



Sudan Joint Appraisal Report

JULY 2024 – SEPTEMBER 2025

Joint Appraisal (JA)

The Joint Appraisal (JA) is an **essential element of Gavi's regular monitoring and performance management (MPM)**. The JA has evolved to align with Gavi 5.0 strategic shifts.

The JA is an **annual, country-led, multi-stakeholder** review/discussion that represents an important opportunity for countries to engage Gavi Alliance partners and other key stakeholders on annual progress of routine immunisation programmes against national goals and objectives, and to discuss how Gavi support is contributing to this progress. Key stakeholders involved in the country's immunisation programme should be represented at the Joint Appraisal, including civil society organisations (CSOs).

As an integrated part of Gavi's portfolio management process, the JA discussion should review **Gavi's contribution to immunisation programme performance** in 2024/H1 2025. A key feature of the JA is the joint discussion about the **promising practices, challenges met and future needs** for improving immunisation performance with a focus on reaching zero-dose children and missed communities.

The modality of the Joint Appraisal exercise is tailored to the country context and may be scheduled taking into consideration other planning exercises such as EPI reviews or National Immunisation Strategy Development.¹ The JA process will involve preparatory work to assemble and analyse data in advance of the discussion, exchange on the trends and their implications for the EPI program, and will conclude with the finalisation of a report and relevant deliberation outcomes and follow-up actions. At least one live discussion (in person or virtual) of the multiple stakeholders engaged in the Joint Appraisal should be organised.

The Joint Appraisal template is structured as follows

- **Section 1: Country situation:** overview of performance of Gavi support & discussion on progress and challenges faced during 2024 and first semester of 2025
- **Section 2: Looking forward:** summary of discussion points and follow up actions

The information and indicators contained in section 1 on the country immunisation programme performance and Gavi support are mostly based on standard reporting. They are part of Gavi's monitoring and performance management framework, which will inform ongoing portfolio discussions, the JA, as well as discussions at the Alliance Partnership and Performance Team (APPT) meeting.

Section 1 is also where Gavi expects reporting against the Grant-linked Key Performance Indicators developed during HSS / EAF applications. For these indicators, results are to be analysed as (1) the absolute change in the indicator as a trend over time and; (2) the percent change in the indicator against the baseline value from the HSS or EAF application. Changes over time will be assessed against the end of grant target set during the application stage. Please ensure that sufficient data is provided to conduct such analyses, including the baseline values, targets, and sufficient annual data to infer trends.

The below set of cross-cutting questions should be considered to structure qualitative information:

¹ Countries which are finalising in the course of 2023 a Full Portfolio Planning are not expected to conduct a JA.

Cross-cutting Questions

1. What factors have facilitated or impeded progress?
2. What promising practices and/or innovations have emerged?
3. What key contributions have partners made to drive performance?
4. What are the top risks that should be mitigated?

Section 1 forms the analytical foundation to structure the JA discussion with Section 2 summarising the outcome of the JA and follow-up actions.

The outcome of this Joint Appraisal will include a joint assessment of promising practices, perceived challenges and opportunities for Gavi investments, and should elaborate future actions with clear targets and assigned responsibilities which is owned by the full set of in-country stakeholders.

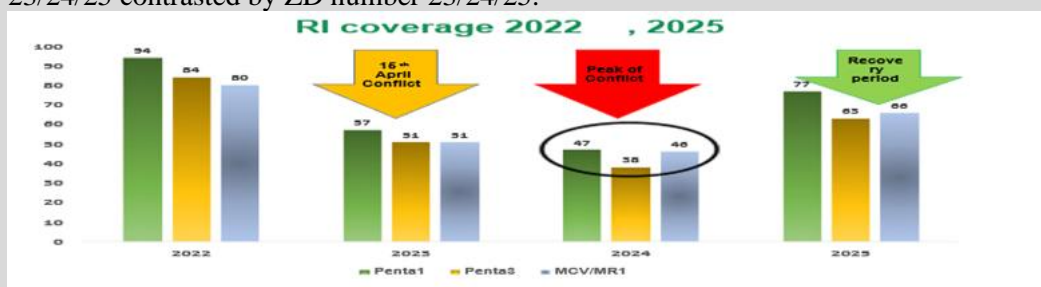
Section 1: Country situation: overview of performance of support & discussion on progress, challenges faced

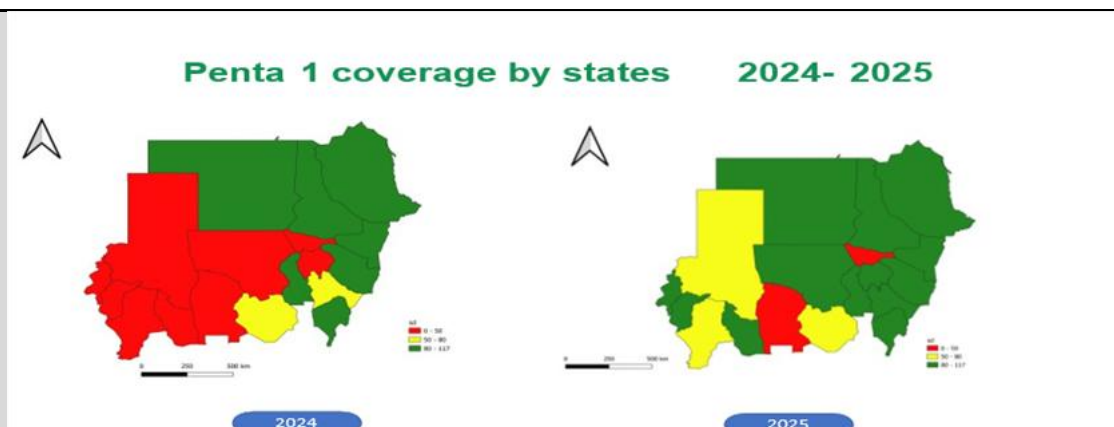
A. Immunisation Programme Performance – Zero-dose, Routine immunisation coverage, Vaccine introductions, campaigns, and outbreak response

Country context:

Sudan continues to face complex humanitarian and economic challenges, yet 2025 marked a notable improvement in the Expanded Programme on Immunization (EPI). Despite ongoing conflict and displacement, coordinated efforts by health authorities and partners expanded outreach to hard-to-reach communities. Strengthened cold-chain systems, mobile vaccination teams, and improved supply management contributed to higher coverage rates. These gains reflect growing accessibility and resilience within Sudan's primary healthcare system.

1. **Learning Question:** In light of the worsening results on the ZD agenda, reflect on the interventions implemented and whether they the most effective approaches? How were prioritization of activities balanced out? The core of the presentation should be around ZD. The country should present the ZD trends 2023 vs 2024 and ½ 2025 by state and present the strategies and activities that have been put in place to address this issue. E.g. volume of activity by state 23/24/25 contrasted by ZD number 23/24/25.





Indicator	2022	2023	2024	% change, 2022-2024	% change, 2023-2024
Number of zero dose children at national level ¹	112,267	700,924	838,147	+647% (+725,880)	+20% (+137,223)
Drop out from DTP1 to DTP3 at national level ¹	10%	11%	19%	+90%	+73%
Drop out from DTP1 to last routine dose of MCV at national level ¹	32%	33%	25%	-22%	-24%
Percentage of health facilities that reported no stock-outs for the full year for DTP ²	NA	NA	NA	NA	NA

¹Source: WHO/UNICEF Estimates of National Immunisation Coverage (WUENIC), July 2022. <https://immunizationdata.who.int/listing.html?topic=coverage>

²Country data as reported to WHO/UNICEF through the electronic Joint Reporting Form (eJRF), July 2022. <https://www.who.int/teams/immunization-vaccines-and-biologicals/immunization-analysis-and-insights/global-monitoring/who-unicef-joint-reporting-process>

Country comments (please consider the set of cross-cutting questions to structure comments):

- Sudan has been affected by conflict since 2023, which has severely weakened routine immunization services in most states, causing coverage to fall dramatically and rendering many health facilities non-operational, thereby hindering access and delivery.
- All EPI strategies, such as outreach and mobile team immunization, along with planned activities, were dropped. However, some acceleration and scale-up of vaccine deliveries through hub-based and hit-and-run strategies helped sustain service delivery where feasible in 2025.

- The integration of targeted outreach and mobile team strategies was applied to reach displaced and hard-to-reach populations, including vaccination campaigns for MR and big catch-up campaigns.
- Introduction of new vaccines—such as the rollout of malaria vaccines in November 2024 into routine immunization—represents innovation in expanding the vaccine portfolio.
- Continued use and adaptation of surveillance and outbreak response informed planning and response to outbreaks of vaccine-preventable diseases such as measles and diphtheria, as well as complement of country response to outbreak of cholera across the country by providing of oral cholera vaccine. .
- Gavi’s commitment to providing necessary funding through WHO, UNICEF, and the Save the Children consortium under the emergency plan contributed to strengthening the national immunization program, increasing cold chain and supply delivery capacities, and training health workers in hard-to-reach areas.

Top Risks and Mitigation:

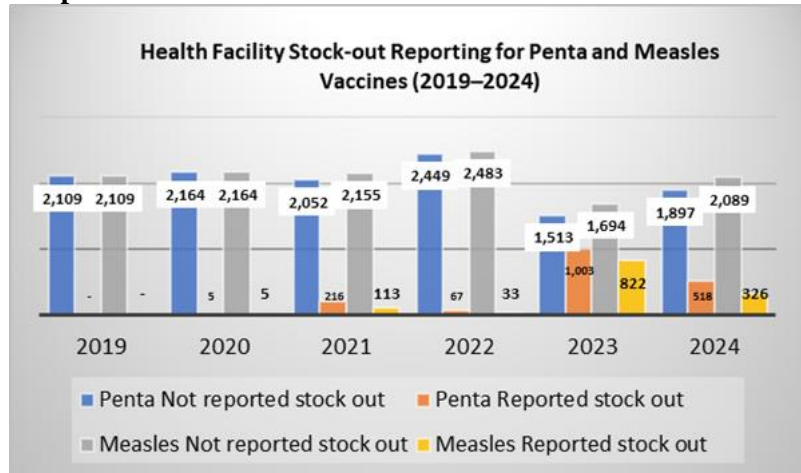
- Continued conflict and insecurity limited access to populations and caused population movement, leading to further declines in routine immunization coverage.
- Increased risk of outbreaks of vaccine-preventable diseases due to low coverage and population displacement.
- Health system disruptions, including non-operational facilities, decrease cold chain capacity, and workforce shortages, compounded by humanitarian conditions.
- Potential interruptions in vaccine supply chains and cold chain integrity in conflict-affected and remote areas, causing difficulties in obtaining vaccines and stockouts in most hard-to-reach states.

