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MINISTRY OF HEALTH-ETHIOPIA
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HEALTHIER CITIZENS FOR PROSPEROUS NATIONS

Ministry of Health and Gavi-Partners Joint Appraisal Report, 2024

Ethiopia Ministry of Health

February, 2025

List of Abbreviations

AEFI: Adverse Effects Following Immunization	ISD: Immunization Service Desk
BCU: Big Catch Up	JA: Joint Appraisal
cVDPV: Circulating Vaccine Derived Polio Virus	LMC: Leadership Management Coordination
DHIS: District Health Information System	MAC: Multi-Age Group
eCHIS: Electronic Community Health Information System	MoH: Ministry of Health
EFDA: Ethiopian Food and Drug Authority	MoF: Ministry of Finance
E-NITAG: Ethiopia-National Immunization Technical Advisory Group	ODK: Open Data Kit
EPHI: Ethiopian Public Health Institute	OPV: Oral Polio Vaccine
EPI: Expanded Program on Immunization	PHCU: Primary Health Care Unit
EPSS: Ethiopian Pharmaceutical Supply Service	PHFs: Private Health Facilities
FPP: Full Portfolio Planning	PIRI: Periodic Intensification of Routine immunization
GAVI: Global Alliance for Vaccine and immunization	RAT: Readiness Assessment Tool
HCD: Human Centred Design	RCS: Rapid Community Survey
HEW: Health Extension Worker	RED: Reaching Every District
HFs: Health Facilities	RHBs: Regional Health Bureaus
HPV: Human Papilloma Virus	RI: Routine Immunization
HW: Health Worker	SIAs: Supplemental Immunization Activities
ICC: Interagency Co-coordinating Committee	TWGs: Technical Working Groups
ICT: Information Communication Technology	TCA: Targeted Country Assistance
IDP: Internally Displaced People	UV: Under Vaccinated
IIP: Immunization in Improvement Plan	VPD: Vaccine Preventable Diseases
ISC: Immunization Supply Chain	WUENIC: WHO and UNICEF Estimate of National Immunization Coverage
IIP: Immunization In Practice	YF: Yellow Fever
IPC: Inter-personal communication	ZD: Zero-Dose

Executive summary of Joint Appraisal report

The Joint Appraisal (JA) is a key monitoring and compliance mechanism of the Ministry of Health (MoH) and its partners to show how the Gavi investment has been utilized for the intended program objectives. This joint appraisal report highlights the status of the immunization program, good practices, challenges, and lessons learned. Gavi also uses joint reports and workshops as **Gavi's regular monitoring and performance management (MPM).**

The JA report is an annual MoH and partners' joint report with input from various stakeholders. It allows discussion with Gavi Alliance partners and other important stockholders on how immunization programs are being operated compared to their goals and objectives. It also gives an opportunity to see how Gavi's support is contributing to this progress.

The joint appraisal report has two major components. Section 1: Country situation: an overview of the immunization program performance by thematic areas (leadership, management and coordination; demand creation and promotion; vaccine logistics and supply management; service delivery; surveillance and response; data and monitoring and evaluation; vaccine safety monitoring; finance; human resources and capacity building; and TCA contributions) & the progress made and challenges faced during reporting period. Section 2: Looking forward: summary of discussion points and follow-up actions.

The JA report is prepared in line with the Gavi joint appraisal report template by addressing key learning questions in each thematic area. It also includes crosscutting issues, such as factors that facilitated and impeded the progress, promising practices and innovations that emerged, key contributions from partners, and major risks that need to be mitigated. The JA report also prioritized focus areas for the year 2025 that can guide our performance to improve the immunization program by identifying and reaching zero-dose and under-vaccinated children throughout the country.

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Section 1: Immunization Program Performance

Learning Question 1: What progress has been made to reach zero-dose and under-immunised children with vaccinations?

1.1 Routine Immunization: Achievements, Challenges, and Future Directions in Ethiopia

Since its launching in 1980, Ethiopia's routine immunization program has significantly advanced the fight against vaccine-preventable diseases (VPDs) and improved child survival rates. Anchored in the technical guidance from the World Health Organization (WHO) and the Ethiopia National Immunization Technical Advisory Group (E-NITAG), the program now delivers 13 life-saving antigens. These include vaccines against diphtheria, pertussis, tetanus, polio, measles, Hib, hepatitis B, pneumococcal disease, rotavirus, HPV, COVID-19, and others.

Strategic advisory bodies such as E-NITAG and coordination platforms such as the Inter-Agency Coordinating Committee (ICC) have strengthened evidence-based decision-making and fostered robust partnerships, ensuring the program's success. Milestones include the introduction of pentavalent, PCV-10, Rota, IPV, HPV, and COVID-19 vaccines. Vaccine switches, such as PCV-10 to PCV-13, tOPV to bOPV, TT to Td, Rotarix to Rotasil, measles single-dose schedule to two-dose schedule, IPV single-dose schedule to two-dose schedule, and HPV two-dose schedule to one-dose schedule were also among the major milestones. Vaccines introduced and used in response to outbreaks include mOPV2, nOPV2, OCV, Men A, and yellow fever. The remarkable achievements include maintaining wild polio-free status and eliminating maternal and neonatal tetanus. Ethiopia's immunization program targets over 3.6 million children annually and delivers immunization services through static, outreach, and mobile services. These efforts have protected millions from VPDs, and affirming the program's vital role in bolstering public health resilience.

Different data sources indicated that the major challenges for the suboptimal immunization coverage are access issues in different contexts, such as conflict affected areas, IDPs, flooding and drought affected areas, urban slums, hard to reach topography, communities living far from health facilities, and others. To address these challenges, the MoH, in collaboration with partners, has been working to expand the service for the community in addition to the static services provided at health facility.

- 447 priority woredas from agrarian and pastoral regions were selected to expand immunization services through intensified outreach for agrarian, and PIRI for pastoral regions with support of Gavi EAF grant. Additionally, UNICEF (50 woreda), CHAI (14 woreda), WHO (20 woreda) are implementing the integrated outreach and PIRI in addition to the 447 woredas.
- Involving humanitarian agencies, Gavi ZIP program is implemented through IRC to restore, rehabilitate and sustain immunization services in 89 woredas affected by conflict
- In urban slum area, the urban integrated outreach program is initiated to reach community in need to expand services, partners, such as UNICEF and CHAI have been supporting the government in this effort.
- Enhancing the engagement of private health facilities to expand immunization service in urban areas

- Extending immunization service provision working days and hours in high load facilities based on the need,

Table 1: Immunization coverage from 2021 to 2023 based on WUENIC

Indicator	2021	2022	2023	% change, 2021-2022	% change, 2022-2023
Penta 1 Coverage	70%	70%	77%	0.0%	10.0%
Penta 3 Coverage	65%	65%	71%	0.0%	9.2%
MCV 1 Coverage	53%	55%	61%	3.8%	10.9%
MCV 2 Coverage	46%	48%	53%	4.3%	10.4%
Number of ZD children at national level	1,205,444	1,229,971	917,000	+2.0%	-25.5%
Drop out from DTP1 to DTP3 at national level	7.1%	7.1%	6.5%	0.0%	-8.5%
Drop out from DTP1 to last routine dose of MCV at national level	34.3%	31.4%	31.2%	-8.3%	-0.6%
Data Sources: WUENIC 2021-2023, MOH ZD estimation for Big Catch Up (BCU)					

The immunization service coverage stagnated during the previous years due to COVID-19 and other man-made and natural problems. However, the above table indicates that Penta 1 coverage shows an increment in 2023 compared to 2022. In addition, there is a significant reduction in the number of zero-dose children in 2023 (25.45% reduction) compared to 2022.This achievement has been made possible by;

- Strengthening program management (coordination and partnership, micro planning, mentorship, supervision, program reviews, feedbacks and others)
- Expanding static, outreach and mobile services
- Implementing Periodic Intensification of Routine Immunization (PIRI)
- Conducting routine catch-up and BCU vaccination
- Integration of immunization with other health services, such as campaigns
- Engaging humanitarian partners in conflict affected areas
- Rehabilitation of public health facilities damaged during conflict and climate change
- Engaging private health facilities in urban areas
- Capacity building for health workers
- Expanding cold chain equipment and vaccine last mile delivery
- Increasing demand creation and social mobilization, advocacy
- Improving policy and guidance to expand service, and catch up vaccination policy
- Deployment of technical assistants to provide support at national and subnational levels.
- Financial support for targeted areas through EAF fund.

