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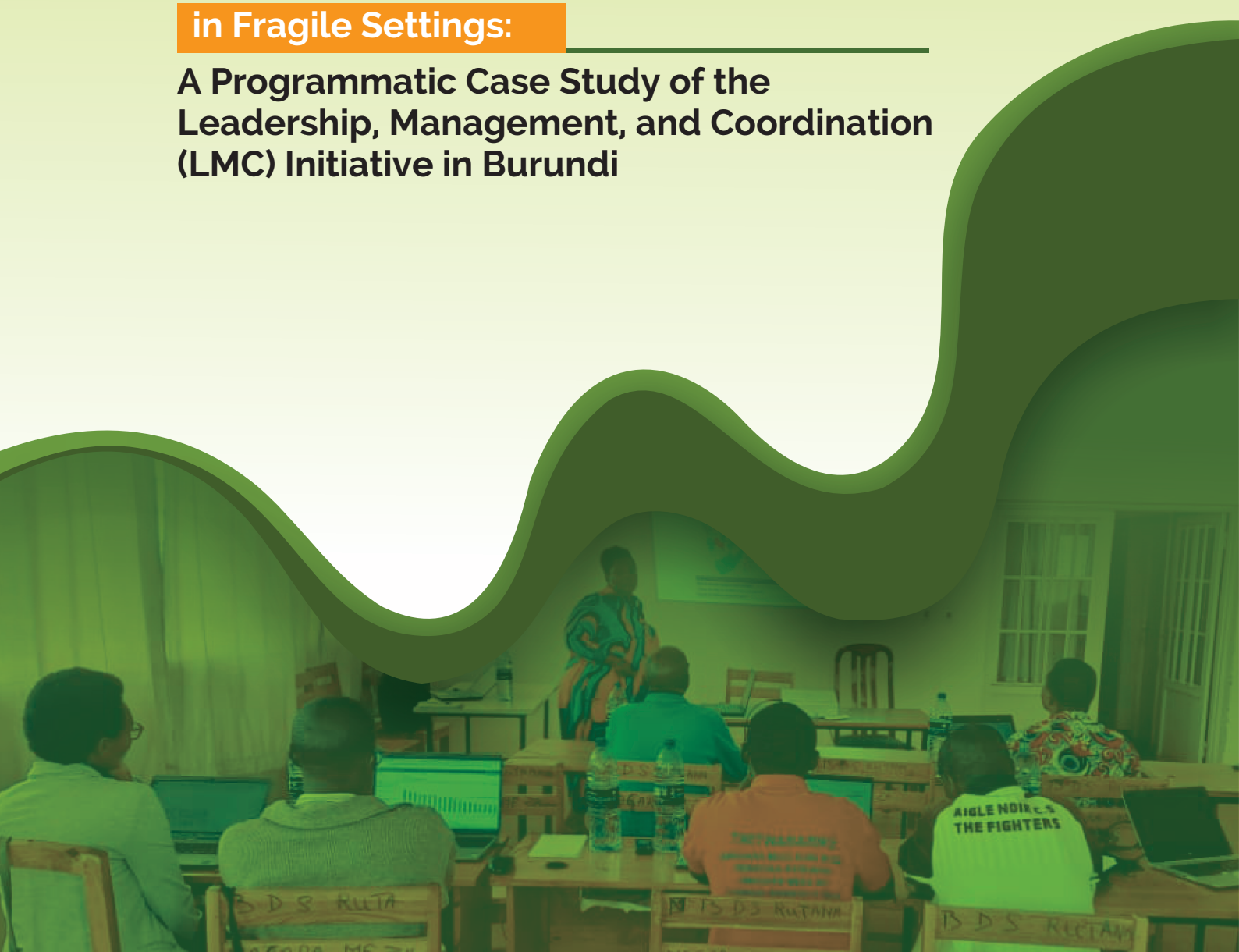
Building EPI Resilience

in Fragile Settings:

A Programmatic Case Study of the Leadership, Management, and Coordination (LMC) Initiative in Burundi



Background and Context

Burundi continues to face persistent challenges in achieving high and equitable routine immunization coverage.[1] Although national vaccination efforts have expanded over the past decade, progress has been constrained by system-level gaps such as limited managerial capacity, weak coordination structures, irregular data review practices, and inadequate use of routine health information for decision-making.[1] These challenges mirror those observed across many low-income countries, where system performance is shaped not only by commodity delivery and service provision but also by the strength of leadership, management, and accountability mechanisms within national and subnational health systems.[2–4]

The Expanded Programme on Immunization (EPI) operates within a context of resource limitations, with provincial and district leadership structures often overstretched, reducing the effectiveness of planning, supervision, and partner alignment.[5]

Fragmented coordination has contributed to variability in program implementation, while inconsistent data quality and limited interpretation skills have made it difficult for health managers to detect problems early and take timely corrective action. Strengthening these foundational system components has therefore been recognized as a national priority.