2. Learning Question: How were stockouts managed and how was reporting of stock levels ensured per access level? How fast were stockouts managed? Are stockouts reported? To what extent did the cross-border initiative alleviate the issues? ? Present the situation by access level with specific focus on Darfurs and Kordofans, Compare the situation from 2023 to 2024 and ½ 2025. What gaps remain in supply chain and cold chain?

Indicator(s):

- Number of health facilities that reported no stock-outs of DTP containing vaccine
- Number of health facilities that reported no stock-outs of Measles containing vaccine
- Closed vial wastage of DTP-containing vaccine
- Number of CCE received/installed/ leased through third party providers.
- Equipment maintenance and/or onsite readiness.
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Graphs:





Country comments (please consider the set of cross-cutting questions to structure comments):

4.2 Stock-Out Management and Stock Level Reporting (June 2024 – June 2025)

Overview

Between June 2024 and June 2025, Sudan’s immunization programme continued to experience intermittent stock-outs of Pentavalent and Measles-containing vaccines, particularly in Darfur, Kordofan, Gazira , and Khartoum. These shortages were driven by ongoing conflict, which continues to disrupt access corridors, limit movement of supplies, and cause recurrent damage or looting of cold-chain infrastructure. The resulting instability at state and locality levels has constrained the programme’s ability to maintain predictable and uninterrupted vaccine availability.

During late 2024, supply routes from Port Sudan remained unreliable due to insecurity and road closures, though limited overland shipments via Al Dabbah helped partially restore supplies in parts of Darfur. West Kordofan received one shipment through the Kosti corridor, followed by a second successful delivery routed through East Darfur using the newly established cross-border channel. In South Kordofan, only the eastern localities continued to receive small, regular consignments, while central and southern localities—including Kadugli, Dilling, and Al-Buram—remained fully inaccessible throughout the reporting period.

The overall picture is one of significant improvement in Darfur following activation of the cross-border mechanism, continued stability in accessible states, and persistent and severe access constraints in both West and South Kordofan.

Management and Reporting by Access Level

Accessible states such as Northern, River Nile, Red Sea, Kassala, Gedaref, Blue Nile, Sinnar, and accessible parts of Gazira and Khartoum maintained relatively stable supply chains during the reporting period. Regular replenishment from Port Sudan and timely redistribution from state and locality stores allowed stock-outs to be resolved within a few days to two weeks.

Hard-to-reach states, particularly East, South, and Central Darfur—as well as parts of South and West Kordofan—faced recurrent stock-outs during late 2024 due to insecurity and damaged infrastructure. However, availability improved markedly from early 2025 following activation of the Adré corridor, reducing state-level stock-out duration from several months to two–four weeks.

Inaccessible states, mainly West Kordofan and interior South Kordofan, remained the most affected. Limited deliveries reached eastern South Kordofan, but no vaccine consignments could be safely transported to the central and southern parts of the state. In West Kordofan, although one shipment via Kosti and one via East Darfur were achieved, the lack of a stable corridor has prevented reliable supply throughout the period.

Access Level	States / Areas	Management Actions	Reporting & Resolution Speed
A. Accessible	River Nile, Northern, Red Sea, Kassala, Gedaref, Blue Nile, Sinnar, and accessible areas of Gazira * and	<ul style="list-style-type: none"> • Rapid redistribution from national → state → locality stores. • Use of buffer stocks and scheduled UNICEF replenishments to prevent prolonged shortages. 	<ul style="list-style-type: none"> • Regular monthly HF reporting using paper registers aggregated at locality/state level and submitted to Federal EPI. • Stock-outs typically resolved

	Khartoum*; Port Sudan hub		within 2–14 days , depending on transport and fuel availability. <i>Brief shortages in Gazira and Khartoum in late 2024 were resolved through Jan–Mar 2025 deliveries.</i>
B. Hard-to-Reach	East, Central, and South Darfur (before cross-border activation), and parts of West & South Kordofan	<ul style="list-style-type: none"> • Activation of Adré cross-border corridor (Q2 2025) enabled large-scale deliveries and cleared Darfur backlogs. • Generator, solar, and fuel support sustained cold chain operations at state/locality stores. 	<ul style="list-style-type: none"> • Reporting delayed by several weeks due to movement restrictions; often dependent on supervisory access. • After Adré activation, Darfur stock-outs reduced from months to 2–4 weeks.
C. Inaccessible / Negotiation-Dependent	West Kordofan; South Kordofan (Kadugli, Dilling, Al-Buram and surrounding localities)	<ul style="list-style-type: none"> • Negotiations underway for alternative supply routing (Nairobi → Juba → Wau → Abyei → Kadugli) in collaboration with UNICEF and partners. • Minimal outreach maintained by partners relying on residual or campaign stock where possible. 	<ul style="list-style-type: none"> • Routine HF reporting largely absent; visibility reconstructed from partner missions and OCHA access snapshots. • Stock-outs persist for >2 months in multiple localities due to lack of safe and predictable delivery routes.

Cross-Border Initiative – Impact on Stock-Out Reduction

The activation of the Adré cross-border corridor is one of the most significant supply chain achievements of the reporting period. The successful pilot in March 2025 confirmed that cross-border delivery from Chad was both secure and operationally feasible. The corridor became fully functional shortly thereafter, enabling sustained shipments of vaccines and selected cold-chain equipment into all five Darfur states.

This shift dramatically reduced stock-out durations at state level, transforming long-standing gaps that previously lasted months into manageable replenishment cycles measured in weeks. The corridor also provided a dependable alternative to insecure mainland routes from Port Sudan, improving predictability for routine immunization and campaign planning.

Despite these gains, distribution bottlenecks at locality and facility levels persist. Health facility-level stock-outs remain common in some areas due to maldistribution, limited last-mile transport, and restricted supervisory access. Strengthening intra-state redistribution mechanisms will be essential to ensure that state-level improvements translate into consistent vaccine availability at service delivery points.

Stock-Level Reporting Practices

Reporting practices during the period varied significantly by access level. In accessible states, routine monthly reporting remained functional. Health facilities used paper registers that were aggregated at locality and state levels and shared regularly with the Federal EPI.

In contrast, reporting from hard-to-reach and inaccessible areas was frequently delayed or incomplete due to insecurity and limited movement. To compensate, state teams and partners relied heavily on phone-based updates, partner-supported assessments, and field reports from NGOs and UN agencies. While these measures helped improve visibility, they remain insufficient for timely, real-time stock monitoring.

The Federal EPI plans to initiate the roll-out of the **Stock Management Tool (SMT)** in Q4 2025, beginning with Training of Trainers. Once implemented, SMT is expected to enhance real-time reporting and support more accurate forecasting and redistribution.

Remaining Gaps in Supply Chain and Cold Chain (June 2024 – June 2025)

Despite the operational advances achieved during the reporting period, significant systemic gaps remain. Recurrent conflict continues to threaten supply continuity through repeated damage and looting of cold-chain assets, particularly in the Kordofans and parts of Darfur. Volatile access has prevented planned deliveries, leaving several localities with prolonged stock-outs and minimal visibility of HF-level supply.

Cold-chain maintenance remains a major bottleneck, with frequent equipment breakdowns, shortages of spare parts, and limited technical capacity delaying timely repairs. Electricity blackouts and high generator fuel requirements further undermine temperature stability, especially in high-burden states.

Data visibility also remains weak in hard-to-reach and inaccessible areas, with delayed reporting limiting the Federal EPI’s ability to plan timely replenishment. In addition, ongoing funding constraints affect the programme’s ability to maintain buffer stocks, deploy surge transport, repair damaged infrastructure, and expand solarization.

The cumulative impact of service disruptions during 2023–2024 has resulted in significant immunity gaps, reflected in rising zero-dose prevalence in several states. Sustained catch-up campaigns and intensified outreach remain essential to address these gaps and to ensure equitable access to routine immunization services.

Closed Vial Wastage (2019–2024)

Closed vial wastage for the Pentavalent (DTP-HepB-Hib) vaccine remained consistently low throughout the period 2019–2024, demonstrating the programme’s strong cold-chain management practices and careful handling, even under highly challenging conditions. No closed vial wastage was reported in 2019, 2020, or 2022, while minimal levels were recorded in 2021 (0.5%), 2023 (1%), and 2024 (0.5%).

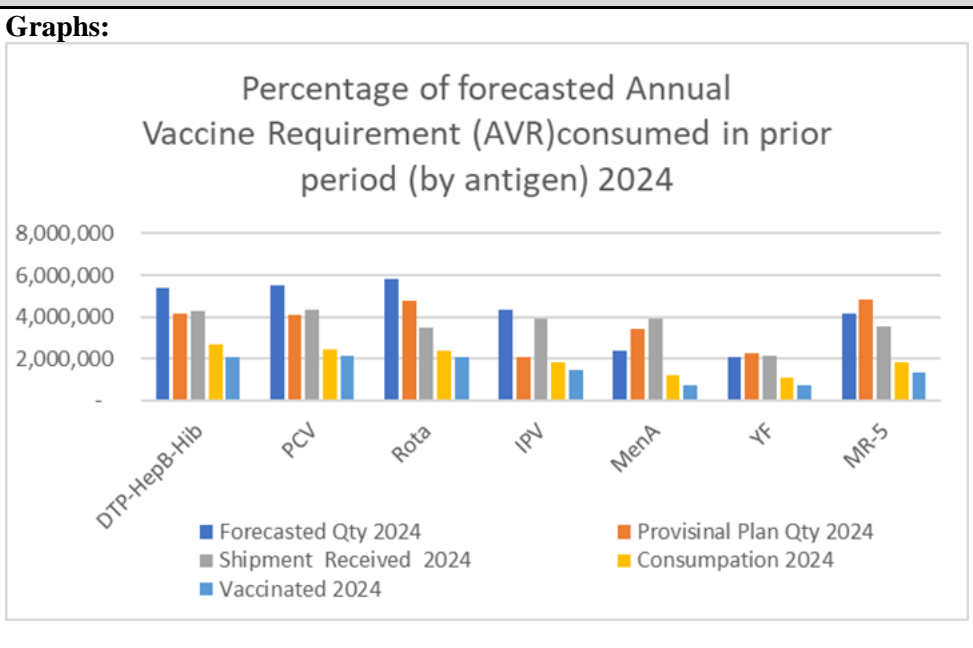
The increases observed in 2023 and 2024 coincided with conflict-related disruptions, including looting, destruction of cold stores, extended electricity blackouts, and displacement of health workers, all of which heightened the risk of temperature excursions and physical losses. Despite these pressures, the overall wastage levels remained very low, indicating that vaccine integrity was largely preserved across the supply chain.