Despite improvements in coverage and reduction of ZD children, Ethiopia's immunization program continues to face the following challenges that threaten or impede its equitable reach and sustainability. These include:

- Natural and human-made challenges, such as conflicts, drought, and flooding.
- Limited engagement of humanitarian partners in conflict affected areas, given that there are massive demands in these areas
- The effects of COVID 19 pandemic
- Sub-optimal functionality of the Health Extension Program (HEP)
- Financial constraints for running the programs
- Logistical barriers, including the difficulty of delivering vaccines and services to remote and conflict affected areas
- Challenging topography, scattered settlement and pastoral communities
- Narrow immunization structure at all levels, and staffing shortages and turnover
- Limited infrastructure, such as road, and electricity
- Limited public-private partnership,
- Limited pre- and in-service training opportunities for program managers and service providers
- Limitations of the data quality and evidences
- Suboptimal program monitoring
- Outbreaks and other competing priorities

The MoH, in collaboration with partners, is working and committed to addressing those challenges with the essence of strengthening existing programs, restoring and rehabilitating services, and sustaining achievements, thorough cost-effective and tailored approaches, innovative mechanisms, robust data use, partnerships, and country-led approaches.

1.2. Progress on Zero Dose (ZD) Reduction

Ethiopia has been progressing in reaching ZD from the birth cohort by strengthening routine immunization and reducing backlogs through catch up vaccination. Initially, Ethiopia estimated 3.9 million ZD children as a backlog from 2019-2022. Among these 651K ZD children 12-59 months of age were vaccinated through the catch-up vaccination program as of December 2024. Even though several works remain ahead, this is encouraging because catch up is a new initiative that began in 2024.

MoH clearly strategized service delivery modalities to identify and reach ZD and under vaccinated children

i. Routinely or regularly: ZD vaccination is planned to be implemented regularly every day whenever there is vaccination in static, outreach, PIRI, mobile vaccination, and hit and run
ii. Campaign: Organizing BCU vaccination campaign periodically based on the availability of funds to reach more children
iii. Integration: Integrating ZD and under vaccinated children vaccination with any campaigns (nOPV2, HPV, Measles reactive vaccination and others similar services)

There are different strategies deployed to conduct the BCU in different contexts and across the regions in a tailored manner.

- In urban areas, especially in Addis Ababa, identification and vaccination of ZD and under-vaccinated children were implemented by integrating with the nOPV2 campaign. Urban slum areas were mapped, and outreach sessions were organized through the support of CHAI and UNICEF. A human-centered design approach was implemented to identify the root causes. Dire Dawa and Harari towns conducted a house to house headcount to identify and vaccinate ZD children with the support of Gavi EAF funds.
- In agrarian communities (Amhara, Oromia, SWE, Central Ethiopia, South Ethiopia, Tigray, Sidama): head count, micro plan and intensified outreach sessions organized with Gavi EAF funds and support from implementing partners through the ZD projects (UNICEF, WHO, CHAI, IRC, and CDC).
- In pastoral communities (Somali, Afar, Benshangul and Gambela): community mapping and PIRI were implemented to identify and reach through specific project support of GAVI EAF,UNICEF, CHAI, PATH, JSI, and CCRDA.
- In humanitarian areas, partners that include IRC, UNICEF and WHO supported the government efforts of vaccinating ZD and under vaccinated children by organizing vaccination teams. The hit- and-run approach was also employed in active conflict areas. In October 2024, the MoH with regional health bureaus and partners, conducted an intra-action review (IAR) to review the implementation of good practices, facilitating factors, and challenges and limiting factors for the immunization program implementation. Accordingly, the action plan was developed to reignite the BCU implementation.

Table 2: Estimated ZD Targets (2019-2023) and children vaccinated by Region

Region	Estimated ZD target (2019-2023)	ZD vaccinated		Total ZD vaccinated	% reached
		Integrated catch up (Five different SIAs + RI catch up)	Big-catch up (1 round), and several integration with Nopv2, HPV MAC, regular as of January 20, 2024		
Addis Ababa	16,992	216	23	239	1%
Afar	103,136	22,119	19,383	41,502	40%
Amhara	655,691	44,070	61,040	105,110	16%
Benishangul.G	31,573	7,977	8,824	16,801	53%
Central Ethiopia	185,002	9,517	5,458	14,975	8%
Dire Dawa	3,531	1,421	462	1,883	53%
Gambella	14,340	5,487	8,783	14,270	100%
Harari	6,689	259	324	583	9%
Oromia	1,536,947	113,040	70,313	183,353	12%
Sidama	237,072	3,216	32,856	36,072	15%
South Ethiopia	226,113	13,745	143,421	157,166	70%
Somali	452,970	70,196	16,397	86,593	19%
Southwest Ethiopia	125,902	7,330	23,135	30,465	24%
Tigray	392,028	35,449	20,608	56,057	14%
Total	**3,987,986**	**334,042**	**411,027**	**745,069**	**19%**

There are several factors that facilitate vaccination of ZD children.

- Ethiopia developed a policy guide that facilitated the vaccination of ZD children who are age greater than one year in year 2022. In addition, in 2023, the MoH developed an accelerated plan to address ZD and under vaccinated children following the moment of global BCU initiatives. This plan, in turn, facilitated to mobilize vaccines and leverage resources.
- A catch up/BCU field level operational guide was developed to harmonize the uniform implementation across all the facilities.
- There has been leadership commitment especially at higher levels. The program has advocated and made ZD vaccination as a flagship agenda by the ministry and leaders. This has facilitated the ZD performance review, as monitoring has been conducted regularly and support and guidance have been provided promptly. MoH has advocated for regional presidents and top political leaders as ZD is a litmus of the functionality of primary health care and it is an indicator for deprivation of essential health services that require immediate action.
- Several advocacy workshops conducted for media professionals, and stakeholders and these efforts were also cascaded to subnational level,
- The Gavi HSS/EAF/TCA support for the immunization program, such as, head count and micro planning, outreach/PIRI and monitoring support has facilitated the implementation.
- The program leveraged any available resources from World Bank -COVID 19 support, EAF, HSS, SDG and CDC resources to provide orientation on ZD, to advocate or mobilize the community, identify and vaccinate, and monitor the implementation,
- Specific ZD projects, which are implemented by UNICEF through Gavi and CIFF, CHAI (through Gavi, BMGF and Elma), WHO (Gavi), IRC (Gavi) in humanitarian corridor has supported specific woredas to implement digital head count, micro plan, outreach and PIRI and conducted supervision and reviews of ZD and under vaccinated children, and simultaneously supported the health system strengthening.
- COVAX, TCA and other project technical staffs have been leveraged to support the catch-up vaccination.
- Head count of ZD children was initiated by the ministry using digital tools to register and map ZD children.
- Use of locally generated data to estimate ZD by subnational levels (region and woreda level)
- Different strategies were deployed based on the local contexts (Hit and run in conflict affected areas, PIRI and mobile team for pastoral, integrated outreach for urban and agrarian hard to reach areas)
- Vaccine from the routine immunization stock (specifically Penta vaccine) was utilized to vaccinate ZD children during the launching of BCU, which was later refilled by the subsequent BCU shipment. Partners, who are working on ZD reduction or any immunization activities, also mobilized to support the efforts of the government, especially in their project areas and humanitarian corridors.
- Integration of ZD vaccination with other health programs (Campaigns).
- Partners supported the government to facilitate performance, such as, logistics delivery in conflict affected areas, facilitating service provisions, and community mobilization.
- Supportive supervision and rapid community survey were conducted to support health facilities and lower administrative structures on routine immunization and catch-up vaccination.

- Regular review through virtual meetings was conducted to discuss on ZD vaccination at national, regional and lower levels and feedbacks also were provided regularly.
- Intra action review was conducted with RHBs and partners to deeply review the implementation of catch-up vaccination and develop action plan to improve implementation.

