data from provincial stakeholders in preparation for coordination and planning meetings at the national level.

✓ *Start with the data you have, and use the data review meeting to highlight and address data quality issues.*

Continuous interaction with data leads to a virtuous cycle of improved data availability and quality. When people actively use data, they identify opportunities to improve the quality and completeness of the data available. Over time, this virtuous cycle can help build confidence in data and data use processes to drive decisionmaking.



Findings:

In countries where data use was limited *ex ante*, scrutinizing data in data review meetings increased both the use of and reliance on the data. Spot-checking and triangulating data from multiple sources helped build team members' confidence in the data being used for action planning. In addition, some team members had never seen their data presented in an organized and analyzed format, and were surprised at the insights it provided about their facilities and communities. Knowing that data would be used to make decisions, rather than only for reporting, encouraged health facility staff to be mindful of data quality. Investing the time in facilitating data review, scrutiny and spot-checking not only increases its use for supply chain improvements but also increases the quality of the data itself.



Implementation Considerations:

Limited data should not hinder routine data review in DRTs. There are different approaches for DRTs to interact with and scrutinize their data, for instance:

- **Generate data for review:** In cases of limited data availability, use simple data collection methods (such

as a call center approach where health facilities are called to collect data) to generate data for review. Manual data collection methods can be replaced later with more sustainable methods to ensure that the data review team has a steady stream of data to review and analyze on a routine basis.

- **Use data triangulation:** Data triangulation, which is when a piece of data can be verified with several different data sources in order to add credibility to the findings, can increase confidence in the data being reviewed. This is particularly useful in contexts where multiple methods are used to capture the same data (i.e. paper-based ledgers, physical stock counts and eLMIS).
- **Visualize the data in new ways:** Visualizing the data in novel ways can help the DRT detect issues that may not be obvious in traditional reporting formats.
- **Improving data quality and availability:** As a first step, set targets for improving data quality and availability. Once data quality and availability improve, the DRT can then analyze the more comprehensive and accurate data, to identify and address broader supply chain issues.

Extended Mentorships as Needed

Country:  Nigeria

Organization: CHAI

In preparation for data review meetings in focal states and local government areas (LGAs), CHAI planned to provide trainings relevant to the stock management tool necessary for collecting, analyzing and presenting data at meetings. While these initial trainings lasted between two and five days for each focal area, it became clear that additional training would be needed to ensure that government staff were proficient in running these data review meetings independently. While some data review participants suffered from inadequate fieldwork experience, others lacked prior computer training. CHAI decided to address both lower level needs—such as basic computer training—as well as higher level needs—such as leadership and data-based decisionmaking skills—through at least six months of continuous mentorship. While this required more time and resources than a simple, one-time training, it helped ensure the consistent, effective and independent functioning of these data review meetings.

Visualization, and Financial Implications, Spur Stakeholders to Action

Country:  Mozambique

Organization: VillageReach

In Mozambique, performance on EPI-relevant indicators was initially accessed and analyzed through multiple data sources and systems that did not communicate with each other. Synthesizing information from these systems was burdensome, and did not provide end-to-end visibility on EPI performance. As part of the central level VAN (*Visibility Analytics Network*) implementation, a dashboard for data integration was identified as a solution to increase data visibility and facilitate EPI program monitoring. The objective was to include all indicators on a single, easy-to-access platform. The transformative experience was immediate. Being able to see data, on a monthly basis, visualized in a compelling and accessible manner was highly appreciated and increased motivation to ensure that central-level data review meetings took place.

III. Nurture teams' motivation and accountability

✓ *Include strategies to build motivation and accountability in the DRT design.*

Data review meetings rely on the active and thoughtful participation of attendees. Inclusion of strategies to encourage participation and ensure sustained engagement over time can supplement official job expectations.



Findings:

Across the interventions, various motivation and accountability mechanisms were used to encourage participation. Some of the strategies included having participants sign public declarations, providing explicit recognition for KPI improvement, and unifying participants around a common goal. Other strategies included having influential conveners attend meetings, as well as comparing and highlighting performance across regions to introduce competition. Financial incentives—i.e., per diems—were also used in some countries, which encouraged participation in the initial phases of the interventions, but de-motivated team members at later stages when the per diems were removed.