To address these gaps, the Leadership, Management, and Coordination (LMC) support initiative was introduced in 2024 across five priority provinces.

[1] *Yaya S, Zegeye B, Ahinkorah BO, Ameyaw EK, Seidu AA, Shibre G. Time trends, geographical, socio-economic and gender disparities in neonatal mortality in Burundi: evidence from the demographic and health surveys, 2010–2016. Arch Public Health. 2020;78(1):115.*

[2] *Prosser W, Sagar K, Seidel M, Alva S. Ensuring vaccine potency and availability: how evidence shaped Gavi's Immunization Supply Chain Strategy. BMC Health Serv Res. 2022;22(1):1237.*

[3] *Gavi. Phase V (2021–2025) [Internet]. 2019 [cited 2025 Aug 10]. Available from: https://www.gavi.org/our-alliance/strategy/phase-5-2021-2025*

The intervention aligned with global recommendations for health system strengthening, including the Gavi 6.0 agenda,[4] which emphasizes country leadership, institutional capacity-building, and better use of data to drive immunization results.

The initiative aimed to support provincial and district teams by improving staff competencies, revitalizing coordination platforms, and embedding systematic use of routine data in planning and oversight. The Burundi experience offers emerging insights into how structured system strengthening approaches can contribute to more resilient and adaptive immunization delivery in resource-constrained settings.

Project Overview

The LMC initiative in Burundi is part of a wider Gavi-supported effort to strengthen immunization systems in several African countries. The project began in mid-2024 and is being implemented jointly by the Burundi Ministry of Health, the national Expanded Programme on Immunization (EPI), and the Solina Health consortium, with technical input from regional and district stakeholders.

The initiative is funded through Gavi's Health Systems Strengthening support and focuses on five priority provinces: Ngozi, Kirundo, Rumonge, Rutana, and Bujumbura Rural (Figure 1). These areas were selected due to persistent challenges in planning, supervision, data use, and coordination across immunization operations.[5]

Figure 1: *Map of Burundi showing LMC intervention provinces*

[4] *Gavi. Phase 6 (2026–2030): the Alliance's strategy [Internet]. 2024 [cited 2025 Oct 27]. Available from: https://www.gavi.org/our-alliance/strategy/phase-6-2026-2030*

[5] *Gavi. Phase V (2021–2025) [Internet]. 2019 [cited 2025 Aug 10]. Available from: https://www.gavi.org/our-alliance/strategy/phase-5-2021-2025*

The intervention aims to improve the leadership and technical capacity of EPI staff, strengthen provincial and district coordination platforms, and enhance the use of data for program oversight and decision-making. Primary beneficiaries include provincial and district EPI managers, technical platforms, health information officers, and frontline government teams responsible for delivering routine immunization services. Indirect beneficiaries are children and caregivers who rely on equitable and well-managed immunization services.

Expected results from the project include better coordination of routine immunization activities, improved staff competency for managing core functions, increased accountability for performance, and more consistent use of data to identify service gaps and guide corrective actions. The project is designed to support stronger institutional practices that provinces can maintain within existing government structures. The connection between the intervention inputs and the expected outcomes is shown in the theory of change below (Figure 2)