Factors impeding the implementation of catch-up vaccination:

- Operational budget shortage for identification, vaccination, monitoring, printing, training, and other related activities.
- Conflict, bad terrain, disbursed population settlement, rainy season, and flooding limited the access to conduct identification of ZD and UVC
- Difficulties to delivering vaccines in conflict affected, remote rural, and flooded areas.
- Minimal engagement of lower-level officials to support the BCU activities and suboptimal functionality of immunization coordination platforms at lower level (Woreda and health facility level)
- Resistance and misperceptions of Health Workers (HWs) to accept ZD or UVC presence in their catchment areas also impede the identification and vaccination of ZD and UVC.
- Gaps in prioritizing of high-risk areas during identification
- The catch-up vaccination is labour intensive and health workers at lower level are over-loaded with various activities
- Misperception of considering BCU as a campaign (one-time activity)
- Vaccine shortage during BCU campaign period (Penta vaccine) and bundling problem of vaccines and other supplies
- Inadequate social mobilization on catch-up vaccination, broadcasting of spot messages, print material production and social media utilization on catch up vaccination
- Data quality gaps in recording, reporting and monitoring
- Shortage and poor utilization of recording and reporting tools

Promising practices in reduction of ZD children

- Use of digital tools for head count and mapping Open Data Kit (ODK) or Chief Technology Officer (CTO) survey head count tool
- Rapid community survey tool deployed to validate the catch-up vaccination
- Continued higher level leadership follow up and commitment to support the catch-up vaccination
- Partner engagement and support in the catch-up vaccination.
- Intra action review conducted and action plan developed, as well as, re-ignition of catch up on the way.
- Big catch-up vaccination contributed to strengthening RI and PHC and this resulted in positive attitudes for the initiative.

Major areas need to get addressed:

- The need to strengthen the humanitarian agencies involvement in conflict affected areas
- Mobilizing operational budget for the BCU implementation or re-ignition.

- The need for special support in remote, pastoral, hard-to-reach, and other contexts.
- Reigniting of periodic efforts to address backlogs and strengthen the immunization system.
- The perception of health workers and/or lower-level managers on the presence of ZD children in their catchment
- Data quality problems necessitate mitigations to improve the recording, and reporting

Big catch up vaccination contribution to routine immunization and primary health care strengthening

As evidences showed that ZD is like a litmus for the multiple deprivations of social, economic, and other contexts. The BCU implementation has been planned to be integrated with other essential services. During the BCU implementation, routine immunization and other nutritional and maternal services have been provided. This promotes resource sharing, optimizes service delivery, and reduces service costs that enable to use resources efficiently and sustainably.

1.3. Private Health Facility (PHF) Support for their engagement in immunization program

Public–Private-Partnerships (PPPs) are essential in moving towards universal health coverage to fill gaps in coverage and reduce burden from the public health facilities. The engagement of private sector is a means to improve access and quality of immunization services. MoH has been coordinating government health facilities and the private health facilities to standardize service provision between public and private.

In Ethiopia, the contribution of private sectors to improve the immunization coverage, service quality, and disease surveillance remains inconsistent across different regions. To address this gap, MOH has revised its immunization implementation guidelines to better integrate and engage Private Health Facilities (PHFs) into national immunization programs. This initiative aims to leverage the strengths of both public and private sectors to enhance service delivery.

Table 5: The number of PHFs providing immunization services across the years and their contribution

Indicators	2020	2021	2022	2023	2024	Remark
Number of private health facility providing immunization service	34	45	56	126	166	PHF contributes 1.1% form the total
Number children vaccinated through the private health facility (Penta1)	28,245	28106	26695	34316	40098	

Table 5 shows the engagement of PHF has been increasing from time to time in providing immunization services in big cities. The PPP has led to significant improvements in the quality of immunization services delivery in the private sector by standardizing service and guide PHFs to use only the WHO Pre-Qualified-Standard (PQS) refrigerator. The DHIS 2 report showed that overall the PHF contribution is 1.1% from the total vaccinated children. It was also identified that there are PHFs that do not have access

to DHIS2 for reporting their performances and their contribution was reported through the government facilities.

Table 6: PHF currently providing Immunization Service by regions as of December, 2024

S.n	Name of regions	#of PHFs *	PHF providing RI service	PHF having DHIS2 access	PHFS having DHIS2 access %	PHFs with WHO PQS refrigerator	PHFs with WHO PQS refrigerator%
1	Addis Ababa	1084	67	59	88	67	100
2	Afar	43	3	3	100	3	100
3	Amhara	925	16	16	100	16	100
4	Dire Dawa	70	6	6	100	5	83
5	Gambella	182	1	1	100	1	100
6	Harara	44	2	2	100	2	100
7	Oromia	1616	50	34	68	36	72
8	South Ethiopia	209	4	4	100	2	50
9	Sidama	62	5	5	100	2	40
10	Somali	81	6	6	100	2	33
14	Tigray	262	6	0	0	6	100
11	Ben. Gumuz	126	0	-	-	-	-
12	Central Eth	412	0	-	-	-	-
13	SWE	212	0	-	-	-	-
	Total	5328	166	136	82%	142	86%

** Potential health facilities we mean the private health facilities which provides a mix or single services related to RMNCH, have high client flow opportunity to create demand for RI, having reporting system, and eligible to provide immunization service if they get the required support from the government and relevant partners..*

As shown in Table 6, some PHFs do not have refrigerators for storing vaccines. However, they are using cold boxes and vaccine carriers for vaccination. There are thousands of PHFs that can potentially contribute to immunization if they can get a WHO PQS refrigerator as a minimum support package. There are factors that facilitated the engagement of PHF in immunization service delivery:

- The health sector plan encourages partnership of the private sector in health investments.
- The engagement of PHF clearly indicated in immunization policy implementation guidelines, including the role and responsibilities of PHF.
- MOH, in collaboration with CHAI mapped PHFs and identified potential PHFs that can provide immunization services and advocacy conducted to initiate immunization services at PHFs.
- The existence of potential PHF that could procure WHO PQS refrigerators by themselves, (most of the PHFs in Addis Ababa procure WHO PQS refrigerators by their own).
- The existence of the PHFs forum in Addis Ababa city administration that creates opportunity to hear from PHFs.

- With support of USAID, about 40 refrigerators were provided for potential PHFs with high client flow to start immunization services and expand the engagement.
- MoH, CHAI, and PATH provided capacity building training (IIP). Supportive supervision is also conducted to PHF to enhance the quality of immunization services and increase access.
- With the Gavi TCA support, CHAI deployed Technical Assistances to MoH and Addis Ababa city regional health bureau to support the PHF.

The fact that the existence of huge number of potential PHF and interests from PHF owners to provide immunization services at cites/towns, there are factors impeding their engagement in immunization services. The following are major challenges that limit the scale up of PHFs engagement and their performances:

- WHO PQS refrigerators are very expensive that impedes the engagement of PHF as expected
- No tax exemption for procuring WHO PQS refrigerators by private owners
- High turnover of trained EPI service providers from PHFs affects quality of vaccination services and leads to service interruptions.
- Limited donors/ partners support in availing refrigerators and other supports to PHFs,
- Less attention from regional/lower-level officials, in advocating, and supporting PHFs
- Fragmented mechanisms of vaccine delivery for PHF affect vaccine availability every time.
- Some of the PHFs have no system for reporting their performance (limited direct access to DHIS2)

In order to expand the PHF engagement on immunization service and increase performance, the following key issues need to be addressed.

- Resource mobilization from Donors/Partners to procure WHO PQS refrigerators/ Donation of WHO PQS refrigerators for potential PHFs to scale up EPI services
- Advocacy for tax exemption for procuring refrigerators by private owners like as other medical equipment's
- Establish uniform vaccine delivery mechanisms for the PHFs providing immunization service, including direct delivery from EPSS
- Facilitate reporting mechanisms through direct access to DHIS 2 for remaining health facility
- Continuous follow up, and support including capacity building training and supportive supervision to PHFs

Lessons learned from public private partnership for immunization service were.

- Conducting training sessions on RI, at least annually, is important to fill the gap due to high staff turnover and maintain quality of services.
- Supportive supervision on PHFs is also important means of capacity-building to further strengthen partnership with private health sectors.

- Private health facilities need to be supported to have WHO-PQS refrigerators to maintain optimum temperature and ensure vaccine potency.

1.4. Performance of Immunization Demand Creation and Promotion

EPI demand creation and promotion activities are led by the Immunization Service Desk (ISD) and there is functional Communication Technical Working Group (C-TWG) which is composed of staff from the MoH LEOs and agencies, and partners. The C-TWG is working in developing advocacy and communication tools and messages, organizing advocacy and program communications and coordinating social mobilization, developing demand creation and promotion guidelines, such as Human Centre Design (HCD) and Inter Personal Communication (IPC) guidelines and tools. The MoH has developed demand promotion for immunization action plan (2024-2025) to guide and coordinate the activities implementation at national and subnational level, including partners.