Implementation Considerations:

When designing and introducing data review interventions, include strategies to motivate team members to actively participate. While every context differs, the experience above suggests that motivation strategies should first consider the underlying cultural, reporting, and incentives structures already in place. Specific options to consider include:

- **Positive affirmation:** In contexts where positive affirmation is an effective motivator, collective goal-setting and public celebration of success can be valuable.
- **Competition and comparison:** In contexts where holding people accountable for poor performance is effective, the use of cross-region comparisons can be more effective.
- **Presence of leadership:** Having influential leaders routinely attend meetings or review outputs can complement celebratory or accountability approaches.
- **Financial incentives:** Financial incentives should be evaluated carefully before being introduced, considering (i) the long-term cost implications for maintaining such incentives once the government fully absorbs the costs and (ii) the reaction of participants if they are withdrawn.

✓ *Cultivate champions and leaders who can help generate buy-in for data use.*

Support from a senior official or other champion, such as a national EPI manager or a director of public health, even if he or she is not ultimately a member of a data review team, shows leadership and commitment to instituting data use for decisionmaking and change.



Findings:

Buy in from influential leaders is critical for the successful implementation and longevity of data review teams. Mechanisms for building leadership and commitment varied across organizations, but visible

support, in the form of public endorsement or even participation, was broadly accepted as desirable or even necessary to motivate team members to participate in meetings, despite competing priorities. In Tanzania, the highest-ranking regional political official in the country endorsed the teams' work, which generated "buzz" and encouraged team members to participate. Similar high-level endorsements were found to be helpful in Mozambique and Guinea. The Kenya teams kicked off with a leadership workshop to sensitize county officials, whose support for the intervention helped to establish the teams and sanctioned their functioning.

In addition to well-timed, high-level leadership and endorsement, across countries, leadership *within* the data review teams was important to sustain the teams, especially after partner support waned or responsibilities transitioned. Strong leadership is not a given; building those skills requires investment. In many cases, leadership was built by using orientations as an opportunity to highlight that DRT members were not simply cogs within a large machine and that they wielded the power to effect change and performance improvement within the supply chain.



Implementation Considerations:

Leadership and commitment to data use is required at all levels not only to initiate and establish teams, but to keep them running on a regular basis without being replaced by competing priorities over time.

Influential champions are especially important at these moments in a data review team life cycle:

- **Presence** at the initial kick-off meeting to promote the importance of data use and give public support for the intervention, whether at the DRT's first-ever meeting or at the start of a new planning or fiscal period.
- **Regular check-ins** to demonstrate interest in, and accountability for, performance changes.
- **Support to unblock issues** and address challenges in instances when problem-mitigation solutions are beyond the authority of the DRT.

Healthy Competition

Countries:  Mozambique

Organization: VillageReach

In order to encourage provincial EPI managers in Mozambique to continue engaging with the data and the data review team, the Ministry of Health, with the support of VillageReach, is implementing a "VAN Champions League" strategy. This borrows from "UEFA Soccer Champions League" to instill competition on the basis of data quality and data use in three regions of Mozambique (South, Center, North). The VAN Champions League will have periodic performance evaluations to identify strong performers. At the end of the year, the central level M&E team will identify and reward the provinces with the best performance in data collection, data entry and data use through data review meetings. While Champions League is still in the process of being implemented, it is hoped that a sense of competition can further unify data review teams and inspire them to work towards a common goal. The prospect of gaining national recognition for their efforts to improve the immunization supply chain may also instill a greater sense of pride and ownership over the work.

Unified by a Common Goal & Accountability

Countries:  Cameroon

Organization: CHAI

Central level data review in Cameroon was prompted by a large loss of vaccine at the central vaccine store due to poor stock management and reporting practices. As a result, CHAI conducted a regional assessment that highlighted similar issues at lower levels of the immunization supply chain. The combined loss of vaccines and poor assessment results motivated central and regional staff to unify around the common goal of preventing such losses and stockouts in the future. It also helped generate explicit buy-in from EPI staff for integrating immunization supply chain data review into the pre-existing national logistics working group meeting, which already convened the relevant staff and partners.

In 2016, the Minister of Health signed a decree, designating that key partners and EPI staff should attend these meetings, and now accountability drives consistent data review at the central level. Due to these prior challenges, accountability is now closely linked to supply chain performance in Cameroon. For example, if reporting is delayed or distribution of vaccines does not occur consistently, on time and in full, members of the data review team must explain why and how these delays occurred. Those who are responsible for such problems must work through these issues and together with the data review team, identify the root causes and develop feasible solutions. They are held accountable by their superiors to carry out these tasks and as such, members of the data review meetings largely view this as "a necessary part of their work."

