Mali Learning Hub - October 2025

Zero-Dose LEARNING HUB

Learn more

The Mali Learning Hub (November 2022–December 2025), known in French as *Centre d'Apprentissage pour l'équité en vaccination* (CAPEV), is led by GaneshAID with the Center for Vaccine Development-Mali (CDV-Mali) and the University of Science, Technique and Technologies of Bamako.

The Learning Hub focuses on four districts, representing different zero-dose (ZD) contexts:

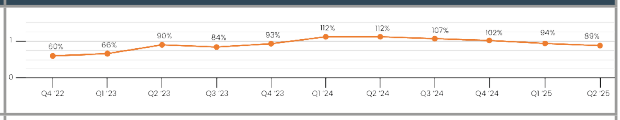
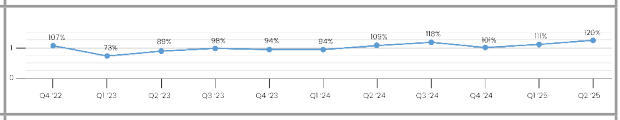
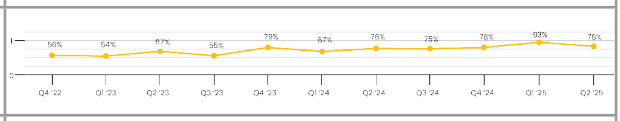
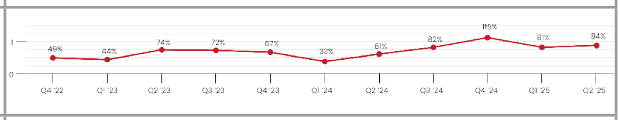
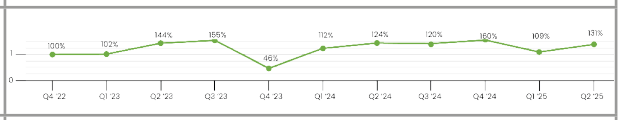
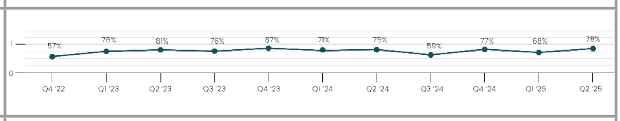
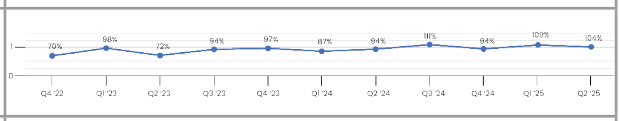
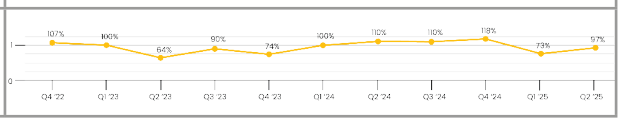
District	Context	CSCom
Ségou	Urban/peri-urban	Pelengana Nord, Cinzana Gare
Yorosso	Conflict	Boura, Karangana
Bougouni	Other populations (internally displaced persons, refugees, islanders, migrants, nomads, gold miners)	Bougouni Est, Kologo
Niono	Rural/remote	Niono Central, N'Debougou

Grants in Mali

- **Equity Accelerator Funding (EAF):** 2024-2027; funding being disbursed by government as of September 2024
- **Health System Strengthening (HSS-3):** 2024-2029

Study Subdistricts in Mali: Trends in DTP1 Coverage from 2022 to 2025

(Source: Mali DHIS2 reported in Mali Learning Hub Quarterly Progress Report)

District	Sub-district	Trend Q4 2022 - Q2 2025
Ségou	Pelengana Nord	
	Cinzana Gare	
Niono	N'Debougou	
	Niono Central	
Bougouni	Bougouni Oest	
	Kologo	
Yorosso	Karangana	
	Boura	

National Strategies to Reduce Zero-Dose Children in Mali

The political and institutional will to reach ZD children is reflected in the national vaccination strategy, currently under development, and the full portfolio planning (FPP), which began implementation in mid-2024 and includes 79 ZD interventions across 44 districts:

- Interventions include **extending times for immunization sessions, microplanning, "rolling logistics" for island districts that are adaptable to changing circumstances, and leveraging community platforms to address gender barriers,** such as the strategy to work with women's groups to address gender related barriers and identify and reach ZD children in urban areas (See Collaborating with Women's Groups: A Promising Approach to Identify and Reach Zero-Dose Children in Urban Mali).
- **Interventions for conflict zones,** including paying community health workers to vaccinate, integrating vaccination into a community care program, and establishing partnerships with non-governmental organizations and humanitarian agencies.
- **Quarterly mobile clinics** for districts with internally displaced populations.