In the reporting period 2023 and 2024, the MoH immunization team conducted the following key activities to create demand and promote the program and this effort contributed for successful campaign implementation and immunization service coverage improvement. WHO, UNICEF, PATH, CCRDA/CORE Group, Girls Effects, IRC/REACH Ethiopia and other partners also designed behaviourally informed interventions to enhance COVID-19 vaccine uptake, HPV campaigns, BCU campaigns. The activities include community conversations, sensitization workshops for media professionals, religious group, house-to-house mobilization and community dialogues and printed materials (leaflets) to IDP sites, and high zero-dose areas across regions and communities.

i. **Advocacy:** several advocacy workshops conducted for different targeted groups to seek political gain, resource mobilization and other required supports

- High level advocacy conducted at national level with regional presidents, regional health bureau heads and political party leaders on ZD and under vaccinated children vaccination and integrated COVID-19 vaccine to seek due attention to the issue and monitor the implementation and support financially. All regions conducted an equivalent advocacy meeting with their respective leaders and cascaded to the lower level, reach on consensus and create sense of ownership about addressing the ZD and under vaccinated children in their catchment area. The effort has been evaluated weekly with other activities critically.

Figure 1: *Picture of national level advocacy workshop on ZD* and under vaccinated children *for regional presidents and political leaders, 2024*

- High level advocacy workshop held with House of People Representatives on ZD and under vaccinated children vaccination program to support and monitor the implementing actor's and increase domestic financing allocation for immunization program. Based on this, the representatives include the ZD and under vaccinated children as one of their indicators/ agenda during their supervision to the ground level.

Figure 2: *Picture of national level advocacy workshop on ZD and immunization program for parliamentarians, 2024*

ii. Advocacy event was conducted by Ministry of Education, Ministry of Women and Social Affairs, Inter Religious Council of Ethiopia, Federation of People with Disability Association, Teachers Association, Youth Association, Ministry of Health Youth Council, media agencies, and health care professionals association on HPV vaccination campaigns, ZD and under vaccinated children, and integrated COVID-19 vaccination. Following the advocacy event, sectors supported the HPV vaccination especially school vaccination has been facilitated. Ministry of Education office officially communicated to its subnational structures and schools to support the implementation of the campaign in the school set up.

iii. Subnational level advocacy also conducted with different stakeholders on ZD and under vaccinated children, HPV Multi Age Cohort (MAC) and integrated COVID-19 vaccination. After the national level workshop, all participants start disseminating key messages about the HPV MAC vaccination campaign throughout their communication platforms like social media and their lower structures.

   a. WHO Supported sensitization and advocacy workshops on the COVID-19 vaccine with religious and community leaders, as well as, media professionals.

Figure 3: *Picture of national and regional level advocacy workshop on ZD and immunization program for various stakeholders, 2024*

Sensitization workshop has been conducted with MoH public relation experts, hotline councillors (952 and 8335) media agencies and professionals, regional health bureau public relations; both on HPV vaccination campaign and routine immunization including COVID-19 vaccine. In addition to the national level workshop, the regional level sensitization workshop was conducted with regional media agencies, experts and public relation officers, and for school principals and community platforms at sub- regional level.

iv. **Press release and launching**

a. Press release and launching for HPV vaccination campaign: in March 2024, a press release has been given by the MoH Minister Dr. Mekdes Daba and other higher officials at national level and by RHB heads at regional level.

Figure 4: *Picture of National level launching ceremony and press release on HPV MAC vaccination campaign on Nov 2024.*

b. Press release and launching for BCU was conducted by the State Minster of the MoH for media professionals of both the government and non-governmental media in June 2024.

Figure 5: *Picture of launching and press release on the BCU, June 2024*

v. **Africa Vaccination Week and world polio day** was commemorated with the presence of the state minister of MoH, RHB heads, partners, religious leaders, and community representatives and media professionals. During the event, panel discussion was held on polio, and ZD and partners and stakeholders renewed their commitment to support the program. Using the events catch up vaccination and polio vaccination were provided to eligible children and taking the opportunity key immunization messages were transmitted via live streams and pick hour news and social media.

Figure 6: *Picture of national level AVW celebration and World polio day commemorations, 2024*

vi. **Social Mobilization**: social mobilization for immunization program conducted to create demand and promote immunization services through different approaches.

a. Broadcasting TV and Radio spot messages for the public during campaign, and new vaccine introduction. For instance, several TV and radio messages on HPV and BCU campaigns were broadcasted using different local languages. There are favourable media platforms with large numbers of audiences, such as Fana (>6 million reach), Ethiopian Broadcast Service (EBS, >21 million reach) and Ethiopian Broadcast Corporation (EBC >15 million).

Figure 7: *Picture of TV message broadcasting*

b. Community level mobilization also conducted through social mobilizers during campaigns, integrated outreaches and PIRI.
c. CCRDA/Core group organized community-level demand-generation activities through community conversations and 110 Community Conversation (CC) groups were established, and each group conduct monthly dialogues that engaged 1,206 participants. In addition,17,306 individuals reached through mainstreaming EPI into religious system and 92 religious leaders actively engaged
d. Girls Effect supported Somali and South Ethiopia regions to reach 8,538 caregivers, and 9,692 care givers respectively, and 16,182 people through Champion App and, community-based discussion and house-to-house mobilization respectively
e. Gavi IRC REACH oriented vaccinators and HEWs to provide health education for pregnant women who attended antenatal care (ANC) in Tigray region
f. Gavi REACH Ethiopia conducted a familiarization and demand creation workshop for 487 participants; 6,000 leaflets were distributed to high ZD kebeles and villages.

Figure 8: *Picture of community level mobilizers, 2024*

vii. **Program communication:** immunization program communication was conducted for several experts to communicate the program

a. Capacity building: demand creation team also conducted several capacity building activities for subnational team to implement

- UNICEF deployed 15 SBC consultants at national and regional levels to strengthen the MoH's demand promotion efforts related to routine immunization and new vaccine introductions
- Human Center Design (HCD) ToT was provided for 121 participants from MoH, regions and partners. Regions also cascaded the training and 345 received HCD training. Currently MoH works with subnational teams to train 9746 participants at PHCU level.

Figure 9: *Picture of HCD Training, 2024*

- Partners supported, health workers and service providers utilized HCD and behavioural Insights (BI) to reach zero-dose communities, and documented best practices and lessons learned from the demand promotion activities
- CHAI implemented the HCD approach in urban slum areas (Addis Ababa), pastoralist (Afar) and agrarian (Oromia) to identify drivers and reach zero-dose and under-vaccinated children, quantitative and qualitative data collected and drivers' analysis is underway in Oromia and Afar regions and implementation of interventions started in Addis Ababa

b. A letter of collaborative sent to MOE on how the Education structure works together with the health sector at all levels

c. WHO Developed tailored communication strategies for school communities to increase vaccine uptake among students and staff

d. Poster and banners (Job aids) prepared and distributed to vaccination for community mobilization.

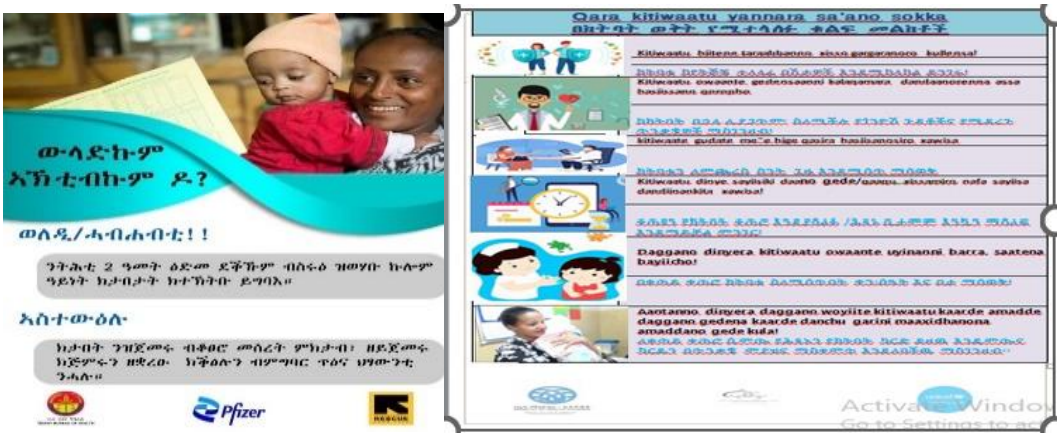


Figure 10: *Picture of posters and Banners for social mobilization, 2024*

The following factors that facilitated the implementation of demand creation and promotion activity accomplishment to contribute for the reduction of ZD and under vaccinated children;

- Leadership commitment
- Multi-sectorial collaboration
- Strong partnership with stakeholders
- Financial support from both global donors and partners
- Utilization of multiple media outlets based on the context
- Functional existing community platforms in some areas

In general, the fact several demand creation and promotion activities have been conducted, however, there are still gaps in program that needs to be addressed through demand creation and communication activities. The following are some limiting factors and challenges that impede the implementations.