Our Implementation Approach

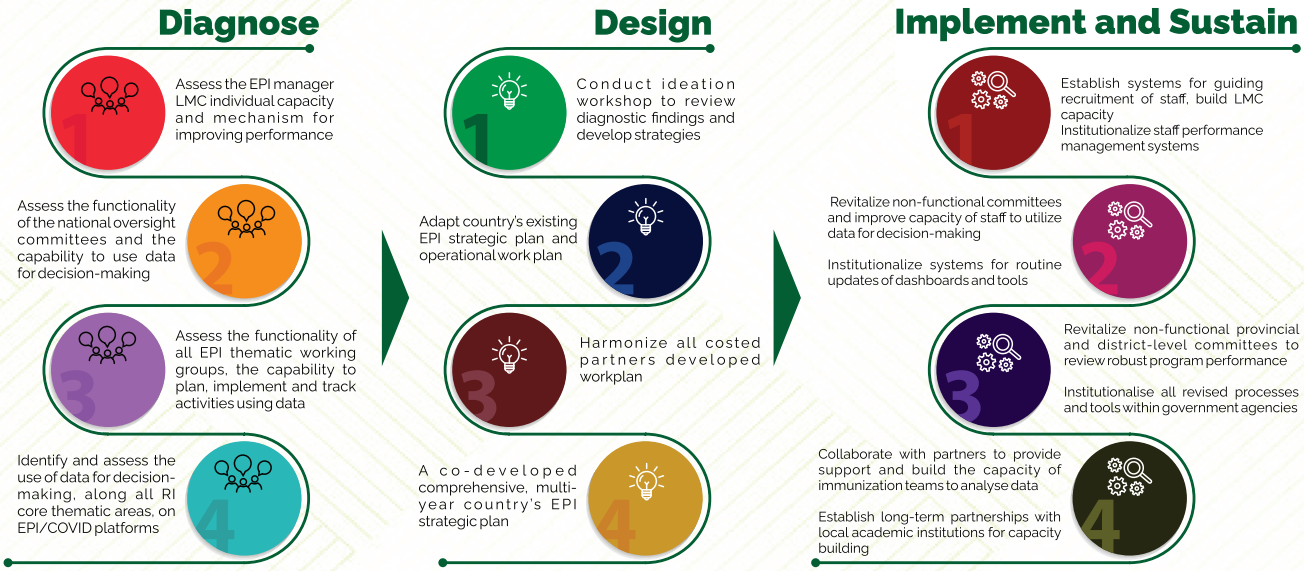
Objectives

1. Improve leadership and management capacity of EPI managers across all levels

2. Strengthen national oversight committees to improve immunization program performance

3. Strengthen sub-national oversight committees to review EPI program performance

4. Collaborate with partners to support all levels in analyzing data



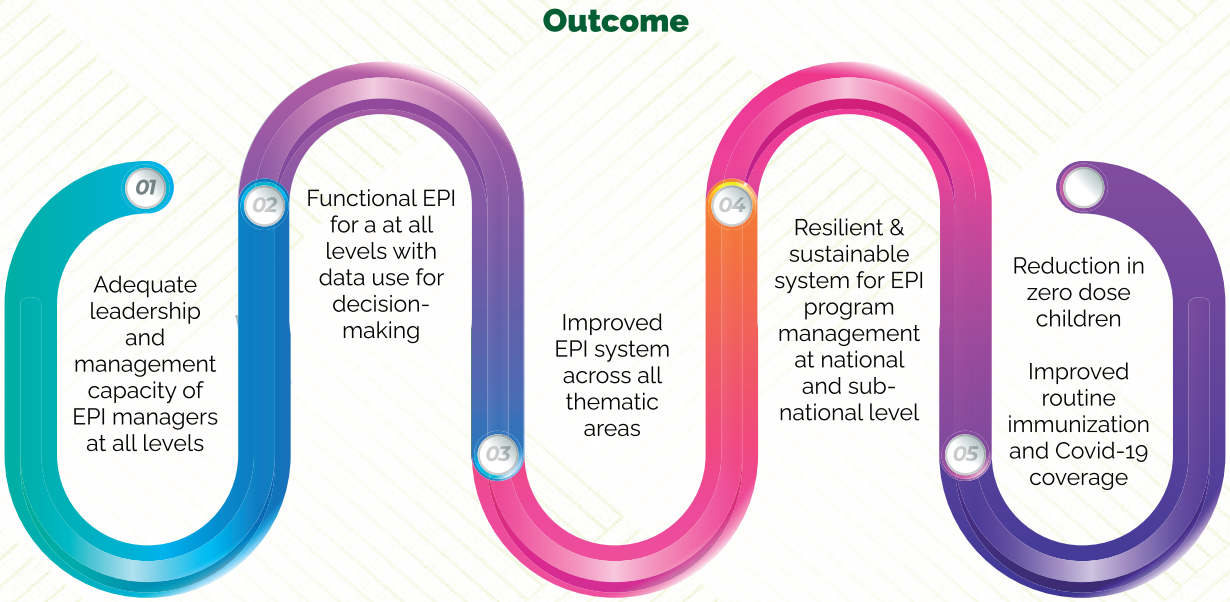


Figure 2: *The LMC intervention theory of change (ToC)*

The Challenge

Before the intervention, Burundi's immunization programme faced systemic constraints that limited effective service delivery and strategic oversight. Key challenges included ineffective coordination systems at provincial and district levels, irregular technical meetings, and limited follow-through on action points. In many provinces, coordination committees either did not meet routinely or lacked clear terms of reference, which reduced accountability and delayed implementation of activities identified during reviews.

Data use for decision-making was also limited. Although reporting from health facilities into national systems was largely routine, data were seldom analysed or used effectively to plan or redirect activities. Many review meetings relied on narrative reports rather than structured dashboards or performance metrics, limiting the visibility of trends in coverage, stock management, supervision, and service delivery. These gaps contributed to inconsistent monitoring of programme performance and delayed corrective action at operational levels.

Capacity limitations among staff further affected systematic program execution. Many provincial and district teams had not received structured leadership or managerial training, which affected planning, supportive supervision, and documentation. As a result, performance issues often persisted for long periods without being escalated or resolved.

These challenges collectively contributed to inconsistent program oversight and delayed responses to implementation bottlenecks, reinforcing the need for structured leadership, management, and coordination support aligned with national immunization priorities and ongoing global efforts to strengthen health systems in low-resource settings (WHO, 2024).

The Intervention

To address the identified performance and coordination challenges within the Burundi immunization program, a structured Leadership, Management and Coordination support package was implemented with the Ministry of Public Health and the national EPI.

The intervention focused on strengthening workforce capability, improving the functionality of coordination platforms, and supporting greater use of routine data for decision-making across provinces and districts. These interventions are described below.

Management and leadership capacity building