Continued monitoring, timely redistribution, and strengthened security and supervision at storage sites—particularly in high-risk states—will remain important to further minimize losses and protect vaccine quality as the programme expands recovery efforts in 2025–2026.

3. Learning Question: Are vaccines being consumed at rates that are in-line with approved forecasts? If so, why are ZD increasing? What is the forecast based on? Are there data challenges? What are the key drivers of consumption compared to expectation (e.g., stockouts, increased coverage, wastage)? Present by state and show the vaccine consumption together with number vaccinated 2023 vs 2024 and ½ 2025.

Indicator(s):

- Percentage of forecasted Annual Vaccine Requirement (AVR) consumed in prior period (by antigen)



Country comments (please consider the set of cross-cutting questions to structure comments):

Vaccine consumption patterns in 2024 demonstrate a clear divergence between states with stable access and those affected by severe insecurity. In accessible states, consumption remained aligned with the Annual Vaccine Requirement (AVR), reflecting strong adherence to forecasting assumptions and effective

utilization of available stock. For antigens such as DTP-HepB-Hib, PCV, Rota, IPV and MenA, the quantities consumed closely tracked the forecasted volumes wherever service delivery and distribution channels remained functional. This alignment confirms that the national AVR was technically sound and that forecasting remained accurate for areas with regular access to vaccines.

However, consumption figures for conflict-affected states fell significantly below forecasted levels—not due to overestimation of need, but because vaccines could not be reliably delivered or utilized. The year 2024 was marked by the loss of Gazira, Khartoum, and large parts of Sennar to RSF control, resulting in intense fighting, damage to infrastructure, and the effective closure of central corridors that traditionally support vaccine movement inland. Gazira, which normally acts as a major distribution hub, remained inaccessible throughout 2024, while Khartoum and Sennar could not be reached until their liberation in early 2025. This interruption had a cascading effect, preventing vaccine movement to White Nile, the Kordofans, parts of Blue Nile, and limiting the functioning of state-level cold stores that historically relied on resupply through these central routes.

Darfur states were similarly affected. Throughout 2024, only two consignments reached Darfur via the Port Sudan–Al Dabbah corridor, both arriving late and in limited quantities. These deliveries were insufficient to meet the forecasted needs of five states. In West Kordofan, only one shipment was successfully delivered via Kosti during the year. South Kordofan received only small, intermittent volumes in its eastern localities, while the central and southern areas remained entirely cut off. These interruptions directly constrained consumption, as localities simply did not have vaccines available in quantities needed to meet expected utilization levels.

These access barriers—not forecasting—explain the gap between forecasted AVR and actual doses consumed in 2024. The forecast for the year was based on standard demographic projections, historical wastage rates, and expected program performance in a normal operational context. These assumptions held true for accessible areas, where consumption and vaccination trends followed forecasted patterns closely. However, in states experiencing conflict, insecurity, and prolonged interruption of supply lines, consumption naturally fell far below expectations because vaccines could not be delivered, stored safely, or distributed to health facilities.

The inaccessibility of major hubs in 2024 also affected last-mile delivery. Even when limited stock reached some state stores, many locality and facility cold chains were damaged, under-powered, or without functional transport. This contributed to uneven distribution and constrained the ability of localities to consume the quantities originally forecasted. Supply bottlenecks, insufficient refrigerated transport, electricity blackouts, generator fuel shortages, and reduced supervisory mobility all limited the timely movement of stock from state to facility levels.

Population displacement further complicated consumption patterns. Large movements of people from conflict-affected areas toward relatively safer states such as Gedaref, Kassala, Blue Nile, and Sinnar created localized surges in demand that exceeded the operational capacity of receiving states. Meanwhile, depopulation of original areas of displacement reduced the number of children reachable in those states, further contributing to consumption gaps relative to forecasts.

By the end of 2024, the overall picture showed strong consumption alignment with forecasts in accessible states but substantial under-consumption in conflict-affected states due to restricted supply routes, limited facility functionality, and the near-total inability to deliver vaccines to several localities. The inland corridors reopened only in early 2025 with the liberation of Gazira and Khartoum, while the operationalization of the Adré corridor in March 2025 improved supply to Darfur. These developments began to resolve supply bottlenecks but were too late to influence 2024 consumption figures.

In summary, 2024 vaccine consumption patterns were driven primarily by access constraints and supply interruptions, not by forecasting inaccuracies. Where vaccines could be delivered and services could operate, consumption matched expectations. Where access was blocked or cold-chain capacity was compromised, consumption fell well below forecasted levels. The data clearly indicate that consumption in 2024 reflects the realities of conflict-related operational barriers, rather than issues with supply planning or quantification.

4. Learning Question: Is the country complying with co-financing requirements in a timely manner?

Indicator(s):

- **Country co-financing obligation met in a timely manner**

Country comments:

Sudan, as a Gavi-supported country, has a strong record of meeting its co-financing commitments and has never missed a payment. During the COVID-19 pandemic, Gavi granted Sudan waivers for 2020 and 2021 due to the exceptional global circumstances. In 2022, despite continued difficulties, Sudan again fulfilled its co-financing requirements. For 2023, 2024 and 2025 Sudan has requested waivers because the ongoing armed conflict has severely strained national resources.

Despite the Ministry of Finance expressing a firm commitment to resume co-financing obligations from 2026 onward, the Ministry of Health anticipates a shortage of funds in the current context due to the ongoing armed conflict and severe economic strain. This uncertainty poses a significant risk to sustaining vaccine supply and routine immunization activities. While Sudan has historically honored its co-financing commitments, Sudan intends to request a multi-year waiver. Moreover, to mitigate this risk, discussions are ongoing to explore partial payment options and a progressive co-financing trajectory, alongside advocacy efforts urging the Ministry of Finance to allocate budget resources. Continued coordination between the Ministry of Health, Ministry of Finance, and Gavi will be essential to ensure predictable funding and avoid disruptions in immunization services.

5. Learning Question: If applicable, have new vaccines been introduced as planned and if not, why? Is coverage of recently introduced vaccines being scaled-up as expected?

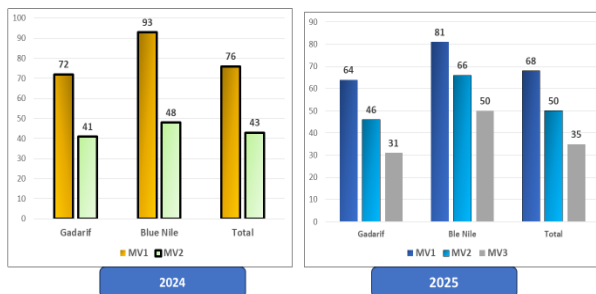
Indicator(s):

- Number of routine introductions completed over number of targets set for the calendar year
- Coverage of recently introduced vaccines

In addition, forecasted routine introduction & campaign dates should be validated during the JA discussion

Graphs:

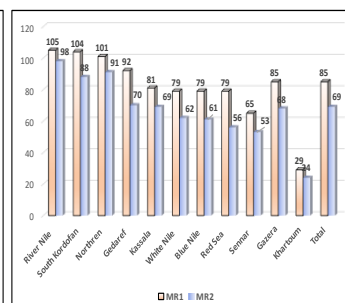
Malaria Vaccine coverage 2024 – 2025 up to Oct



MR vaccines coverage

MR introduction status

- ✓ The MR vaccine was introduced in 11 states,
- ✓ The introduction will be completed by the end of the year



The MR vaccine was introduced in 8 states 2024, 3 States were added to the introduction in 2025 from March and May, thus the states that have been introduced the vaccine reached 11 states.

Country comments (please consider the set of cross-cutting questions to structure comments):

Malaria vaccine: -

- Sudan officially introduced the malaria vaccine for the first time in its immunization programme in November 4, 2024, with the first doses delivered to health facilities in 15 localities in Gedaref and Blue Nile states targeting children under 12 months old. This marked its phased rollout amid ongoing conflict and humanitarian challenges.
- The expansion plan will be implemented in December 2025.
- The new states being introduced are White Nile, Sinnar, and the remaining Blue Nile localities.

The malaria introduction targets a total of 148 localities through a phased- introduction approach. While the first introduction phase includes 15 localities, the scale -up to the remaining 133 localities is planned in 2026 in Three phases. Meanwhile the National Malaria Control Program (NMCP) continue to monitor the epidemiological situation and adjust target localities accordingly

.MR vaccine: -

- In early 2024, the Federal Ministry of Health through Gavi fund launched an MR in routine targeting **9-month-old children** in 62 localities across seven states.
- Sudan introduced the rubella component (as part of MR vaccine) into the routine schedule
- MR vaccine *was introduced as planned* into the programme in phases and supported with a large campaign

Other new vaccine introduction plan

- The hepatitis B vaccine has been approved in 2025.
- The vaccine is scheduled to be introduced in all states in first of December 2025.
- The hepatitis B vaccine zero dose is administered to births less than two weeks old

6. Learning Question: If relevant, how effective have recent Gavi supported vaccination campaigns been?² (e.g., timeliness of outbreak response, quality, campaign reach and link back to strengthening routine immunisation). **Please highlight lessons learned which are applicable for routine immunisation and upcoming campaigns. What was the effect of multiple campaigns on RI as well as PHC integration?** Provide the overall total number of campaigns with number immunized and contrast them with the cost with the cost and numbers achieved through routine immunization. Present a plan to integrate/consolidate campaigns.