- Gap of the in person and community based social mobilization for communities who have limited access for media and network access
- Limited attention to demand activities and HR shortage at sub national levels
- Resource constraints for demand creation and promotion activities
- Insecurities in some areas limited community level interventions
- Weakened existing community structures to intensively engage them for EPI demand activities
- Mis and dis information circulating through social media on vaccines
- COVID-19 vaccine hesitancy among some communities and health workers

Lesson learned / promising practices in demand creation and promotion

- The leadership engagement has a significant impact to provide direction and close follow up
- Partnership created with different stakeholders, such as the Interreligious Council of Ethiopia are crucial to solve context and religion specific demand barriers
- Advocacies with parallel Minister offices (multi-sectoral collaboration) plays a pivotal role for smooth implementation of the program

- Employing category specific message dissemination strategy enhances the reach to the target, such as utilization of Tiktok and social media influencers to disseminate HPV vaccine messages

1.5. Immunization Supply chain management

Learning Question: How well are vaccine stocks being managed? Are vaccines being consumed at rates that are in-line with approved forecasts? what are the key drivers of consumption compared to expectation (e.g., stock-outs, increased coverage, wastage)?

The MoH, in collaboration with the EPSS and partners, have been working on strengthening the immunization supply chain of the country. The national and sub national vaccine logistics technical working group, who act as an advisory team for the ministry, RHBs and EPSS on immunization supply chain activities, are key drivers for the improvement on cold chain equipment management, LMIS, HR and capacity building and development, temperature monitoring, inventory management, distribution and waste management activities.

Performance/Achievement/Result:

- The country has conducted vaccine, and related supplies demand forecast exercise for Gavi supported, traditional, new vaccines, vaccines for measles SIA, HPV MAC, BCU and COVID-19 Vaccine.
- Installation of 3 cold rooms, 1,671 SDD refrigerators, 378 on-grid refrigerators, and the procurement of 2 large cold vans, 10 medium vans, 10 refrigerated pickups, 965 cold boxes, 624 motorcycles,1,395 vaccine carriers, and 10,875 fridge tags. These upgrades, which added 564,667 litters of storage (200,667 litters) and transportation (300,000 Litters) capacity, have supported the successful rollout of new vaccines, catch-up vaccination, the HPV MAC campaign, and routine immunization efforts. These supports are funded by GAVI, World Bank and AfCDC and facilitated by UNICEF.
- Initiated the revitalization and integration of logistics systems, including the mBrana mobile application, Dagu-2, to ERP and national dashboard and cold chain equipment inventory module to MEMIS in collaboration with DHA/JSI, UNICEF and CHAI. Temporary solutions, such as Google Sheets and Kobo Toolbox, are being used to collect and analyze vaccine and supply stock status until the mBrana system and Dagu-2 become fully operational. Additionally, a VRF data analysis tool has been developed to enhance supply chain performance monitoring and is set for full implementation in 2025.
- In collaboration with UNICEF, the MOH is leveraging data visibility platforms such as ViVA, the electronic vaccine arrival report, and the collaborative procurement portal. These tools help in forecasting, supply planning, vaccine clearance monitoring, and projecting vaccine stock levels. They also help proactively identify and address potential risks of overstocking or stock-outs.
- The medical equipment management information system (MEMIS) database is being used for regular updating of cold chain equipment inventory management, CCE registration, work order tracking, transaction management and maintenance and installation request and report.
- With technical and financial support of UNICEF and CHAI, MOH is utilizing RTMD at all EPSS cold rooms and health facilities equipped with vaccine refrigerators with RTMD. Temperature feedback collected via RTMD is shared centrally and disseminated to all hubs and health facilities.

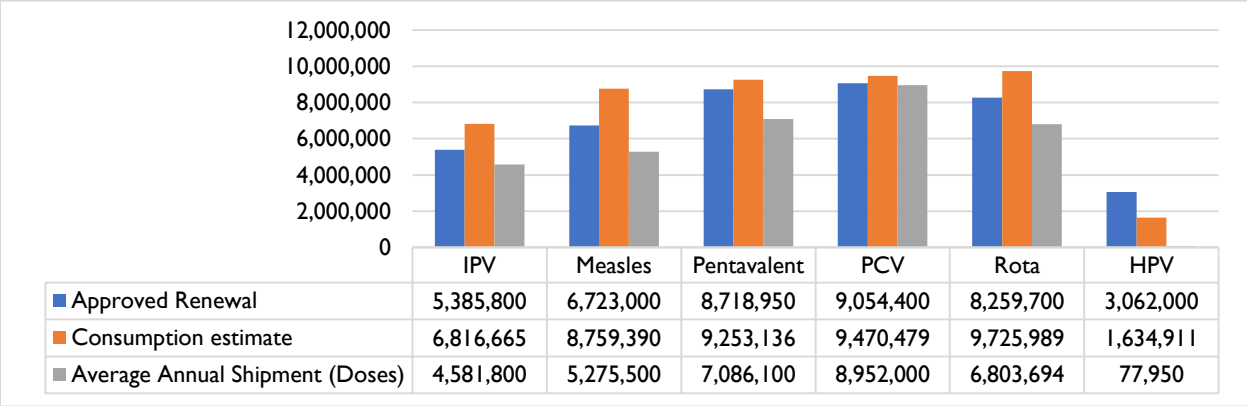
To further enhance Cold Chain Equipment (CCE).

- The logistics versus service data triangulation was exercised nationally, and a significant disparity was identified between the distributed vaccines and available program data. Woredas with higher discrepancies are identified and prioritized for support. Standard operating procedure has been developed to guide subnational teams to perform this exercise on a regular basis.
- Trainings on vaccines and cold chain management was conducted for 63 Vaccine Logistics Officers, and COVID-19 vaccine integration training for 858 experts, 50 university lecturers trained on CCE management, and 175 graduating biomedical engineers received pre-service training, and 50 biomedical engineers were trained in SDD installation and maintenance. Additionally, 523 cold chain experts and EPI focal persons were trained in MEMIS use, and 150 biomedical engineers received in-service training on CCE calibration and maintenance, capacities building at national, sub-national, and service delivery levels was provided by financial and technical support from UNICEF, CHAI, DHA/JSI, GHSC-PSM, and USAID PQM+.
- In collaboration with UNICEF, a total of 1,076 refrigerators were repaired and increased the functionality of CCE from 79% to 80%.
- Preparatory activities for the HFSE-CCEOP Learning Agenda pilot, targeting 305 health facilities, including site assessments, energy need identification, equipment sizing, Operational Deployment Plan (ODP) was completed to ensure the effective implementation of the project. This activity mainly facilitated by UNICEF and WHO.
- The MOH with World Bank and AfCDC, undertook preparatory activities for local vaccine manufacturing, including setting up a project office, recruiting critical staff, selecting vaccines, and designing the plant, have been completed and working with goal to deliver fill-finish vaccines by 2026.
- A national temperature monitoring study (TMS) was conducted, and based on the study finding improvement plan has been developed.
- The vaccine direct delivery or last mile delivery performance had been improved from 1,766 (44%) to 2,686 (60%) HFs; the remaining 40 % of HFs are receiving vaccines and supplies through woreda health offices in collaboration with UNICEF, CHAI, FIT, and GHSC-PSM.
- Airlifting is used for delivery of vaccines and supplies to conflict affected and inaccessible EPSS hubs, and humanitarian organizations like IRC, UNICEF, and others are supporting the health system by delivering health commodities to districts with security problems.
- To encourage Public Private Partnership, MOH and EPSS working with 3PL (FiT) integrated vaccine delivery is being carried out in 330 health facilities distributed under 4 EPSS hubs.
- In collaboration with UNICEF, preparatory activities of the DRIVE initiative targeting 138 PHCU, 523 HPs and 1,046 outreach sites have been completed.
- Targeted EVM assessment was conducted in 25 storage locations and the composite score was 62% and this indicated the need to strengthen EVM at all levels.
- Maintenance of modern high-temperature incinerators is carried out at 8 EPSS hubs, ensuring that these incinerators remain fully operational. They are utilized to efficiently dispose of waste, and supporting effective waste management practices.