To address the substantial competency gaps identified in the diagnostic phase, a comprehensive capacity-building program was rolled out in two stages: in-class training and on-the-job coaching.

The in-class training, conducted between July and August, 2024, brought together 126 EPI staff from the five provinces (Figure 3). The curriculum was structured around four dimensions: (i) foundational knowledge on vaccine-preventable diseases, immunization schedules, and antigens; (ii) functional skills, including proficiency in Microsoft Word, Excel, and PowerPoint; (iii) core technical competencies in supply chain, finance management, supportive supervision, and work planning; and (iv) leadership and management skills such as team leadership, analytical reasoning, problem-solving, and the use of data for decision-making.

Figure 3: *A cross section of EPI staff in Kirundo and Ngozi provinces during the in-class training*

The on-the-job coaching phase, conducted from November 2024 to February 2025, provided individualized mentorship to 64 staff (Figure 4). This approach emphasized the application of classroom-acquired knowledge in real-world settings. The coaching model also supported the institutionalization of Burundi's revised Performance Management System (PMS), introduced in June 2024 by the Ministry of Public Service.

Figure 4: *Some district-level EPI staff taking instruction from coaches as part of the on-the-job coaching program*

Strengthening governance and coordination

A major component of the response was the revitalization of governance and coordination structures to improve oversight and accountability. Technical platforms at provincial and district levels were reactivated with newly developed Terms of Reference (ToRs) that clearly defined their roles, responsibilities, and deliverables. The revitalized platforms were supported to develop structured meeting agendas, ensure the systematic follow-up of action points, and adopt data-driven approaches to deliberations (Figure 5).

Figure 5: *Data review meeting in Ngozi province*

At the provincial level, the Provincial Oversight Committees (CPSDs) were strengthened to play a more active role in supervising EPI performance. Coordination mechanisms were enhanced by introducing multi-level joint meetings that connected provincial and district stakeholders, fostering improved communication and harmonization of workplans. Importantly, all five provinces developed SMART, cost Annual Operational Plans (AAPs) for 2024/2025, each with embedded performance monitoring frameworks. This was a significant departure from the earlier centralized planning approach, ensuring stronger local ownership and accountability. The establishment of backstop mechanisms for committee leadership also ensured continuity and effectiveness of meetings, even in cases where key officials were unavailable.