**Coverage rates for Q1–Q4 2024 have been updated in this dashboard to reflect more complete data recently made available through DHIS2.*

Gavi The Vaccine Alliance · JSI · IIHMR DELHI · The Geneva Learning Foundation

Mali Learning Hub

Learn more

Data Interpretation: The figure *(Study Subdistricts in Mali: Trends in DTP1 Coverage from 2022 to 2025)* presents subnational data from Mali's DHIS2 system on DTP1 coverage from quarter four (Q4) 2022 to quarter two (Q2) 2025. Trends across the eight subdistricts targeted by the Learning Hub study continue to show considerable variability over time and between locations.

In Pelengana Nord, coverage rose steadily through 2023, peaking above 110 percent in early 2024, before stabilizing in the 80–100 percent range in 2025. Cinzana Gare continues to show consistently high coverage, remaining near or above 100 percent throughout the reporting period and reaching 120 percent in Q2 2025, indicating potential data quality challenges.

Coverage in N'Debougou remains relatively stable with a gradual upward trend, ranging from the mid-50s to over 90 percent before moderating slightly in early 2025. Niono Central continues to show pronounced fluctuations, with coverage ranging from a low of 28 percent in quarter one (Q1) 2024 to a peak of 84 percent in Q2 2025, suggesting ongoing localized challenges in service delivery or reporting of data.

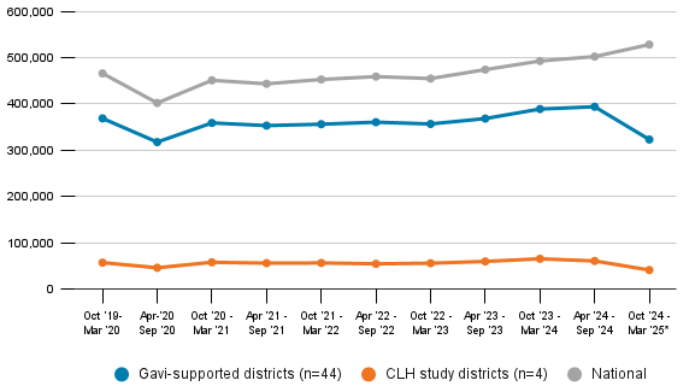
Bougouni Ouest continued to post volatile coverage rates, ranging from 100 to 145 percent over the three year period, except for a sharp dip to 45 percent in Q4 2023. Consistent coverage above 100 percent across 11 quarters suggests underlying data quality issues, likely related to an overestimation of the numerator (doses administered) or an underestimation of the denominator (target population).

In contrast, coverage in Kologo and Karangana is relatively stable, with modest increases over time and recent values hovering between 80 and 110 percent. Boura continues to experience notable fluctuations, ranging from 64 to 148 percent over the period and reaching 97 percent in Q2 2025, highlighting potential data inconsistencies or variations in target population estimates.

As before, it is important to note that these coverage rates are calculated using denominators based on extrapolations from the 2009 census. Although a new census was conducted in 2022, only preliminary results are available, which may contribute to coverage rates exceeding 100 percent and to variability between reporting periods.

Trends in National DTP1 Numbers and Coverage (October 2019–March 2025)

Number of Children Immunized: DTP1



Source: Data reported by Mali to WHO through the electronic joint reporting form (eJRF).

While the national- and subnational-level trends presented in this dashboard offer valuable insights into immunization performance over time, data derived from the eJRF and national administrative systems (such as DHIS2) have important limitations for real-time monitoring and decision-making. eJRF data are often subject to significant delays, as they must pass through country and regional reporting channels before becoming publicly available. Similarly, DHIS2 data frequently face quality challenges and are often incomplete at the time of initial reporting, with figures continuing to be revised and updated for many months, in some cases up to a year later. ZDLH's experience with eJRF and DHIS2 data underscores these limitations, highlighting that such data are best interpreted as retrospective performance indicators rather than tools for active program management and course correction.