No-Cost or Low-Cost Recognition

Countries:  Kenya

Organization: JSI

The JSI-supported data review teams' standard operating procedures (SOPs) specify a recognition plan to motivate the team and align individual and team actions with the team goal. Examples of no-cost recognition included verbal appreciation, applause, or standing ovations during meetings; appreciation letters; or public notices of high performing facilities." Low-cost options included certificates, small gifts such as pens or notebooks, or WhatsApp group messages acknowledging indicator improvements. Teams in Kenya for instance further improved on the SOP by defining more clearly what types of recognition corresponded to process successes or improvements on different indicators.

Aligning Funding

Countries:  Mozambique

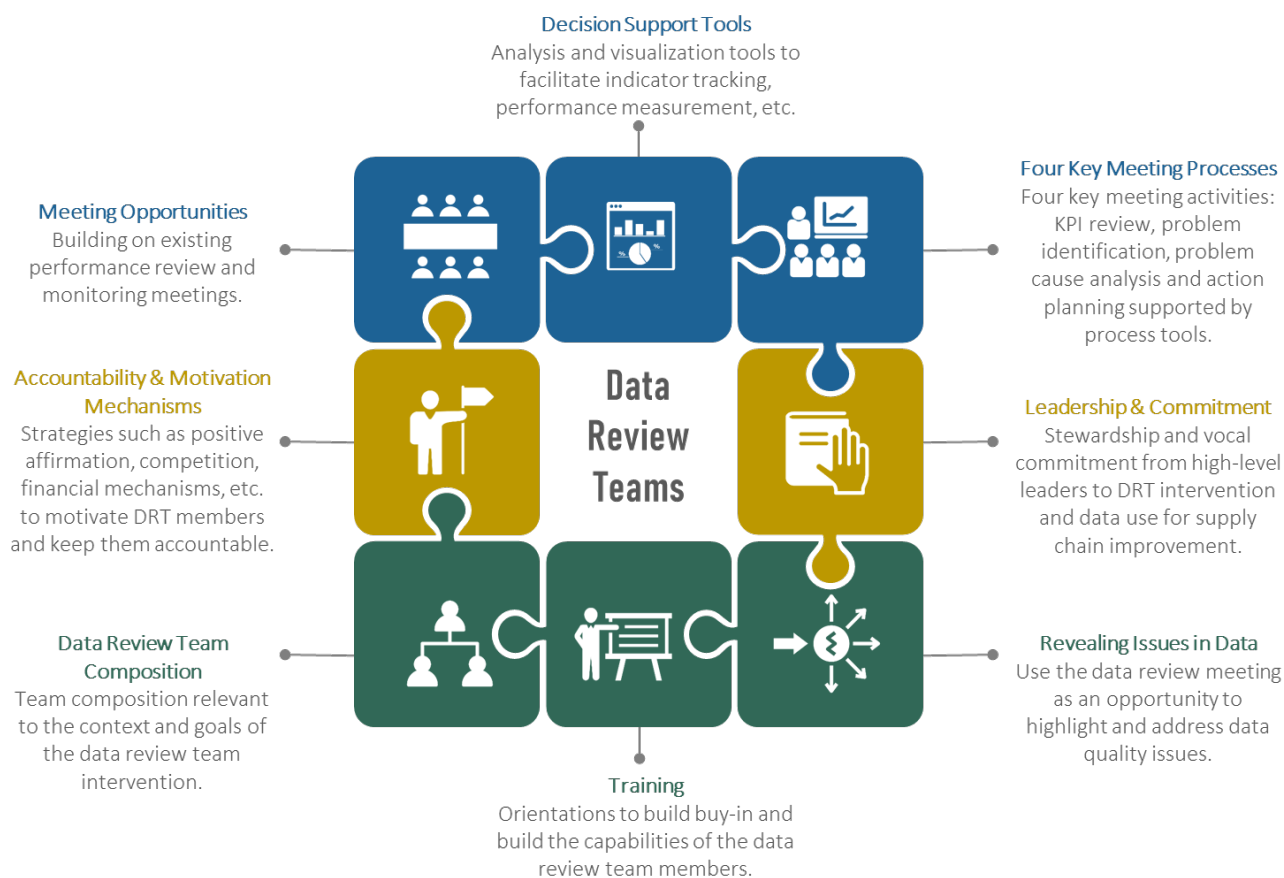
Organization: VillageReach

Driving local ownership through funding is another strategy that can build accountability within the data review team. In Mozambique, as of 2019, the government has budgeted for VAN meeting costs for district and province EPI officials across all 11 provinces in its GAVI HSS request. In addition to demonstrating strong commitment to facilitating the data review teams, this sets expectations for accountability among data review teams.