Enhancing data use for decision-making

The intervention placed strong emphasis on improving data quality, accessibility, and utilization. First, a data map was developed to trace information flow from health facilities to the central level, providing clarity on bottlenecks and informing interventions. Second, an EPI-specific program performance dashboard was developed and rolled out. This tool provided user-friendly data visualizations and was systematically incorporated into technical platforms and CPSD meetings, elevating the quality of discussions by grounding them in evidence.

To institutionalize data use, the consortium supported 69 data review meetings across the five provinces between mid-2024 and mid-2025. These meetings helped district health teams identify inconsistencies, address data quality issues, and prioritize corrective actions. Hands-on coaching was also provided to enhance staff capacity in analyzing and presenting data. Specific examples of data-driven action included the appointment of surveillance focal persons in all health facilities in Rutana and Gihofi districts to improve case detection and reporting, procurement of cold chain units for facilities with storage deficits, and prioritization of low-performing facilities for supportive supervision. Furthermore, targeted campaigns were designed using data insights, such as catch-up vaccination sessions for 1,082 zero-dose children in Ngozi and a rapid measles campaign in Rutana's Giharo camp, reaching 645 under-vaccinated children.

Through this combination of skills development, governance strengthening and improved data systems, the approach aimed to build structures and capabilities that government teams could maintain independently and scale across the health system over time.

Results and Outcomes

The implementation of the LMC intervention which entered its execution phase in June 2024, has already produced measurable results across the thematic areas of capacity building, governance and coordination, and data use for decision-making. Additional achievements were noted in financial management, service delivery, and vaccine supply systems. Together, these results demonstrate progress in addressing systemic bottlenecks identified during the diagnostic exercise. The early results of the intervention across the thematic areas are described below.

Capacity building

The most immediate and tangible impact was observed in the domain of human resource capacity. The in-class training program, conducted between July 22 and August 10, 2024, achieved 100% attendance and completion among the 126 targeted EPI staff across the five supported provinces. Participant satisfaction was overwhelmingly positive, with 98% reporting that the training was relevant and useful to their roles.

Knowledge and skills gains were substantial. Average pre-test scores of 32% improved to 59% in post-tests, representing a 27-point improvement. Critically, while only one participant (0.8%) scored above 50% on the pre-test, 83% achieved this threshold post-training, underscoring the effectiveness of the training curriculum (Figure 6 & 7).