<p>Indicator(s):</p> <ul style="list-style-type: none"> • Number of vaccination campaigns conducted (stratified by type of campaigns , including preventive , reactive, catch-up, follow-up, sub-national and national) • Coverage of recent Gavi- 	<p><i>MR Campaigns:</i></p> <p>Total Implementation Achieved (Phases I-IV)</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Item</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Total Target</td> <td>10,468,795</td> </tr> <tr> <td>Total Reached</td> <td>10,492,872</td> </tr> <tr> <td>Overall Coverage</td> <td>100%</td> </tr> <tr> <td>States Implemented</td> <td>11</td> </tr> <tr> <td>Localities implemented</td> <td>87</td> </tr> <tr> <td>Implementation Period</td> <td>Jan 2024 – Sep 2025</td> </tr> </tbody> </table> <p>Reactive OCV campaign:</p>	Item	Value	Total Target	10,468,795	Total Reached	10,492,872	Overall Coverage	100%	States Implemented	11	Localities implemented	87	Implementation Period	Jan 2024 – Sep 2025
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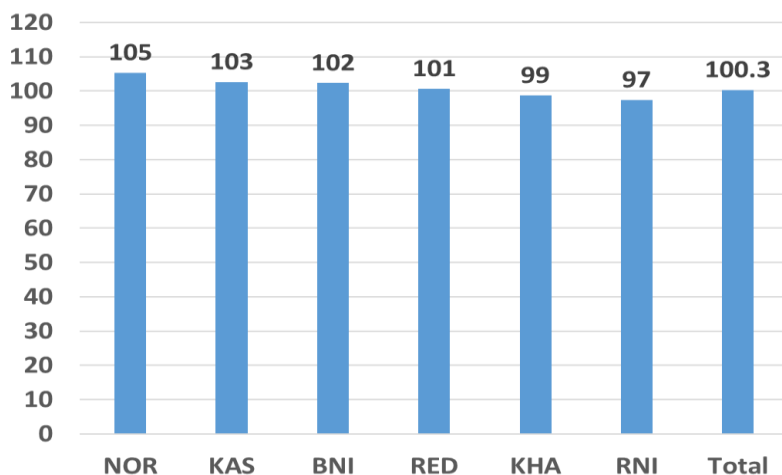
² Please reflect on those campaigns conducted since the last Joint Appraisal/Multi-Stakeholder Dialogue exercise.

supported campaigns , compared to target (coverage rate disaggregated by sex if collected)

- Number of reported outbreaks of vaccine-preventable diseases (for which GAVI supports with reactive campaigns)

Implementation of the Sudan Oral Cholera Vaccine (OCV) Campaign: November 2023 - Oct 2025						
#	State	Localities	Implementation Dates	Total target	Total coverage	%
1	Gedaref Aljazirah	Medeinat Al Gedaref W:at Al Gedaref, Al Fakhaga, Al Qereicha, Gelbar Al Shargiah, Al Gelbar Al Ghazwah and Medinat Al Bahra	20 - 25 November 2023	2,269,157	2,260,135	100
2	Khartoum	Khartoum	19 - 28 December 2023	410,635	410,352	100
3	Red Sea, Kassala and White Nile	Port Sudan, Sawahin, Tawbar, Medinat Kassala, Reif Kassala, Al Dimin	7 - 12 February 2024	1,902,038	1,867,157	98
4	Kassala	Wed Alhaisio	19 - 22 August 2024	51,000	51,000	100
5	Kassala	Wed Alhaisio and Kassala	16 - 21 September 2024	404,081	404,049	100
6	River Nile, Kassala and Gedaref	Medeinat Al Gedaref Ad Dumar, Arbars, Barbar, Reif Khassam Elgiba	19 - 24 October 2024	1,407,188	1,393,399	99
7	White Nile, Aljazirah, Sennar and Gedaref	Ad Dimin, Al Gitsina, Al Masaqil, Al Fao, Sharg Sennar	11-19 November 2024	2,210,447	2,198,098	99
8	White Nile, Kassala	Halfa AjJadeedah, Reif Nahr Arbars and Aj Jabalin	05-10 December 2024	1,152,866	1,002,459	87
9	Red Sea, River Nile, Northern, White Nile	Port Sudan, Hays, Dordob, Sheadi, Al Matams, Dongola, Ad Dabbah, Gali	18-23 December 2024 / Northern 29 Dec 2024 - 3 Jan 2025	2,365,249	2,360,763	100
10	White Nile	Kocri, Rabat	12 - 26 February 2025	1,047,341	910,236	87
#	White Nile	Ar Salum	13 - 26 February 2025	141,185	122,776	87
11	Blue Nile	Ed Damazine	12-21 March 2025	272,911	272,908	100
12	North Kordofan	Sheikha	09-14 April 2025	541,531	555,583	103
#	Aljazirah	Wed Medani Locality - Central Provinces and its surrounding areas	12-14 April 2025	18,830	18,829	100
#	Khartoum	Jebel Awia Locality - Al-Jabal Administrative Unit	27-29 May 2025	115,000	115,000.0	100.0
13	Khartoum (Phase One)	Jebel Awia, Sharg An Neel, Um Durum, Karrari, Um Bada - (Five localities include 17 administrative units)	10-19 June 2025	2,611,041	2,242,824	86
14	North Kordofan	Ar Rahad	18-27 June 2025	275,525	265,518	96
15	Sennar	Sennar	10-19 July 2025	547,951	552,223	101
16	White Nile & North and West Kordofan	Tedaf, Al Gitsina, Sheikha, Al Kharim, Sinja, Abu Hajar, Ar Suki and Jazirah	28 July - 6 Aug 2025 / 28 July - 6 Aug 2025 / 8 - 17 Aug 2025 / 30 JULY - 6 Aug 2025 / 14-23 Aug 2025 / 10-19	2,662,624	2,434,155	91
17	Khartoum (Phase Two)	Khartoum, Jebel Awia, Omdurman, Bahri, Sharg An Neel, Karrari, Um Bada (27 administrative units)	10-19 Aug 2025 / 22 Sept - 1 Oct 2025	2,690,172	2,280,962	85
18	South Darfur	Nyala Jazoub, Nyala Shamal and Beheil	21-30 Sept 2025	1,019,109	1,011,574	99
19	East Darfur	Ed Daein, Abu Gebra	22 Sept - 1 Oct / 2025	437,849	423,873	97
20	North Darfur	Tawilla	27 Sept - 6 Oct 2025	406,430	303,430	75
21	Central Darfur	Wasat Jabal Marrak, Ghath Jabal Marrak	27 Sept - 6 Oct 2025	265,165	265,165	100
22	West Darfur	Al Geneina Locality (Al Geneina Administrative Unit)	5 - 9 Oct 2025	189,598	165,935	88
23	South Kordofan	Abu Jibayha	9-18 December 2025	314,876	on going	
		Reif Shargi, Kadgosi,	not fixed	154,997	NOT started	
#	Total			25,884,796		

Diphtheria Campaign - Coverage - by State 22nd - 27th November 2025

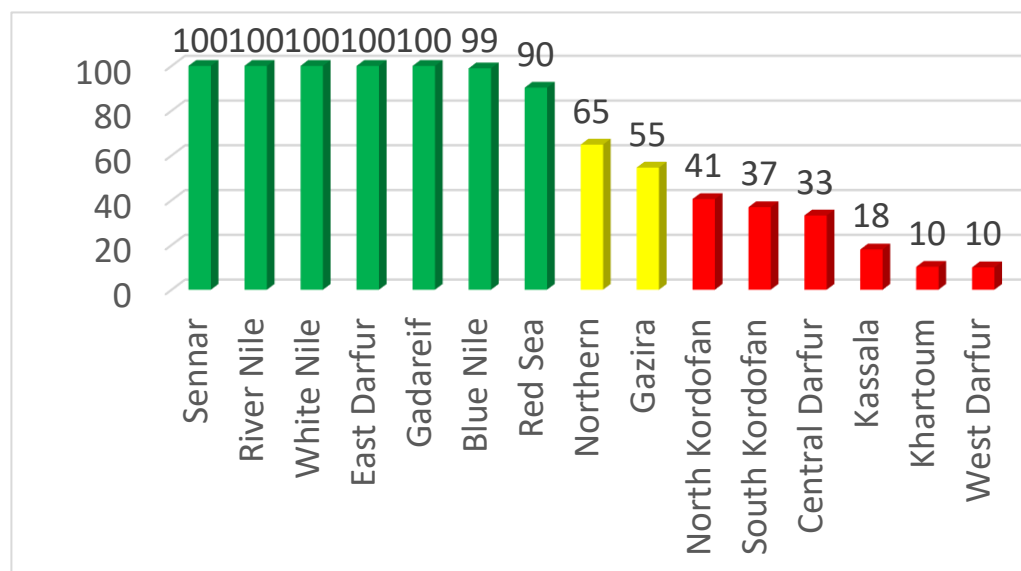


Big catch-up targets

#	State	ZDC for the year (19-22)	ZDC for the year 2023	Total Zero-dose	The target (70%)	2024 -2025 target	2026 target
1	Blue Nile	2,338	4,123	6,461	6,461	6,461	
2	Sennar	2,156	10,864	13,020	13,020	13,020	

3	White Nile	9,306	6,715	16,021	16,021	16,021	
4	River Nile	4,060	0	4,060	4,060	4,060	
5	Northern	1,078	0	1,078	1,078	1,078	
6	Gazeira	59,175	9,993	69,168	41,501	41,501	
7	Khartoum	174,407	215,272	389,679	180,401	36,080	144,321
8	Kassala	21,759	11,508	33,267	33,267	33,267	
9	Red Sea	8,469	0	8,469	8,469	8,469	
10	Gedarif	20,454	15,090	35,544	35,544	35,544	
11	North Kordofan	15,309	51,628	66,937	58,985	26,775	32,210
12	South Kordofan	43,008	30,864	73,872	59,098	29,499	29,599
13	West Kordofan	22,044	42,326	64,370	45,059		45,059
14	North Darfur	9,354	93,404	102,758	71,931	-	71,931
15	South Darfur	51,990	151,720	203,710	162,968	114,078	48,890
16	East Darfur	1,449	30,934	32,383	32,383	32,383	-
17	Central Darfur	14,611	45,455	60,066	48,053	48,053	
18	West Darfur	7,439	75,626	83,065	66,452	66,452	
	TOTAL	468,406	795,521	1,263,927	884,751	512,741	372,010

Penta1 total coverage of BCU by states, 2024-



Country comments (please consider the set of cross-cutting questions to structure comments):

1. MR catch up campaigns

- The campaign implemented in phases based on the security & accessibility situation.