Key Components of Data Review Team Interventions

Taken together, our findings and analysis highlight eight key components that enable data review teams to transform supply chain data into action, create data use cultures, and strengthen the systems that deliver essential commodities to those who need them (Figure 5).

Figure 5: Key Components of Data Review Team Interventions



Looking Ahead: Addressing Issues of Scale and Sustainability

To achieve their greatest impact, data review teams should operate at nation-wide scale, occur consistently as part of routine management processes, and be fully owned by Ministry of Health stakeholders. To achieve this, the design of the data-use team model must be paired with a strategy for effective scale-up and long-term sustainability within the government system. In practice, this often involves tackling important questions of resource constraints.

Data review teams are a fundamentally government-led process, and the majority of resource costs—time, people and finances—are ultimately borne by the government. However, in the majority of cases, the transition period to a new data-review model involves supplemental investment from partners and donors, which may extend into the operational period as well. For example:

- During the roll-out phases, dedicated funding and technical support may be needed for such things as stakeholder workshops and capacity building.
- Similarly, in the early phases, the meetings themselves may need supplemental support, which may be financial (e.g., convening fees, hall rentals) or facilitative (e.g., data analysis mentorship).

However, resources contributed by partners and donors are time-bound, and all costs are eventually borne by the government. Planning for the transition between the period of supplemental resource support and full government ownership is critical to the long-term success of data review teams, and represents a significant undertaking.

Sustainability was an important consideration in the design of the interventions profiled in this paper, but the progress made towards achieving associated goals varied by case—in many cases, due to the stage of the project (e.g., proof of concept) at the time of writing.

Conclusion

Data review teams alone are not cure-alls for strengthening vaccine supply chains. Governments and their partners must continue to make other critical investments in human resources, infrastructure, policies, and technology. But experience shows that data review teams—equipping individuals at all levels of the supply chain to work with and improve the information that they have—can have powerful and in some cases remarkably swift impacts that can ultimately help to ensure that we continue to close the gap on immunization coverage for the world’s poorest people.

Understanding the factors that enable or hinder successful implementation, scale-up, and sustainability of data review teams is important to inform intervention design. The eight recommendations presented in this report are an initial step towards helping EPI managers, supply chain logistics staff, and technical assistance partners to design effective data review teams interventions; and to encourage the global immunization community to generate momentum around this essential system strengthening approach.

To realize the potential of DRTs, implementers need to know more about what works across different settings. Programs also need to be rigorously evaluated to isolate the impact of the DRT intervention from the many other interventions that are often simultaneously implemented. And practitioners need to learn from each other. Some of the most important lessons will be learned on the ground through the trial and error of implementing programs.

Looking ahead, we think that a global learning agenda should focus on robust monitoring to measure the impact of these interventions, and to assess systematic ways to sustain and implement at scale.

Detailed Methodology

1. Primary and secondary data collection

Between December 2018 and March 2019, representatives from JSI, CHAI, and VillageReach conducted in-depth interviews with DRT program managers within their respective organizations and reviewed program documents to understand the design of the interventions (also referred to as “cases”), in order to gain insight into factors that contributed to or hindered success. We used a common data collection and interview template to gather this data.