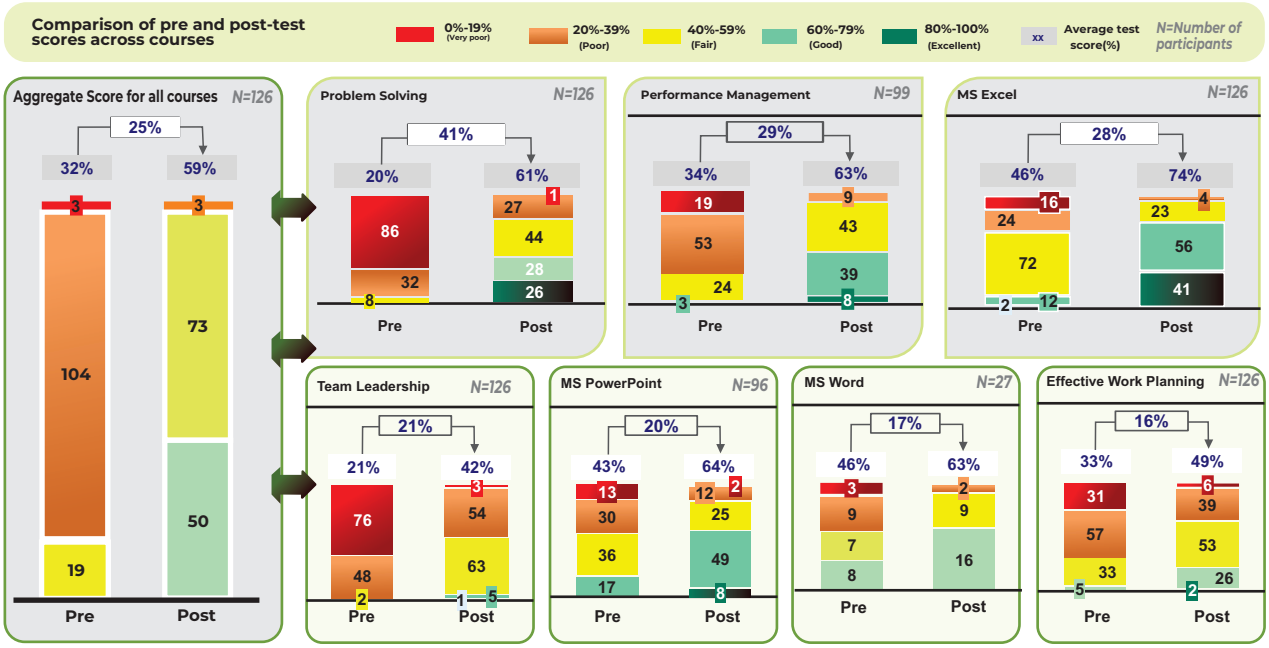
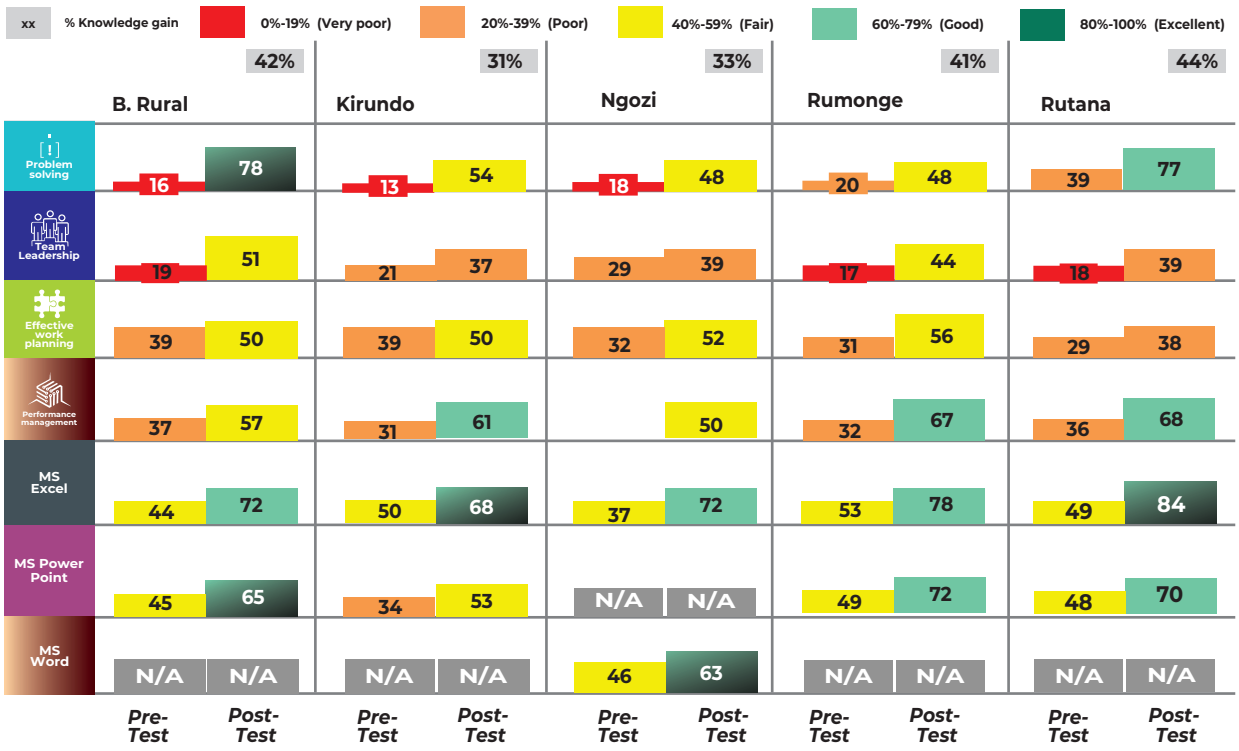


Figure 6: *Aggregated In-class training pre and post-test results across all module July 22 – August 10, 2024*



The subsequent on-the-job coaching phase (November 2024–February 2025), involving 64 staff, reinforced classroom learning and improved the practical application of skills (Figure 8). Supervisors documented concrete improvements: finance managers organized accounting documents more systematically, pharmacy managers applied better quantification practices, and district supervisors increasingly used DHIS2 data to prioritize facilities for visits. Moreover, the intervention supported the rollout of Burundi's revised PMS), introduced nationally in June 2024. Following performance management workshops, 100% of core health staff in supported districts and provinces developed Individual Performance Contracts (IPCs), compared to low baseline figures. For example, Kirundo Province reported a 311% increase in completed IPCs, from 9 pre-workshop to 37 post-workshop.