- The MR catch-up campaign remains in 99 localities pending in: East, South & North Darfur, Khartoum (remaining localities), North Kordofan, South Kordofan (remaining), West Kordofan
- 2. **Reactive OCV campaign:**
 - Within one year, OCV implementation expanded rapidly across multiple states and localities.
 - Over 34 high-risk localities reached, across approximately 9 states
 - States Covered: Gadarif, Gazira, Khartoum, Red Sea, Kassala, White Nile, River Nile, Sennar, Northern
 - The impact of the OCV measured by epidemiological situation of the Cholera outbreak, & no outbreak reported during weeks 46-48
- 3. **Diphtheria Outbreak response campaign:**
The Diphtheria outbreak response campaign targeted 6 states with 17 localities

4. **BCU campaign:**

Sudan faces persistent challenges in reducing zero-dose children—those who have not received any pentavalent vaccine by 12 months—due to conflict, displacement, fragile health systems, and the impact of COVID-19. These gaps have fueled outbreaks of measles, polio, and diphtheria. To address this, the Ministry of Health, in partnership with UNICEF, WHO, Save the Children, IMC, and ALIGHT, launched the Big Catch-Up (BCU) Campaign to close immunity gaps, strengthen routine immunization, and protect vulnerable populations.

The campaign began in November 2024 and was implemented in three phases across 15 states and 115 localities, prioritizing high-burden areas in Darfur and Kordofan, which account for over 60% of zero-dose children. Phase One covered Gedaref, Kassala, River Nile, and Northern; Phase Two targeted Red Sea, Sennar, Gezira, White Nile, Blue Nile, and parts of North and South Kordofan; Phase Three reached East Darfur fully and partially covered Central and West Darfur. Despite security and funding challenges, the BCU campaign significantly improved coverage and routine immunization services, marking a critical step toward reducing vaccine-preventable diseases in Sudan.

The zero-dose coverage up to November, 2025

- The zero dose was reduced by 47% by vaccinated 283,763 children from (1 to 5 Y) by the first dose of Penta 1, and retrieved the defaulters of Penta 2 to 44% and Penta 3 by 48%
- The total zero dose vaccinated by MR1/ MR2 vaccine 563,985_ **child**
- # **441,865** children vaccinated by IPV1/ IPV2 vaccine and this will break the cycle of the Polio epidemic in the states
- **337,388** _children under 2 years vaccinated by Rota 1/ Rota 2 /Rota 3 vaccine and this will contribute in the reduction of the diarrheal disease caused by Rota virus

Contributions of BCU to Routine Immunization

The Big Catch-Up (BCU) campaign significantly strengthened routine immunization across Sudan. Between November 2024 and October 2025, **215,480 under-one children** received Penta1 (11% of the national target), **195,969** were vaccinated with MR1, **390,416** received IPV1/IPV2 (helping break the polio transmission cycle), and **575,074** were vaccinated with Rota1-3, reducing diarrheal disease caused by rotavirus.

Key Strengths and Achievements

The campaign improved identification of high-burden areas ensured strong state-level commitment, and adopted robust planning and resource integration. Supportive supervision and continuous monitoring enhanced quality and accountability, while strategic re-planning addressed low-coverage localities. Routine coverage improved notably for Penta and MR vaccines, and hidden refusals were identified and addressed through targeted communication in River Nile, Kassala, and Blue Nile.

Main Challenges

Persistent insecurity and population mobility disrupted service delivery, while organized refusals in Kassala and River Nile and unforeseen rejection in Red Sea state required tailored engagement. Difficulties in locating zero-dose children in both stable and remote/displaced communities and funding gaps for Darfur rounds further constrained progress.

Lessons Learned

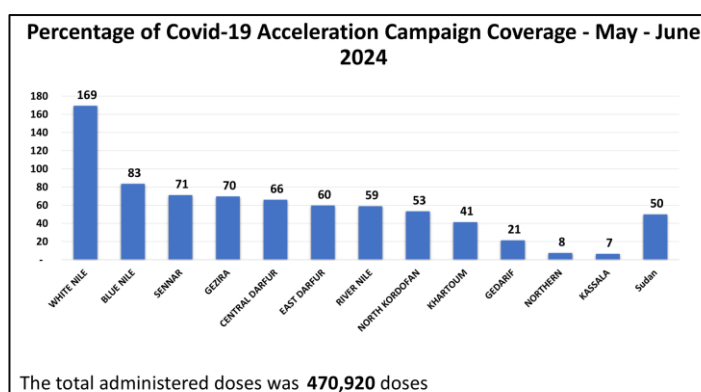
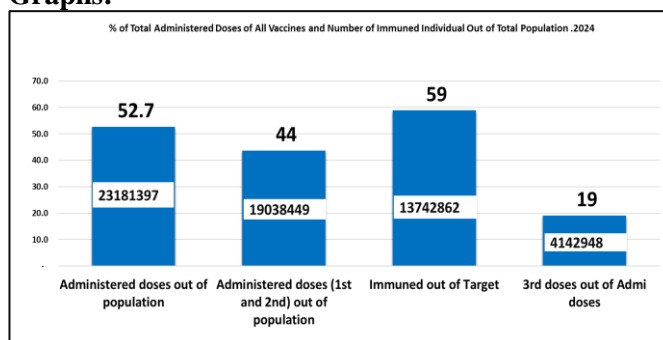
Effective preparedness, accurate mapping of zero-dose communities, and strong community engagement are critical. Full coverage of IDPs and timely strategies to address refusals remain essential for future campaigns.

7. Learning Question:

Indicator(s):

- Report and reflect on progress in uptake, with particular emphasis on older adults, health workers and other high-priority population group (as defined by WHO SAGE guidance). Analyse both primary series uptake and boosting.
- Describe if and how the country is integrating delivery of COVID-19 vaccine with routine immunisation & other primary health care services, including reflecting on how Gavi CDS has been used to support these integration efforts (if applicable).
- How have CDS funds been used to strengthen broader RI efforts beyond COVID-19?

Graphs:



Country comments (please consider the set of cross-cutting questions to structure comments):

- On October 22, 2020, the government of Sudan established a high-Level steering committee. The director-general of PHC established the National COVID-19 Vaccination Technical Committee established by the director-general of PHC in November 2020. Both committees provide oversight in the acquisition and delivery COVID-19 vaccination. The first NVDP was submitted in February 2021.
- The rollout of COVID-19 vaccines launched on 9th March 2021 in Khartoum State. Gradually, the vaccination was rolled out across all 18 states of Sudan through phases.
 - In phase one the target was the health care providers and persons 45 years of age and above with comorbidities.
 - Then below 45 years old regardless of their health condition extending to include the essential workers such as the teachers, police officers,
 - Finally, the target is 18 years old and above irrespective of their health condition.
- The immunization strategies used to achieve this progress were:
 - Fixed vaccination posts, and Acceleration activities to cover high-risk groups conducted until the second half of 2021 achieved coverage of 3%.
 - Mini campaign conducted each month up to September 2022 to bring the Percentage of Immune individuals out of the total population to 10%.
 - Finally, a three-round national immunization mega campaign was conducted during October 2022, January, and March 2023, raising the coverage to 59%.
 - Sudan adopted the Mix-Match Approach in August 2022, as updated in the SAGE extraordinary meeting.
- **COVID-19 vaccination Achieve Progress, 2024 which are:**
 - Conduct acceleration activities integrated with RI during May and June 2024.
 - Addressing the catchment area for each strategy to increase and sustain coverage.
 - Strengthen defaulters' tracing and retrieving system.
 - Strengthening the links with the community in all catchment areas of the service delivery sites.
 - Preparation and steps done for the Integration into RI.
- **Progress on the uptake for Special Groups:**
 - **Health workers:** the estimated group to be around 3% of the total population, this was calculated based on in their final class of medical-related schools, the total number of people working in health-related fields, and the number of the total number of people working and

health-related students in that the total number of people working and health-related students at their final class of medical-related schools exposed to the health settings. The total number of health workers registered as vaccinated in the COVAX electronic system is **735,770** people, the electronic system is underachieving where only 64.6% equal to **14,982,227** of the reported coverage is captured by the electronic system up to March 2023 before 15th April conflict.

- **Older adults:** according to the 2008 census projection of 2020, the total number of the population aged 65 years and above is **1,360,753** people. The data analysis from the electronic system shows that out of the total number of the people aged 65yrs and above, the number of people reach with C19 is **1,254,628**.
- **Adult with comorbidity:** according to 2008 census projection was **774,992** The data analysis from the electronic system show that the number of people reach with C19 is **132,212**.
- **Immuno-compromised persons:** the estimated target was **294,981** Based on the analysis of the vaccination data from the electronic system, there are only **127,521** people with comorbidities vaccinated.
- **Nomads, IDPs and Refugees** the estimated target was **2,109,275** from the electronic system shows that out of the total number **393,491** was vaccinated.