Interpretation: The number of children immunized with DTP1 in Mali has remained relatively stable at both the national and subnational levels since 2020, with gradual increases observed over time. Nationally, immunization numbers have shown consistent growth, surpassing 500,000 in the most recent reporting period. In Gavi-supported districts and Learning Hub study districts, the number of children immunized has also remained steady, with modest but sustained gains over the past several years and a notable decline in the most recent six-month reporting period.

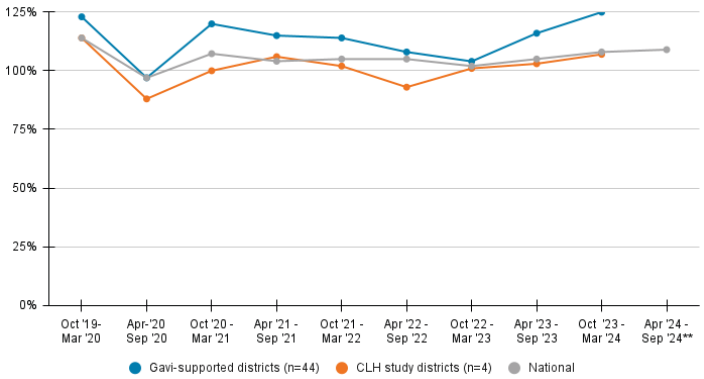
**The observed decline in Gavi-supported and Learning Hub study districts is likely due, in part, to incomplete data, as several districts had not yet reported DTP1 vaccinations to the eJRF at the time of this analysis.*

Mali Learning Hub

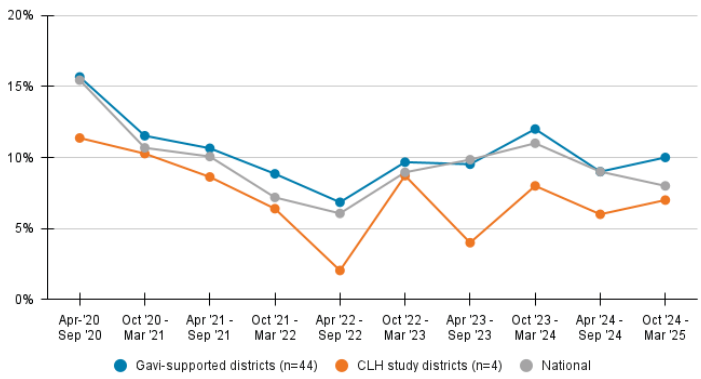
Learn more

Trends in National DTP1 Numbers and Coverage (October 2019–March 2025)

DTP1 Coverage



DTP1-3 Dropout



***For the national level, 44 Gavi-supported districts, and Learning Hub study districts, denominators for 2019–2023 were obtained from the WHO monthly immunization database. Data for 2024 and 2025 are not yet available through WHO; the Learning Hub was able to obtain the national-level denominator for 2024.*

Interpretation: DTP1 coverage in Mali has remained relatively stable at the national level and in Gavi-supported districts, while Learning Hub study districts consistently report higher and more variable coverage, frequently exceeding 100 percent. Coverage across all levels dipped slightly in 2022–2023 but rebounded in 2024; the latest data show strong performance across national and Gavi districts. Coverage rates consistently exceeding 100 percent in the Learning Hub study areas suggests persistent data quality issues that should be flagged.

DTP1–3 dropout rates have declined steadily since 2020, particularly in the Learning Hub study districts, where rates fell from over 10 percent to below 5 percent in recent years. Although some fluctuations persist, especially in Gavi-supported districts, the overall downward trend suggests improvements in service continuity and follow-up for completing the DTP series.

Implementation Research

The Mali Learning Hub advanced its ongoing implementation research (IR) on two digital innovations, Coach2PEV (C2P) and MEDEXIS, to improve supervision, performance management, and vaccine logistics. The IR follows a three-phased approach to assess the feasibility, acceptability, and effectiveness of these new platforms in routine immunization services.

Phase 1 data estimated vaccination coverage, identified barriers, and assessed behavioral and social drivers of vaccination. The mixed-methods study combined household surveys (LQAS) with qualitative research across four district typologies (urban, rural, migrant, and conflict-affected) revealing both systemic and demand-side constraints.

The Learning Hub convened a national workshop with the Ministry of Health and local partners to validate findings from the Phase 1 research and co-develop recommendations for future scaling.

Delays in rollout of both IR interventions required adjusting timelines of the Learning Hub research, with C2P Phase 2 scheduled for August–September 2025 and MEDEXIS aligned with Phase 3.