Does not conduct activity | Conducts activity with significant support | Conducts activity with minimal support | Conducts activity independently | Role has been institutionalized (backstop & tools/sop

DESIGNATION	COACHING OBJECTIVES	BASELINE					ENDLINE					SUPERVISORS REMARK
		○	◔	◑	◕	●	○	◔	◑	◕	●	
DISTRICT HEAD	Strengthen proficiency in the conduct data analysis using MS Excel		1							1		*Significant improvement in planning and monitoring-evaluation of district activities*
	Master the provision of oversight to district staff			1							1	
	Master the conduct of supervision sessions at health facilities		1							1		
DATA MANAGER	Strengthen proficiency in the use of data for decision making		3	5						1	7	*The data manager now has a good command of IT tools as a result of coaching*
	Master the development of data analysis reports and routine bulletins	1	4	1						3	3	
	Understand how to monitor surveillance indicators for VPDs	2									2	
FINANCE MANAGER	Master the use of finance management tools		1	6						2	5	*Great improvement in financial management, especially supporting report development*
	Master the public procurement procedure	3	3	-						4	2	
	Master effective development and implementation of budgets	1	2	1	1					3	2	
PHARMACY MANAGER	Enhance proficiency in the analysis of supply chain data on DHIS2	1		2						2	1	*The pharmacy manager now implements skills learned in coaching for his tasks*
	Master the principles of supply chain management		1	3	1					2	3	
	Master the development of supply chain report		2	2						1	3	
SUPERVISOR	Enhance data analysis and use of data for supervision	8	12	7					5	17	5	*The supervisor has now acquired knowledge that can help the district with data analysis.*
	Master problem identification and solving for supervision conduct	1	3	3					1	1	5	
	Master the development and use of effective ToR's		1	3						1	3	

Figure 8: *On-the-job coaching performance report across all provinces*

Governance and coordination

Progress was equally notable in strengthening governance and coordination platforms (Table 1). Nineteen TWGs at provincial and district levels were revitalized, each equipped with updated ToRs that formalized their mandates and accountability structures. Between January and June 2025, 98% of TWG meetings were conducted as scheduled, with 92% of action points completed on time. Meeting notes were consistently prepared, and the introduction of backstop mechanisms ensured meetings were not disrupted by the absence of key facilitators.

Table 1: *Technical meetings functionality scores before and after the LMC intervention*

Province	Number of Technical meetings	Baseline Mean Score	Endline Mean Score	% Change	Functionality Level	Remarks on Improvement
Ngozi	4	48.2	83.4	73%	Level 2 (Functional)	Regular meetings held quarterly; 90% of action points tracked.
Kirundo	3	50.6	79.8	58%	Level 2 (Functional)	Meetings led by provincial EPI focal; improved documentation practices.
Rumonge	4	44.1	81.7	85%	Level 2 (Functional)	Meetings aligned with EPI dashboard review.
Rutana	4	42.8	78.5	83%	Level 1 (Developing)	Improved meeting regularity; still dependent on partner facilitation.
Bujumbura Rural	4	46.5	85.2	83%	Level 2 (Functional)	Action - tracking templates fully institutionalized.
Aggregate (N=19)	19	46.4	81.7	76%	Mostly Functional (Level 2)	Substantial progress in meeting regularity, data use, and follow-up.

Another milestone was the development of SMART, costing AAPs for 2024/2025 in all five supported provinces. These plans incorporated clear performance monitoring frameworks, marking a shift from previously centralized work planning. The involvement of sub-national actors enhanced ownership and responsiveness to local challenges. Immunization data also became a routine agenda item in 100% of TWG meetings held between March and June 2025, illustrating the institutionalization of evidence-based deliberation.