Table 7: Stock availability, wastage and maintenance data, as of January 2024

S. N	Indicators	Performance	Percentage
1	Number of health facilities that reported no stock-outs of DTP containing vaccine	3,946	92
2	Number of health facilities that reported no stock-outs of Measles containing vaccine	4,032	94
3	Closed vial wastage of DTP-containing vaccine	22,959	0.25
4	Number of CCE received/installed/ leased through third party providers.	2,019	98
5	Equipment maintenance	1,076	48

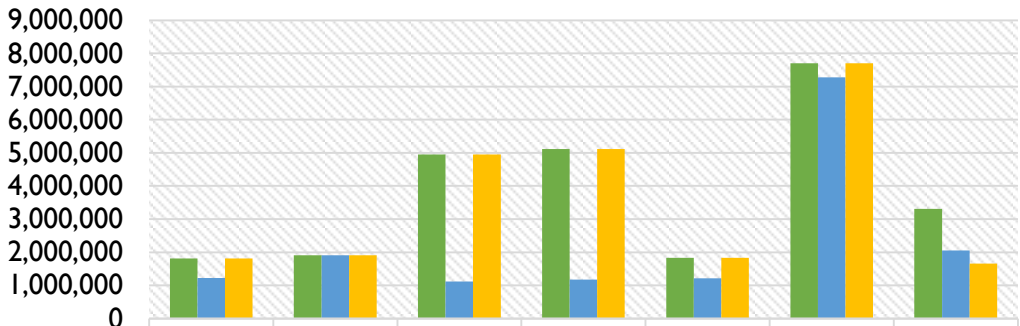
Out of 4,289 hospitals and health centers providing vaccination services, approximately 3,946 (92%) health facilities had Pentavalent vaccines available every month. Similarly, about 4,032 (94%) health facilities had Measles vaccines available every month. The closed vial wastages of Pentavalent vaccines were approximately 22,959 doses (0.25%), wasted due to Vaccine Vial Monitor (VVM) changes, expiration, and breakage. Out of 2,241 identified non-functional vaccine refrigerators, 1,076 were maintained in 868 health facilities. The closed vial wastage rate is persistently below 1%, which is far below WHO unavoidable recommended wastage rate of 2%.



	IPV	Measles	Pentavalent	PCV	Rota	HPV
Approved Renewal	5,385,800	6,723,000	8,718,950	9,054,400	8,259,700	3,062,000
Consumption estimate	6,816,665	8,759,390	9,253,136	9,470,479	9,725,989	1,634,911
Average Annual Shipment (Doses)	4,581,800	5,275,500	7,086,100	8,952,000	6,803,694	77,950

Graph 1: Are vaccines being consumed at rates that are in-line with approved forecasts? - Routine Immunization January 2024.

Most of Gavi approved doses for routine program have been received and remaining doses will be received in 1st quarter of 2025. The average consumption estimates slightly higher than the approved ones and annual shipment because of roll over stock from the previous year. Regarding HPV, a single dose switch campaign was done and the indicated doses absorbed.



	IPV	Measles	Pentavalent	PCV	Rota	HPV	COVID-19
Approved Renewal	1,810,200	1,911,000	4,955,050	5,116,600	1,829,300	7,700,630	3,312,000
Consumption estimate	1,223,950	1,911,000	1,115,795	1,174,421	1,216,151	7,275,333	2,057,812
Average Annual Shipment (Doses)	1,810,200	1,911,000	4,955,050	5,116,600	1,829,300	7,700,630	1,656,000

Graph 2: The Big Catch-Up, HPV MAC and COVID-19 Vaccine Consumption rate, January 2024.

From most of the Gavi-approved doses for the BCU, HPV MAC, and COVID-19 vaccination programs, HPV and BCU vaccines have been received. The consumption of pentavalent vaccines is lower than planned due to shipment delays, and the PCV dose schedule was changed. However, the approved doses for COVID-19 vaccines have not been received due to lower demand for the COVID-19 vaccination.

Facilitators/Enabling factors:

- Country leadership, governance, and stewardship
- Domestic and International Funding
- Availability of technical support through TCA and other sources
- Existence of established policies/guidelines
- Access to digital tools
- Availability of infrastructure across the supply chain levels.
- Stakeholders' alignment and coordination
- Private Sector engagement in vaccine delivery to Health centres and Hospitals

Lesson Learned

- Joint planning to Integrating iSCM with the overall health supply chain can improve efficiency and reduce duplication of efforts.
- Engaging communities and local leaders enhances vaccine delivery in conflict affected areas.
- The need for strengthen Public-Private Partnerships and engagement of humanitarian actors.
- LMD expansion improves availability of Vaccine at SDP.

Challenges:-

- Low EVM score at subnational.

- Lack of a reliable digital system to monitor the stock and CCEI.
- Sub-optimal functionality of sub-national TWGs.
- Infrastructure related (Vehicle, motorcycle, vaccine refrigerator, computer, electricity, road access).
- Availability of HFs without CCE, non-functional and obsolete CCE.
- Weak temperature monitoring practice.
- Low engagement of humanitarian organizations in logistics delivery.
- Sub optimal waste management practice, low functionality of waste disposal facility.

Anticipated Risks: -

- •Resource constraints to scale up LMD to hard-to-reach area and equip HFs with optimal cold chain
- •Sustainability of eLMIS implementation at the lower level
- •Technology/System failure/Virus Attack.
- Conflict

Mitigation Strategy

- Leverage partner support, advocacy and resource mobilization
- Strengthening the PPP to support LMD in hard-to-reach areas
- Strength government ownership on digital tools
- Advocate community ownership

Next priorities:

- Last Mile Delivery Expansion
- Enhance Stock Management and Data Visibility (eLMIS)
- Optimize Real-time CCE inventory Updates Using MEMIS and RTMD.
- Strengthening Coordination at Sub-national Level
- Strengthening PPP & Humanitarian Actors' Engagement
- Revise/Update iSC Strategic Plan
- Human Vaccine Manufacturing (SheildVax)
- New Initiatives (DRIVE and HFSE)
- Equipping HFs that don't have CCE.
- Conduct a Wastage Monitoring Study
- Strengthen Healthcare Waste Management
- HR Capacity Building
- KPI Based Monitoring and Evaluation

1.6. Vaccine Co-financing payment

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

The MoH has been actively engaged in co-financing arrangements to enhance healthcare funding, particularly through initiatives that align with the Ethiopian Health Care Financing (HCF) Strategy (2022-2031). This strategy emphasizes the importance of co-financing as a means to bridge the funding gap in the health sector, encouraging partnerships between various governmental levels and development partners. As part of this, MoH and Gavi have a framework agreement on vaccine program and other health system support, Ethiopia agreed mandatory obligation to pay the co-financing payment for vaccine and cold chain equipment and Gavi also covers the remaining costs.

Every year, MoH pays co-financing payment through UNICEF for the vaccine and cold chain equipment procurement. As target population and coverage increases, the co-financing cost that the government will be covering also increases. For this, the government has been increasing its co-financing allocations through time. Despite several competing priorities, trends over the years showed that Ethiopia fulfilled the co-financing obligations. The table below showed cost of the government of Ethiopia paid for co-financing for vaccine and cold chain equipment procurement.

Table: 8 Co-financing payment for vaccines and old Chain Equipment by government of Ethiopia over the years

Cost Category	Co-financing for vaccines and cold Chain Equipment					
	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	Total
MoH-co-financing (USD)	6,565,236.55	8,505,713.70	6,682,663.00	9,381,160.22	7,148,435.18	38,283,208.65

The following factors facilitated to fulfil the co-financing obligation payment by the government for vaccine and cold chain equipment procurements.