8. Learning Question: Trajectory and progress against targets set

- **How does the progress over the past year compare with your Theory of Change or programme objectives? Nassir and Sahar in collaboration routine and other departments** if there are **other factors** (e.g., government transitions, natural disasters, other disease outbreaks, etc.) which have led to disruptions in your immunisation programme over the last year, please also reflect on those.
- How are IDPs tracked, by geographical area and by results for ZD coverage? How are denominators adjusted to reflect population movements?
- Insert programmatic indicators such as % of activities implemented vs planned (e.g. outreach)
- % Of facilities providing EPI services with functional PQS active cold chain equipment
- % Localities that regularly report their stock level by locality & access level
- % Health facilities offering immunization services by locality & access level
- % Supportive supervision visits conducted vs planned
- No. of incinerators installed vs planned
- % Of districts conducting IIP training vs planned
- % Of planned review meetings conducted at national level
- % Of districts M&E officers trained on DQSA vs planned
- Etc

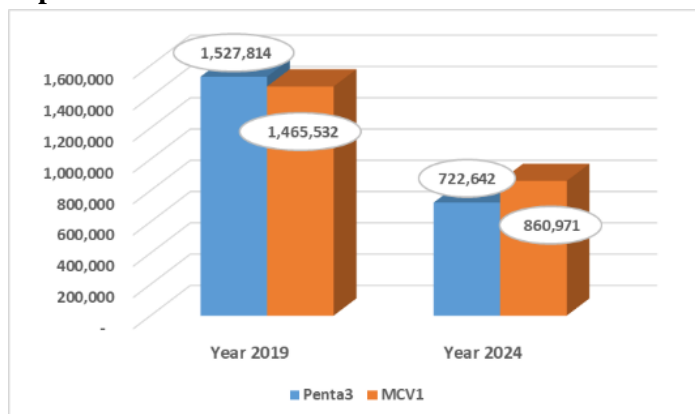
Indicator(s):

- Number of children who received DTP3 and number of children who received MCV1 in the past year compared to the number who received those vaccines in 2019.
- **Qualitative information**

Community acceptance of immunization remains generally positive, though misinformation and service interruptions have affected demand in some areas.

Stronger engagement with community leaders, NGOs, and humanitarian actors has proven critical for reaching zero-dose and under-immunized children.

Graphs:



Flexibility in planning and real-time adaptation are essential given Sudan's fluid context.

Country comments (please consider the set of cross-cutting questions to structure comments):

Progress Compared to the Previous Year

Programme progress over the past year shows mixed performance compared to the previous year, largely influenced by Sudan's evolving humanitarian and political context. While some immunization and surveillance activities demonstrated resilience and partial recovery, overall progress was slower than planned due to persistent disruptions.

Key contributing factors included:

- Armed conflict and insecurity, particularly since April 2023, leading to population displacement and restricted access to several localities.
- Governmental transitions and institutional disruptions, affecting coordination, decision-making, and continuity of health services.
- Disease outbreaks and public health emergencies, which diverted resources and attention.
- Supply chain interruptions, including delays in vaccine distribution, cold chain maintenance, and availability of logistics.
- Human resource constraints, with staff displacement and reduced supervision capacity.

Despite these challenges, collaboration between the Expanded Programme on Immunization (EPI), WHO, UNICEF, and implementing partners enabled continued service delivery in accessible areas, with adaptive strategies such as mobile teams and integration with humanitarian response mechanisms.

Tracking of IDPs and ZD Coverage

Internally Displaced Persons (IDPs) were tracked primarily by:

- Geographical area and locality, using data from IOM DTM, HAC, and state-level reports.
- Access level (accessible, partially accessible, non-accessible) to adjust targets and implementation approaches.

Denominators for Zero-Dose (ZD) and immunization coverage were adjusted to reflect population movements, including:

- Influxes into relatively stable states (e.g., Northern, Gedarif, Kassala, White Nile).
- Outflows from conflict-affected areas (e.g., Khartoum, Darfur states).
- Use of updated population estimates where available, while acknowledging data limitations.

Performance Against Key Programmatic Indicators

Activities implemented vs planned:

- Outreach and mobile activities were implemented below planned levels in insecure areas, while exceeding targets in some IDP-hosting localities.
- Facilities providing EPI services with functional POS and cold chain equipment: Functionality remained stable in accessible areas but declined where electricity, fuel, and maintenance services were disrupted.
- Localities regularly reporting stock levels: Reporting completeness varied by access level, with lower consistency in hard-to-reach areas.

- Health facilities offering immunization services: Services continued in most accessible localities, with temporary suspensions in conflict-affected zones.
- Supportive supervision visits: Conducted at reduced frequency compared to plans due to movement restrictions and security risks.
- IP training, review meetings, and M&E capacity building: Activities were partially completed, with virtual or decentralized approaches used where feasible.

Indicator Performance

The number of children receiving DTP3 and MCV1 in the past year declined compared to pre-crisis levels (e.g., 2019), particularly in conflict-affected and displacement-hosting areas.

However, targeted campaigns and integrated outreach contributed to localized improvements, especially among IDP populations in accessible states.

Overall, programme performance in Sudan reflects a highly constrained operating environment, with progress dependent on security, access, and partner coordination. Continued investment in:

- Context-specific planning,
- Improved population data,
- Decentralized service delivery,
- Strengthened monitoring and supervision,

will be essential to sustain gains and advance toward immunization targets amid ongoing humanitarian challenges.

B. Programme Management

Financial implementation of Gavi cash grants

UNICEF/WHO /SCI/ ALIGHT/IMC/EMPHNET/Shaza

Grant	Recipient	Period	Status as of Status as of (23-11-2025)				
			Grant Value \$	Appr. \$	Disb.	Expenditure	Utilisation
					\$	\$	(in %)
PEF-TCA	GHD EMPH NET	Apr 2023 - Dec 2025	2,270,120	2,270,120	2,007,519	2,231,510	98%
Old Emergency EPI plan (SM230557)	UNICEF	18/08/2023 to 31/03/2025	8,181,415	8,181,415	8,181,415	8,177,009.13	99.9
MR Catch up Campaign (SM230668)	UNICEF	3/11/2023 to 31/12/2025	14,550,550	14,550,550	14,550,550	10,880,430.07	74.8
Introduction (SM240109)	UNICEF	29/02/2024 to 31/12/2025	1,593,047	1,593,047	1,593,047.00	676,960.58	42.5
**Malaria vaccine	UNICEF	06/08/2024 to	1,224,093.00	1,224,093.00	1,224,093.00	180,922.05	14.8

Introduction (SC240542)		31/12/2025					
Cross Border (SC240669)	UNICEF	26/09/2024 to 31/12/2025	3,018,137.00,	3,018,137.00,	2,541,757.64	1,430,735.10	56.3
Covid delivery support (SM220771)	UNICEF	31/10/2022 to 31/12/2025	7,543,681.20	7,543,681.20	7,543,681.20	7,501,412.04	99.4
PEF TCA (SC220798)	UNICEF	06/12/2022 to 31/12/2025	4,010,921.00	4,010,921.00	4,010,921.00	3,346,795.60	83.4
**New EPI Emergency plan (SM240612)	UNICEF	19/11/2024 to 31/12/2025	11,177,895.12	11,177,895.12	11,177,895.12	9,334,147.04	83.5
Diphtheria outbreak response (SC250498)	UNICEF	01/09/2025 to 31/03/2026	4,324,560.92	4,324,560.92	4,324,560.92	0	0
HepB Birth dose introduction (SC250495)	UNICEF	04/09/2025 to 30/06/2026	1,770,372.72	1,770,372.72	1,770,372.72	412,980.00	23.3
66034(O CV - repurposed as Emergency plan)	WHO	1,383,766	1,293,240	504,652	480,203	308385	76.2
74737(TCA)	WHO	2,520,081	2,520,081	2,117,871	215,756	186,454	92

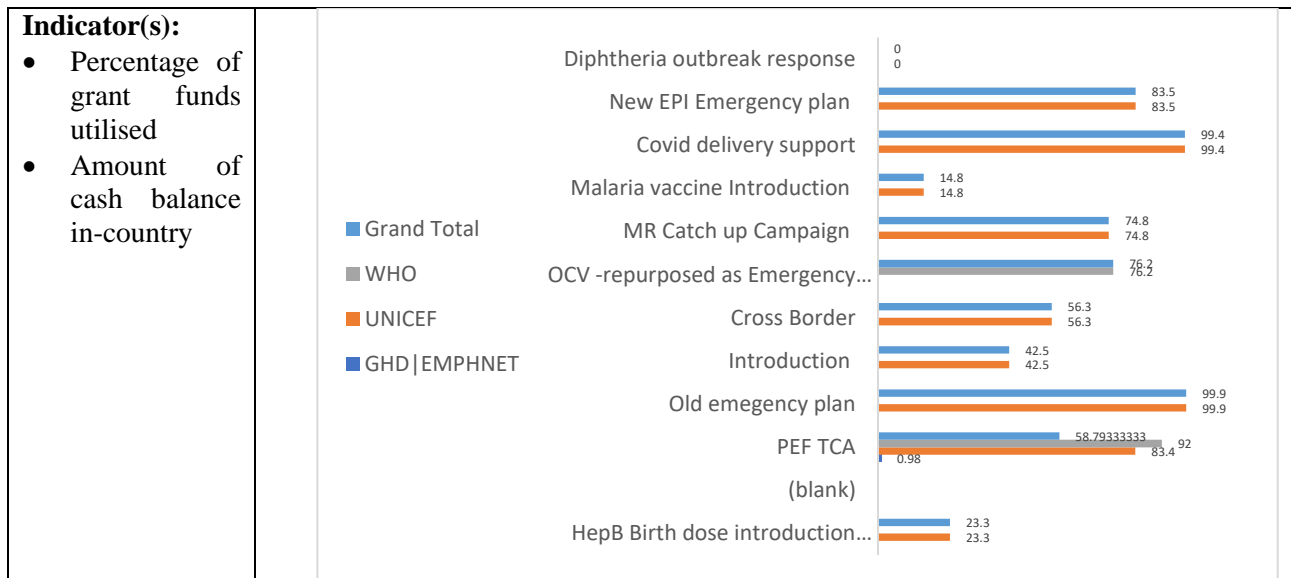
Cash³ Support Summary*

*All amounts are in USD

**Comment below in case of non-compliance

<p>9. Learning Question: How well is the country able to absorb Gavi funding and what are the drivers? (This should cover all funding including funds channelled through partners.) Shaza /Nada and Sahar suggestion to do the analysis by partner, grant, component</p> <p>➤ Comment on the financial implementation progress of grants including but not limited to the utilisation rates. What are the key issues?</p>
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³ All HSIS grants (HSS, VIGs, OPS, Switch), EAF and CDS cash support as applicable.