Data use for decision-making

The intervention made significant strides in embedding data use into program management. A national data map was developed to visualize data flows and highlight systemic bottlenecks, while an EPI-specific program performance dashboard was rolled out to facilitate data interpretation.

The dashboard is now routinely used in TWG and CPSD meetings, ensuring that immunization performance discussions are grounded in actionable evidence.

In total, 69 data review meetings were supported between mid-2024 and mid-2025. These platforms enabled district management teams to identify and address data quality issues, leading to improvements in reporting consistency.

For example, data managers reduced discrepancies between facility-level registers and aggregated reports, while supervisors used data to prioritize low-performing facilities for supportive visits.

The data-driven approach directly informed targeted interventions. Surveillance focal persons were appointed in Rutana and Gihofi to strengthen disease reporting. Cold chain equipment was procured and installed in facilities with vaccine preservation challenges. Catch-up campaigns were organized, including outreach to 1,082 zero-dose children in Ngozi Province. In Giharo camp (Rutana), a rapid measles campaign vaccinated 645 under-immunized children with the measles-rubella vaccine.

Enablers of Success

Several factors contributed to the progress recorded during the early phase of the Burundi LMC intervention. Strong government ownership was critical. From project design to rollout, the national EPI team and provincial authorities led key activities, which helped ensure that tools, processes, and timelines were aligned with existing systems rather than imposed externally. This strengthened relevance and enabled smoother adoption at subnational levels.

Close collaboration between government and partners also played an important role. Regular joint planning sessions allowed challenges to be addressed quickly, created shared accountability, and ensured that technical inputs were consistent across provinces. Capacity strengthening, delivered through structured training and on-the-job coaching, improved staff confidence and supported the practical uptake of new skills.

The use of simple and adaptable tools, such as meeting templates, standard operating procedures, and dashboards, made daily tasks easier to operationalize and reduced dependence on external support. Consistent engagement with provinces through periodic review and follow-up meetings also helped sustain momentum and reinforced the expectation that progress would be tracked and acted upon.

Together, these enablers created a foundation that supported early progress even in a resource-constrained environment.

Challenges and Mitigation

Implementation of the intervention faced several operational and contextual challenges. First, leadership and technical capacity varied widely across provinces and districts, which affected the pace and consistency of adopting new practices. To address this, the project introduced phased mentoring and targeted coaching for managers and frontline workers who required additional support.

Second, many coordination platforms had been inactive for long periods, with limited administrative systems for scheduling, documentation, and follow-up. The project worked with

regional and district teams to reactivate meeting routines, co-create new terms of reference, and introduce standardized templates for agendas, minutes, and action tracking.

Data availability and use also remained uneven across subnational levels. Some districts lacked the tools or confidence to interpret routine data for decision-making. This was mitigated through repeated data review sessions, on-the-job mentoring, and development of dashboards that simplified access to key indicators.

Finally, implementation timelines coincided with competing program demands and limited logistical resources. The team responded by integrating activities into existing review structures and ensuring that responsibilities were progressively shifted to government leadership to maintain progress even during periods of limited partner involvement.

Lessons Learned

The intervention showed that strengthening leadership and coordination requires more than training. Hands-on coaching, improved meeting routines, and clearer accountability structures helped provincial teams translate skills into real operational changes. Regular data review meetings also encouraged teams to act on evidence rather than rely on routine reporting. However, progress varied between provinces, showing that improvement is shaped by management commitment, staffing levels, and local context. Future projects of this nature should build in longer implementation periods, ensure early government buy-in, and provide ongoing technical support to help teams adapt new practices into standard ways of

Sustainability and Next Steps

Sustainability is supported by the government's leadership of the coordination platforms, the development of standard meeting tools, and the integration of review routines into existing supervision and planning systems. Provincial teams are now leading weekly and monthly coordination meetings with less external prompting, and Annual Operational Plans are being monitored more systematically.

Conclusion

The Burundi LMC intervention is helping subnational EPI teams strengthen coordination, improve oversight, and make better use of available data. While the work is still in progress, early results show that focused, structured support can help provincial teams improve planning, communication, and accountability.

The experience demonstrates that change is possible even in resource-constrained settings when government leadership, practical tools, and targeted capacity development are combined. Continued collaboration between government and partners will be important to maintain progress and translate these system improvements into better immunization coverage over time.

Acknowledgments

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