- The government and leadership commitment in allocating funds for the co-financing
- MoH timely planned and submitted budget request for MoF.
- Clear co-financing agreement (Framework) between MoH, MoF, and Gavi.
- Staff assigned from MoH to follow the co-financing and payment process.
- Continues advocacy conducted to MoF by MoH and Gavi to allocate funds and increase allocation and timely budget disbursement.
- Presence of Joint Consultative Committees between MoH, MoF, and HPN partners to advocate for increased resource allocation for health and immunization
- Timely fund disbursement of MoF to MoH to pay the co-financing, despite certain procedural issue needs improvement.

Although Ethiopia fulfilled the co-financing obligation, the process of budget allocation by the MoF and the payment processes have gone through several ups and downs. There is a need of repeated advocacy and higher official communications to MoF for the sufficient budget allocation and disbursement by MoH, GAVI, and other partners.

Indeed, it has been a challenge for the government to secure co-financing budget for new vaccine introduction because of the increasing co-financing budget from time to time. For instance, unplanned new vaccines, such as Rotasill vaccine switch poses increased co-financing cost and the government faced shortage of budgets to fulfil its co-financing obligation. Similarly, for yellow fever (YF) vaccine introduction, MoH has been working to mobilize resources from other sources for the co-financing and this was one factor for the delay of YF vaccine introduction as planned. In general, new vaccine introduction is an important activity that needs special advocacy or financial commitment before the introduction.

1.7. Introducing new vaccines into national routine immunization programs

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?

The introduction of new vaccines has evolved over time to include new technologies, more sophisticated vaccines, and a greater number of diseases protected against. Ethiopia has been working with GAVI and other partners to introduce new vaccines in the country over the years. At the launch of EPI in Ethiopia in 1980, six antigens (BCG, DPT, OPV, and measles) were introduced. The country later introduced Hep-B and Hib, PCV, Rotarix, IPV & bOPV, HPV, MCV2, and COVID-19 vaccines into the routine immunization program in 2007, 2011, 2013, 2015, 2018, 2019, and 2021, respectively.

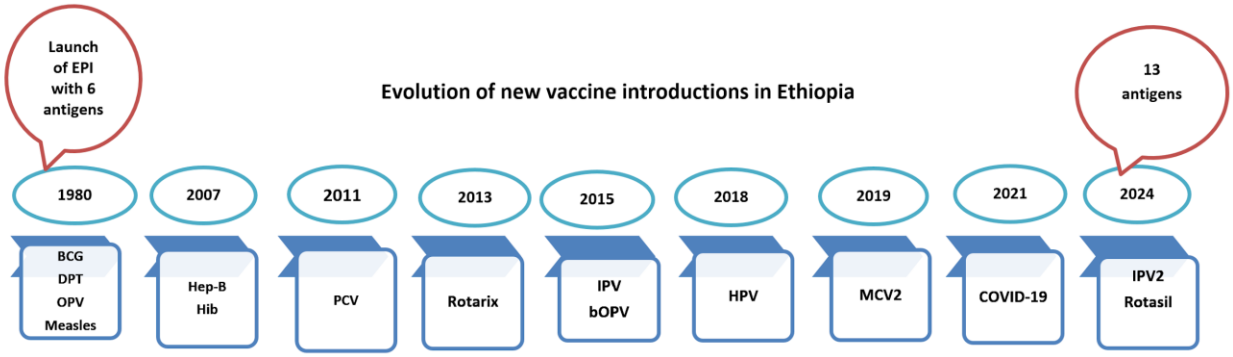


Figure 11: *Evolution of new vaccine introductions in Ethiopia*

New vaccine introduction in 2024

In 2024, it was planned to introduce IPV2 into the national immunization program, switch from Rotarix to Rotasiil, and switch to single-dose HPV vaccination. The introduction of IPV2 and the Rota switch, and the switch to single-dose HPV vaccination, were successfully implemented. MoH has been working on preparatory activities to introduce other new vaccines such as malaria, measles 5-dose, Hep B birth dose, and yellow fever vaccines. However, the stage of preparation for new vaccine introduction varies among vaccines. MoH has tabled additional vaccines for E-NITAG for prioritization for 2026–2030. TCA Partners are providing technical assistance to Ethiopia's NITAG in identification and prioritization of new vaccines to be introduced in Ethiopia.

Table 9: Planned new vaccine introductions and switches and implementation status

s.n	New vaccines/switches	2024 plan	2025 plan	Status	Remark
1	IPV2 introduction	*		Achieved	85% IPV2 coverage
2	Rotarix to Rotasiil switch	*		Achieved	83% Rota3 coverage
3	Switch to single-dose HPV vaccination	*		Achieved	86% HPV 1 coverage
4	Malaria		*	In progress	MoH expects the vaccine delivery in May 2025.
5	Hep B birth dose		*	In progress	Waiting for the GAVI decision letter
6	Yellow Fever vaccine		*	In progress	Waiting for the GAVI decision letter
7	Measles Five dose		*	In progress	MoH expects the vaccine delivery in July 2025

IPV2 Introduction

The government of Ethiopia has introduced the second dose of Inactivated Polio Vaccine (IPV2) into the routine immunization system to enhance polio eradication efforts, in addition to the first dose (IPV1). Two doses of IPV provide higher immunogenicity against all three types of polioviruses compared to the single dose. Ethiopia has been introduced to the second dose of IPV in the 2nd quarter of 2024.

Major activities conducted include planning, coordination, and fund mobilization, training, national and regional-level readiness assessment, communication and demand creation, launching of IPV2 introduction, vaccine, cold chain & logistics management, vaccine safety monitoring, and monitoring and evaluation. Currently, the IPV2 vaccination is being given at nine months in all health facilities of the country, and the national coverage is 85%.

Factors facilitated the successful introduction

- IPV-2 vaccine provides a higher protection against cVDPV2, which are currently circulating and represent a risk in many areas of the country, and it does not carry the risk of VDPV.
- The presence of a well-coordinated and committed national, regional, zonal, and district task force was instrumental in overcoming significant challenges, such as overlapping health campaigns.
- Proper planning, resource mobilization and preparation.
- Utilizing tools like the Readiness Assessment Tool (RAT) and ODK for RCS ensured systematic tracking and monitoring during implementation.
- Effective use of virtual meetings with regional and zonal coordinators proved to be highly beneficial.
- Collaboration with TCA partners, including GAVI, provided crucial financial, technical, and logistical support for the vaccine introduction

Factors impeded or challenged the implementation

- There was a shortage of funds to conduct comprehensive training sessions at the facility level
- Hard-to-reach areas posed logistical challenges, slowing down supervision and vaccine distribution efforts.
- The DHIS2 system was not operational in some regions
- The revised registration tools did not reach to some health facilities
- Basic tools, such as printed job aids, checklists, and updated reporting formats were in short supply

Rota vaccine switch

Ethiopia introduced the rotavirus vaccine in 2013 with two doses of the Rotarix vaccine at the ages of 6 and 10 weeks for infants under one year with other routine vaccines. Ethiopia conducted a forced switch from Rotarix to RotaSIIL vaccine in February 2024 due to the prevailing risk that the production of the Rotarix vaccine is reduced to supply Ethiopia's demand. Therefore, the Rota vaccination for all children under the age of one year sustained without interruption to sustain the gains of VPD control, elimination, and eradication.

Major activities conducted were training material development, readiness assessment using RAT, TOT training, incorporating Rota 3rd dose into the DHIS2 reporting platform, vaccine distribution, vaccine supply stock monitoring, weekly virtual meetings, and post-introduction follow-up and supportive supervision. Currently, all health facilities have switched to the new Rota product, and the Rota 3 coverage is 83%.

Factors facilitated the Rota vaccine switch

- The presence of a well-coordinated and committed national, regional, zonal, and district immunization task force.
- Utilizing tools, such as the Readiness Assessment Tool (RAT) and ODK for RCS ensured systematic tracking and monitoring during implementation.
- Effective use of virtual meetings with regional and zonal coordinators proved to be highly beneficial.
- Collaboration with TCA partners, including GAVI

Factors impeded or challenged the implementation

- Shortage of budget for training and the revision of recording and reporting tools.
- The quality of training at lower levels was compromised due to multiple integrated training activities.
- Service providers' skill gap in administering the Rotasiil vaccine
- The package of the adapter for the Rotasiil needs to be revised as it was challenging for distribution to the lower level.