a. Screenshot of the Data Collection Template:

| Intervention Design | |
|--|-------------|
| <u>Demographics</u> | |
| Category | Description |
| Time period <i>Describe the time period over which the intervention occurred</i> | |
| Supply chain tiers included <i>Describe the supply chain tiers that were in the scope of the intervention (can include changes over time—if different tiers were added/removed at different points)</i> | |
| Geographic scope <i>Describe the geographic reach of the intervention (e.g. number and proportion of districts in the country)</i> | |
| <u>Context Setting Summary</u> | |
| Category | Description |
| Context <i>Provide some context about the country, its supply chain, the motivating problem that led to this work, and the major objectives of the work. (~2 paragraphs of stage setting)</i> | |
| Baseline KPI performance <i>Describe the KPI at the beginning of the intervention. Baseline data provided should be “best available” data, which in some cases may only be the first month of data.</i> | |
| <u>Outcome (including post-project)</u> | |
| Category | Description |
| KPI change and end result <i>Describe how the KPI evolved over the intervention, and what the end result was. A graphic could be useful here</i> | |

b. Link to the data collection template: [Here](#)

2. Identifying similarities and differences in Data Review Team implementation

Representatives from each organization subsequently gathered for a three-day workshop to review the cases and discuss similarities and divergences among them.

The country cases were analyzed using a framework adapted from multiple studies. The framework was created by a consultant, who reviewed frameworks in the global health literature for assessing: 1) supply chain performance, 2) health worker performance, 3) factors that facilitate intervention scale up, and 4) factors that contribute to adoption of new technologies (taken from literature on mature / private sector supply chains). There was a striking convergence among these frameworks—the focus on intervention simplicity and effectiveness; the importance of ownership, leadership, and accountability, for example. The consultant distilled core components and amalgamated them into the framework shown in Table 2: Factors that Facilitate Data Review Team Adoption. These factors are organized within four domains: intervention characteristics; user-related factors; health system factors; and external factors. Rather than being distinct categories, there is considerable overlap among them; and each element may affect the other.

With each case presentation, we documented diverging and converging practices and operational tactics. A summarized version of these practices is catalogued in the [Design Elements Matrix](#).

c. [Screenshot of framework used to assess adoption of interventions:](#)

| Factors | Definition |
|--|---|
| Intervention Characteristics <ul style="list-style-type: none"> • Credibility / Relevance / Meets a felt need • Degree of complexity / ease of use • Effective | <p>Users think the intervention is relevant to a problem they experience. They view it as having an advantage over existing practices, and it is compatible with user norms and values.</p> <p>Though there may be value in complexity (i.e., not all good or necessary interventions are simple), interventions that are simpler to understand and implement are more likely to be adopted and scaled up.</p> <p>Is the intervention considered useful and impactful? Can results be observed? (The degree to which a project is perceived as effective may be affected by the levels of ownership, regardless of whether there is clear evidence of health impact that can be attributed to the program.)</p> |
| User-related factors <ul style="list-style-type: none"> • Capacity / knowledge / skills • Ownership • Motivation | <p>Actors must be competent in performing the task (and there must be adequate resources to fund the process—i.e., training, etc.)</p> <p>Whether intervention roll out was respectful of and adapted to local views and context, may impact the degree to which users feel a sense of ownership of the intervention. It is important consult local stakeholders early and often and adapt the intervention based on use feedback.</p> <p>A practice is more likely to be adopted and sustained if users are held accountable for results. Accountability and motivation can be enhanced in many ways, including through rules, supervision, incentives, and recognition.</p> |
| Health systems factors <ul style="list-style-type: none"> • Leadership / Buy-in / Champion • Resources • Capacity for organizational change | <p>There are strong, effective, motivated leaders at various levels, with a unifying strategic vision, and champions in crucial positions who will take the idea forward and encourage others to do so. (Two issues may affect the degree to which champions emerge: the influence of naysayers or anti-champions and competing priorities and programs.)</p> <p>Managers and implementers must generate sufficient technical and financial resources to ensure all aspects of implementation.</p> <p>Does the current workload allow for the additional of new processes/tasks? Is the culture, systems, structures of the supply chain supportive of change?</p> |
| External Factors | <p>Unforeseen circumstances or events, outside the control of program designers and managers, from political events to natural disasters.</p> |

d. [Link to framework used to assess adoption of interventions:](#) [Here](#)

3. Analyzing similarities and differences in Data Review Team Implementation

Diverging and converging practices across cases were then grouped into “Design Element” categories. These practices were further discussed and analyzed to identify successes, challenges and key considerations for future implementation of data review team interventions. This discussion helped generate our findings.

4. Articulating and categorizing key principles

Based on the analysis and the discussion of our findings, we jointly described and categorized the recommendations that emerged, and, for each, developed considerations for stakeholders to consider in the design and implementation of such interventions.

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