Country comments:

Despite the challenges of operating in a conflict environment, overall grant absorption has remained strong, with several UNICEF-led grants—such as the Old Emergency EPI Plan and COVID-19 delivery support—achieving utilisation rates above 99%, reflecting sustained operational capacity. Other grants, including cross-border activities and the new EPI emergency plan, show steady progress despite access and logistical constraints.

However, the consistent disbursement levels across all grants demonstrate donor confidence and improved financial management systems.

Overall, implementation has strengthened over the past year, with clear signs of adaptation, resilience, and gradual acceleration in programme delivery despite the ongoing war

10. Learning Question: How well is the country resolving issues arising from assurance activities? What issues are left to solve and what is the path forward?

- What is the progress of Grant Management Requirements implementation?
- How has the country addressed recommendations arising from past audit recommendations (annual external audits + Gavi Programme Audit)?
- Comment on the improvements that have been made to financial management and risk assurance activities with support of assurance providers (e.g., Fiscal Agents, Monitoring Agents, Financial Management Technical Assistance)?
- Specifically, what actions have been taken to enable a larger % of Gavi funds to be channelled back through government systems?

Country comments:

During the reporting period of the current Joint Appraisal (JA), all financial resources were channelled through implementing partners rather than directly through government systems. Each partner operates under its own established audit and financial management procedures, which govern how funds are tracked, reported, and verified.

To strengthen oversight and ensure accountability, KPMG, acting as the designated monitoring agent, has been providing support through a range of risk-assurance activities. This includes reviewing financial documentation, assessing compliance with agreed-upon procedures, and identifying potential risks that could affect programme implementation. Their involvement helps enhance transparency, reinforce fiduciary controls, and provide an additional layer of confidence in the use of funds.

Due to the current fluid and unstable situation in the country, programme funds continue to be channelled through implementing partners rather than through government systems. This approach ensures continuity of essential activities while mitigating operational and fiduciary risks during the crisis period.

Once conditions stabilize and the operating environment becomes more predictable, the intention is to transition fund management back to government channels. Restoring government-led financial oversight remains a priority, and preparations for this shift will begin as soon as the situation allows.

11. Learning Question: Please comment on any other financial management-related bottlenecks for implementation and compliance.

Country comments:

- Arrear payments:

A significant challenge during the previous period was the accumulation of arrears for routine immunization, particularly payments for vaccinators, fuel, and vehicle rentals. This issue overshadowed previous joint appraisals and emerged as a major recommendation for corrective action. Through coordinated efforts between partners and state authorities, most of these arrears have now been resolved, ensuring continuity of services. To prevent recurrence, it is essential to establish clear financial management protocols, timely disbursement mechanisms, and robust monitoring systems. Additionally, contingency planning and accountability measures should be integrated into future operational frameworks to safeguard against similar disruptions. One more thing that is important is clear partner financial requirements and flexible financial management.

- effective financial reporting

An important gap identified during the report period was the absence of an effective financial reporting system and limited contribution from the Federal Ministry of Health. This lack of oversight increases the risk of reallocating funds from planned budget lines to other activities, potentially compromising the overall program objectives. To mitigate this, it is critical to establish a transparent financial reporting framework, ensure timely submission of expenditure reports, and strengthen federal-level engagement in resource management. Implementing strict accountability measures and periodic financial audits will help safeguard funds and maintain program integrity.

12. Learning Question: Is the country effectively addressing gender related barriers (e.g. faced by caregivers or adolescents in accessing immunisation services and barriers faced by health workers in delivering immunisation services)? Dr Najwa / Hori and Sehrish add comments used on barriers study findings

<p>Indicator(s):</p> <ul style="list-style-type: none"> • Did (when) the country conduct a gender analysis that identified barriers faced by health workers, caregivers and adolescents (yes/no) • Has the country implemented initiatives that remove or reduce gender related barriers? 	<p>Graphs:</p> <p><i>Sudan has implemented a comprehensive risk assessment on vaccine perceptions in 2025 which includes a significant analysis on gender.</i></p>
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Country comments:
 As per the preliminary findings from the comprehensive risk assessment on vaccine perceptions, Sudan’s immunization programme recognizes that women are the main caregivers who take children for vaccination, and the country is working to address gender-related barriers. The assessment shows that 56% of mothers need household permission or accompaniment before traveling for vaccination, and this friction is highest in two high-movement states 56% in Red Sea and 62% in White Nile, meaning about 6 in every 10 mothers lack full freedom to reach services on their own, which leads to delays, not always refusal. The Sudan EPI programme promotes gender equality by ensuring that vaccinators and health promoters are predominantly women, with at least 50% female representation in vaccination teams

SBC Interventions on Gender-Related Barriers (Phase 1 – 2024) :
 Sudan has implemented SBC interventions to address the gender related barriers, the interventions are implemented through the partnership with Sudanese Red Crescent through engaging the female religious leaders and Mobile cinema project. As part of these project below mentioned activities were implemented during the 1st phase in 2024:

- Female religious leaders mapped in 6 states (Gedaref, Kassala, Red Sea, River Nile, Northern and White Nile-20 per state
- 120 Female religious leaders have been Oriented in 6 states on gender, IPC and immunization
- Each religious leader has conducted 8 sessions with Mothers, fathers, girls and boys in their geographical area disseminating messages and information on the importance of vaccination
- In total 900 sessions were planned, and 918 sessions were conducted engaging 2,534 males, 23,679 females above 18 years and 2,029 boys and 6,256 girls below 18 years of age

SBC Interventions – Phase 2 (2024)
 During the second phase of the project the focus is on two states Red Sea and White Nile, these states are prioritised during persisting vaccine hesitancy issues, during the second phase the planned activities are as below;

State	Locality	Activity	Frequency
Red Sea	GanibOlaib	Mobile cinema shows Community engagement through religious leaders	42 mobile cinema shows 36 Community engagement sessions
White Nile	Elgeteana		



Moments captured during the training of female religious leaders in different states



Community engagement activities by female religious leader in states

Please use the below table when reporting on initiatives that remove or reduce gender related barriers.

Barriers faced by caregivers

Barrier (state the barriers that restricts the caregiver from access the service)	Intervention that addresses barriers (state the interventions planned)	Was the intervention implemented? (no, partially, fully)	What was the impact (provide evidence)?
Social norms and customs prevent girls and women from accessing health facilities where men deliver services	The activity involving female religious leaders is not only targeting females but also aims to reach males both directly and indirectly	Partially the activity is ongoing	Impact will be evaluated once the activity is completed
Religious barriers-fertility concerns related to vaccines	Religious barriers are addressed through engagement of female religious leaders	partially the activity is ongoing	Impact will be evaluated once the activity is completed
Women are concerned about the lack of privacy and the availability of closed-off spaces at vaccination sites.	Operational barriers are still under discussion with EPI, as with current scenario in Sudan the main focus is the continuity of Immunization services.	No	
Long waiting times and limited hours present barriers, especially for women who often face time poverty, multiple competing demands on	Advocacy with the health workers to limit the waiting time at the health facilities	Partially	Impact will be evaluated once the activity is completed

their time, and mobility restrictions.			

Barriers faced by health worker

Barrier (state the barriers that restricts the caregiver from accessing services)	Intervention that addresses barriers (state the interventions planned)	Was the intervention implemented? (no, partially, fully)	What was the impact (provide evidence)?
Barrier (state the barriers that restricts the caregiver from accessing services)	Intervention that addresses barriers (state the interventions planned)	Was the intervention implemented? (no, partially, fully)	What was the impact (provide evidence)?
Lack of sex-disaggregated data at all levels	Advocacy done with EPI on sex desegregated data for Immunization and Polio	Yes	Immunization reports includes sex desegregated data
Women vaccinators do not always have separate toilets or prayer rooms at health facilities.	Operational barriers are still under discussion with EPI, as with current scenario in Sudan the main focus is the continuity of Immunization services.	No	N/A

What new programming or reprogramming is required to improve impact?

New / Reprogramming Priorities – Gender Focus (Sudan EPI & SBC)

- **Expand role of female vaccinators & mobilizers** ensure >50% women in vaccination teams, with targeted recruitment in hard-to-reach and conservative areas.
- **Scale up engagement of female religious leaders** expand beyond Phase 1 states, using their influence to address vaccine hesitancy, fertility myths, and cultural barriers.
- **Strengthen gender-responsive service delivery** create private spaces for women at vaccination sites, address waiting time burdens, and adapt service hours to women’s schedules.
- **Integrate gender-sensitive SBC approaches** expand use of mobile cinema, mothers’ groups, and female peer networks to shift social norms.
- **Support female health workers** ensure safe working conditions (toilets, prayer spaces), and integrate gender equity in training and supervision.
- **Improve data for equity** consistently collect, analyze, and use sex- and age-disaggregated data to identify gaps and tailor micro plans.

13. Learning Question: How well is the country implementing its health information systems and data strengthening, monitoring and learning activities? Is the system used to triangulate data systems to complement information gaps? Are IDPs entered in HMIS as per displacement and immunization status?

How are population movements accounted for and adjusted in targets? What is the methodology? What are steps taken to improve coverage estimates, especially at subnational level?

- What is the progress of planning and implementing health information system and data strengthening, monitoring and learning activities? Do these collectively constitute at least 10% of your HSIS/EAF grant budget?
- How will the country address remaining data-related gaps or barriers to immunization programme performance?
- Comment on key results or findings for identified learning priorities based on country's application. Specifically, what actions have been taken to improve immunization programme performance based on these data? e.g. better understand specific barriers to immunisation, successfully guide implementation, inform course correction for grant activities

Please share any documentation of learning results if available (e.g. reports, evaluations, assessments, etc).