In parallel, a remote ecosystem assessment of the digital infrastructure in Mali confirmed ongoing challenges in connectivity, equipment, and offline functionality.

Key Findings & Challenges from Phase 1 IR across Four Districts

- ZD and underimmunized (UI) children remain concentrated in remote, nomadic, and conflict-affected areas despite relatively high Penta 1 and Penta 3 coverage.
- Stockouts, weak supervision, and sociocultural barriers, especially gendered decision-making and fear of side effects, continue to limit full vaccination.
- C2P and MEDEXIS show promise for improving accountability and stock management but require further adaptation, digital-literacy training, and infrastructure investment before scale-up.
- Security challenges prevented survey work in Yorosso district, suggesting that ZD prevalence in conflict areas may be underestimated.

Next Steps

- Complete Coach2Pev Phase 2 implementation and initiate joint C2P/MEDEXIS rollout in late 2025.
- Implement refinements to supervision tools and provide digital literacy support.
- Integrate hybrid-estimation and triangulation results into national planning and monitoring frameworks.
- Continue strengthening the data ecosystem to ensure real-time, equity-focused decision-making.

Mali Learning Hub

Learn more

Zero-Dose LEARNING HUB

Call to Action

- **Prioritize differentiated approaches:** Apply district typologies (urban informal, rural remote, conflict-affected, nomadic/migrant) to tailor outreach and microplanning strategies for ZD and UI children, with the recognition that district typology labelling may mask the variation and clustering of ZD children at subdistrict levels.
- **Invest in digital readiness and sustainability:** Strengthen infrastructure, equipment, and digital literacy to ensure effective use and scale-up of MEDEXIS and Coach2PEV, aligning them with national systems for long-term interoperability.
- **Strengthen data quality and visibility:** Improve denominator accuracy and interoperability across DHIS2, DISC Mali, MEDEXIS, and Coach2PEV; explore the potential to operationalize geo-targeted mapping and predictive modeling to pinpoint ZD hotspots.
- **Embed gender and equity metrics:** Institutionalize tools such as the Gender and Equity Scorecard to routinely capture and address gender, trust, and decision-making barriers within immunization data systems.
- **Sustain evidence-based advocacy:** Institutionalize decision-making processes within CNI and MOH to fast-track learning products and strengthen collaboration with civil society to ensure findings inform policy, planning, and financing for reaching missed children.

Key Insights, Decisions, and Use of Learning Hub Results

Evidence-driven decision-making and resource allocation at national level

- The Learning Hub findings were used by the MOH and CNI to allocate EAF resources for digital infrastructure and capacity building, and influenced the reallocation of funds to better serve conflict-affected districts.
- The Learning Hub evidence also supported Mali's successful Cold Chain Equipment Optimization Platform (CCEOP) and guided the development of district typologies to tailor immunization strategies by ZD context.

Strengthening digital and data systems for planning and monitoring

- Learning Hub research informed the integration of digital tools, Coach2PEV and MEDEXIS, into national EPI systems, improving visibility and supervision while highlighting ongoing gaps in connectivity, equipment, and literacy.
- Findings demonstrated that ZD children are concentrated in specific geographic areas leading to the recommendation of using geo-targeted ZD mapping, predictive modeling, and expanded monitoring of outreach activities to move away from aggregated data to precise, context-specific analyses to enable Mali to identify, anticipate, and respond to localized immunization gaps. The geo-mapping and predictive modeling is still in an exploratory phase that will be finalized by the Learning Hub by end of project.
- CNI-led Data Quality Group workshops revealed denominator discrepancies across DHIS2 and DISC-Mali, prompting action to review population estimates and automate the generation of the EPI bulletin in DHIS2 to ensure more reliable denominator counts and consistent reporting.

Enhancing knowledge translation, validation, and accountability

- The Learning Hub institutionalized a two-tiered validation process and quarterly review calendar aligned with national coordination meetings, ensuring faster evidence uptake and stronger accountability.
- A partner engagement tracker and CNI newsletter are now used to document stakeholder participation and monitor how research findings are applied.

Expanding advocacy and inclusion through equity tools and partnerships

- Collaboration with Gavi's CSO Fund Manager expanded civil society's role beyond service delivery to include communication of evidence and learning and local advocacy.
- The Learning Hub developed an Executive Dashboard and Gender and Equity Scorecard to embed indicators on women's decision-making, trust, and hesitancy into routine monitoring and district reviews.