Country comments:

For updates on the Learning Activities defined in the 2023 support application, please update the table below:

Learning or Evaluation Question	Use Case
How to develop the best policies and strategies to reach the ZD children in the long term?	To study immunisation/demand barriers among ZDC communities. Evidence based decisions are needed to ensure the appropriate interventions are designed to address ZDC. Stake holders needs the results to make decisions.
What are they key barriers, and enabling factors, including gender and demand-related, to close immunity gaps?	To map potential partners in the target localities/communities, in order to design effective collaboration and coordination plan with potential partners at the community level, the information will be needed at the start of the project. Stakeholders need the results to improve the coordination and information sharing to identify and reach ZDC.
Are specific approaches designed to reach Zero-dose children and missed communities working? What worked well, what did not work as well, and why?	Evaluation of the ZDC interventions implemented and validation/assessment of the reported coverage and the level of immunity status in the targeted communities. Findings of this assessment will support evidence-based interventions activities to be implemented or replanned. The information will be needed after the

	implementation of the planned interventions in the first phase/year of the planned intervention. Government, FMOH, PHC, EPI and partners need the results to make decisions.
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Implementation of Technical Country Assistance (PEF-TCA)

UNICEF/WHO /SCI/ ALIGHT/IMC/EMPHNET/Nada

C.

14. Learning Question: Is the country implementing PEF TCA and COVAX TA as expected? Please explain how the TCA has helped to support the achievement of the country objectives.

Country comments:

Sudan is implementing the PEF Technical Country Assistance (TCA) largely as expected, despite operating in a fragile and conflict-affected context. Progress reports show that over 90% of the allocated TCA budget has been utilized, reflecting strong execution capacity and alignment with planned objectives. Partners have collectively advanced key priorities through technical assistance, capacity building, governance support, and evidence generation.

Capacity building has been a major achievement. UNICEF trained 105 supply chain staff on vaccine management, 803 vaccinators on IPC and SBC reporting, and facilitated Human-Centered Design workshops for demand generation. WHO contributed through specialized training IVPDs, on health planning, program management, financial management, and DHIS2 digital system. EMPHNET complemented the training of three cohorts under the Public Health Empowerment Program (PHEP), graduating 93 residents from multiple states. It also supported Rapid Response Team training.

Governance and coordination were strengthened through the operationalization of the Sudan Immunization Program Coordination Mechanism by EMPHNET and the functionality of the National Logistics Working Group (NLWG), facilitated by UNICEF. The ongoing development of the National Immunization Strategy, supported by WHO, will guide program directions for the next strategic period. In addition, mid-annual review and planning workshops streamlined planning and coordination processes. The NITAG strengthening efforts, jointly supported by EMPHNET and WHO, enhanced the country's independent capacity for evidence-based policy decision-making. Collectively, these initiatives improved planning, coordination, and decision-making at all levels.

Supply chain and digital systems saw significant progress. Through direct technical support, UNICEF contributed to cold chain optimization under CCEOP, piloted the electronic stock management system (eSMT), and initiated the Community Health Information Management System (CHIMS) pilot.

Evidence generation was another key area. The ongoing study by Save the Children will play a critical role in guiding future strategies to prevent the accumulation of zero-dose children. EMPHNET supported program documentation efforts and post-conflict assessments, while WHO contributed to the recovery of the Health Information System (HIS) and the integration of DHIS2. In addition, the IVPDs surveillance review informed evidence-based planning for surveillance recovery. Collectively, these initiatives provide actionable data for microplanning and equity-focused interventions.

Community engagement and demand generation were enhanced through creative communication strategies, risk communication committees, and orientation workshops for volunteers, supported by EMPHNET and UNICEF. These efforts fostered trust and improved immunization uptake in hard-to-reach areas.

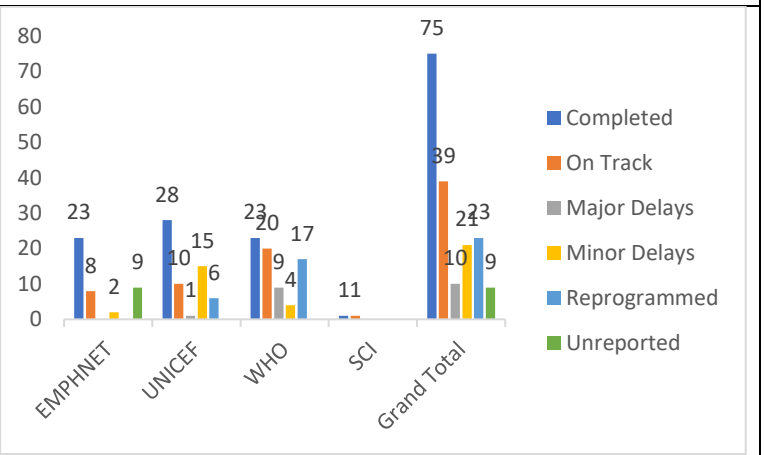
Surveillance strengthening achieved significant progress by supporting in-country testing through the provision of equipment and training for laboratory personnel. In addition, progress encompassed the expansion of community-based surveillance to 590 informants across 15 states. These efforts were complemented by supportive supervision and capacity building for outbreak response.

While most activities are on track, some delays remain in rolling out CHIS tools, training community health workers, and implementing the electronic stock management pilot. These are expected to be completed by the end of 2025.

In summary, TCA has provided technical expertise, financial resources, and operational tools that directly support Sudan’s immunization priorities under IA2030 and Gavi’s equity agenda. Despite contextual challenges, the country has demonstrated strong progress toward its objectives, with pending activities expected to further consolidate these gains.

Indicator(s):

- Country analysis on partner performance as per workplans



Section 2: Looking forward: Summary of key discussion points and follow up actions

Briefly summarise the **key discussion points**, including **identified needs** and **follow up actions** resulting from the Joint Appraisal review and dialogue.

This may include

- Identified (future) needs and priorities
- Follow-up actions to accelerate planned activities
- Expected adjustments to activities and as applicable the Gavi workplan, targets and budget, such as budget reallocations, modifications in TCA planning, revision of dates for anticipated new vaccine applications or introductions, etc.⁴
- Roll-out or expansion of promising practices and innovations
- Other aspects and follow up actions

No	Recommendation	Responsible	Timeline
Program management and financing			
1.	To calculate the cost per person for routine immunization interventions in accessible vs. hard to reach) to inform planning and financial forecasting	FMoH/WHO	June 2026
2.	To document & translate the lessons learned in service delivery, surveillance, and supply and BCU into actionable recommendations to align with the NIS & guide portfolio planning/application	FMoH/EMPHNET supported by all partners	June 2026
3.	Conduct mid-manual internal joint appraisal	Lead by FMoH/ supported by all partners	February 2026 October 2026
4.	Engage non-GAVI humanitarian and development partners via Health Cluster at national and state level to improve coordination and integration	FMoH/WHO	Quarterly monitoring with Adhoc meeting when required
5.	Model cost-effectiveness of session implementation based on antigens availability	FMoH/WHO	June 2026
6.	Establish a mechanism to ensure regular joint monitoring of grant absorption rates.	FMoH/partners	First report by March 2026 - Quarter reports
7.	Ensure the NIS addressed the risk assessment report	FMoH/partners/KPMG	First report by December 2025
8.	Prioritize the digitalization of data recording and	FMoH/EMPHNET	September 2026

⁴ This refers to all types of Gavi support

	registration to improve data availability and accuracy		
9.	Reactivate the immunization research committee to support decision making on program's research	FMoH/WHO	March 2026
10.	Revitalize and implement policies and strategies to address immunization missed opportunities	FMoH/WHO	September 2026
11.	Develop an investment case for resource mobilization based on NIS	FMoH/WHO	March 2026 September 2026
Vaccine supply, quality and logistics			
12.	Conduct EVM during 2026	FMoH/UNICEF	December 2026
13.	Update cold chain inventories and conduct gap analysis to provide evidence-based insights into cold chain needs.	FMoH/UNICEF	July 2026
14.	Assess EPI stores at primary, subnational, and state levels, and undertake necessary rehabilitation to improve warehousing conditions and storage capacity.	FMoH/UNICEF	June 2026
15.	Review the supply chain design and process to identify and implement improvements, including establishing new subnational hubs.	FMoH/UNICEF	September 2026
16.	Plan and monitor scale up of solarization of cold chain infrastructure, especially at primary, subnational, and state levels.	FMoH/UNICEF	Quarter update starting March 2026
17.	Digitalize the Immunization Logistics Information System by deploying the Electronic Stock Management Tool (SMT) to enhance vaccine stock reporting, accountability, and forecasting across all levels.	FMoH/UNICEF	Quarter update starting March 2026
Service delivery			
18.	Improves session quality through assessment, targeted intervention with focus on frontliners training	FMoH/WHO	June 2026
19.	Operationalize U5 immunization policy ensuring integration with	FMoH/WHO	March 2026

	other PHC programs (Child health & nutrition)		
20.	Conduct after-action review for states that completed multiple rounds of BCU	FMoH and partner	March 2026
Disease surveillance			
21.	Develop IVPDs improvement plan based on recent external review results	FMoH/ WHO supported by partners	March 2026
Demand generation			
22.	Strengthen the use of behavioral and coverage evidence to design targeted demand generation strategies that prioritize zero-dose and under-immunized populations.	FMoH/UNICEF supported by partners	Quarter update
23.	Enhance community engagement approaches by leveraging trusted local influencers and structures to build confidence and drive up the uptake of routine immunization services	FMoH/UNICEF supported by partners	Quarter update
24.	Strengthen the implementation targeted, evidence-based Social and Behavior Change (SBC) strategies utilizing context-specific dialogue to systematically address identified resistance points, thereby optimizing vaccine uptake across diverse population segments.	FMoH/UNICEF supported by partners	Quarter update
25.	Improve defaulter tracing and vaccination completion through coordinated home visits and simple reminder mechanisms integrated into routine service delivery	EPI TWG	Quarter update
26.	Sustain targeted demand generation interventions within zero-dose communities in priority geographic and population areas	EPI TWG	Quarter update