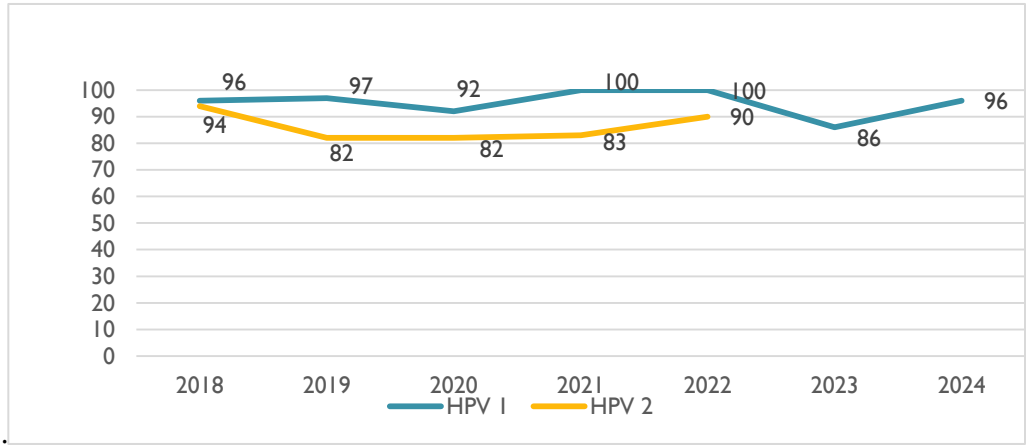
- It was difficult to separately monitor the safety of the new vaccine introduced as it is given simultaneously with other antigens.
- Presence of the previous Rotarix vaccine on health facilities stock delayed the switch in some areas.

Switch to Single Dose HPV Vaccination

Ethiopia introduced HPV vaccination in December 2018 for a single age cohort of 14-year-old girls with two doses of HPV vaccine. Given the potential programmatic and economic benefits and taking into account the recent scientific evidence, the country approved single-dose HPV vaccination as of August 2023. To this end, HPV MAC and the single-dose switch guideline were prepared, and a two-day cascaded training was delivered to all levels of health care providers integrated with IPV2 introduction and Rota vaccine switch. In the first quarter of 2024, Ethiopia has planned to align the switch to single-dose HPV vaccination along with the MAC campaign. However, due to the delay of vaccine shipment to the country, the Ministry decided to continue vaccinating 14-year-old girls with single-dose HPV vaccination by the available vaccine stock at hand. As part of the preparatory activity, M & E tools were revised in the sense of single-dose vaccination, and ODK-based supportive supervision checklist developed to monitor the implementation of single-dose HPV vaccination.

In this regard, the single-dose HPV vaccination was implemented in March 2024. A total of 1,352,853 (86%) girls received single dose of HPV vaccination by then. Of these, 20.4% reached through out-of-school vaccination.

Given the relatively high school enrolment rate of adolescent girls, a school-based, one-week-campaign was the main mode of vaccine delivery. School absentees were referred to the nearby health facilities, and out-of-school girls were identified through leveraging different community-based platforms and through the Health Extension Program in all kebeles (the lowest administration level) and reached through temporary outreach vaccination posts. In the most remote and pastoral communities, mobile vaccination teams used



Graph 3: HPV Vaccination Coverage Trend, 2018-2024

Factors facilitated the Single Dose switch

- A potential programmatic and economic benefit and taking into account the recent scientific evidence.
- From a public health perspective, a single-dose approach can improve efficiency, affordability, and coverage.
- Existence of high political and professional commitment
- Strong inter-sectoral collaboration with the Ministry of Education and the Ministry of Women and Social Affairs at all levels
- Collaboration with Gavi and implementing partners, especially TCA partners
- Simplified logistics, reduced service delivery costs, improved program management, and co-financing.
- The single-dose schedule also eliminates dropout rates and minimizes the occurrence of adverse events following immunization (AEFI).

Factors impeded or challenged implementation of switch to single dose HPV vaccination

- Lack of time for proper micro-planning of single cohort vaccination (quick decision)
- Delayed and protracted regional cascaded training following postponement of the MAC campaign
- Turnover of trained HWs and rotation within departments at the lower level resulted in missing key components of the training.
- Postponement of the MAC vaccination required the revision, translation, and printing of M & E tools for the single-age cohort.

New vaccines in the pipeline and level of preparation

Malaria

The malaria vaccine introduction application proposal has been prepared by establishing technical working groups from the MoH LEOs and agencies, and partners, through gathering and organizing evidence, and conducting several consultation workshops. The need for malaria vaccine was presented to the E-NITAG and endorsed. After E-NITAG endorsement, the proposal was presented to ICC and discussed and also approved by the ICC members. This malaria vaccine application proposal was approved and signed by senior officials of the MoH and the Ministry of Finance, and submitted to Gavi for vaccine and budget support. After GAVI approval for vaccine and operational cost, budget support and receipt of the decision letter, MoH has started preparatory activities to introduce the vaccine.

As part of preparatory activities, Ethiopia has received TA support from partners through GAVI TCA global support for malaria vaccine introduction. Additionally, an inception meeting was undertaken to align the plan and resources for the malaria vaccine introduction with immunization and the malaria prevention and control program task force as one intervention to achieve the malaria prevention, control, and elimination goal in Ethiopia. The vaccine was planned to be introduced for 58 districts in the first

phase, and the country is also awaiting a decision letter from GAVI to expand the vaccine to 101 additional districts with moderate to high malaria transmission.

Hep B birth dose

In Ethiopia, the estimated HBsAg prevalence of hepatitis B is 6.21%, and the prevalence in pregnant women is estimated to be 4.7%, and in children under five, according to the study conducted in one town, is 4.4%. Ethiopia has developed a national strategy for the elimination of viral hepatitis and triple elimination (HBV, HIV, and syphilis) in order to meet the global target for the eradication of HBV by 2030. Hence, the MOH has introduced the HepB vaccine in a pentavalent form since 2007 and given high emphasis to the introduction of HepB-BD vaccination in the routine immunization program as per the cMYP (2021-2025) to be integrated with maternal, child, and new-born service in the country.

The pilot implementation was conducted from Jan 2021 to May 2022 in 4 woredas of Afar, Addis Ababa, Amhara, and Tigray regions with the aim of demonstrating strategies to achieve high HepB-BD coverage, estimating HepB-BD coverage by different strategies, evaluating health workers and community acceptance, and identifying programmatic and logistics needs for nationwide scale-up. Likewise, for documenting best practices and using it for nationwide introduction, a Post Introduction Evaluation (PIE) was conducted and found out that the feasibility of timely provision of HepB-BD in health facilities deliveries. The country tabled the result of the study to E-NITAG and ICC for advice and approval. E-NITAG recommended the nationwide introduction. Finally, after the ICC endorsement, the country applied for Gavi and is waiting for the Gavi decision letter.

Yellow Fever vaccine

The MOH, in collaboration with key stakeholders, generated robust local evidence to inform strategic planning and decision-making processes. This evidence was presented to relevant decision-making bodies for review, guidance, and decisions. This proposal was thoroughly reviewed and endorsed by the Inter-Agency Coordinating Committee (ICC). As a result, Ethiopia successfully prepared and submitted an application to GAVI to include the yellow fever vaccine in its routine immunization schedule for children at nine months of age. The application also detailed plans for a preventive mass vaccination campaign targeting individuals aged nine months to 59 years. Furthermore, the team actively engaged in a call with the GAVI Independent Review Committee (IRC), providing critical clarifications and insights to strengthen the application. The MoH is now awaiting the decision letter from GAVI to move forward with the proposed actions outlined in the application. Upon receiving approval, the MOH will proceed with the implementation plan, including integration of the yellow fever vaccine into the routine immunization schedule and the execution of the preventive mass vaccination campaign as per the outlined strategy.

Measles five dose switch

Ethiopia conducted a pilot study to switch measles from 10 doses to 5 doses in 60 selected woredas of the Amhara and Oromia regions with the aim to see the effect on measles vaccination coverage, the effect on measles vaccination timeliness, cost-effectiveness of each of the two interventions and to investigate the

health worker attitudes are towards smaller multi-dose vials. The result of the study showed that there is significant coverage improvement on MCV2 coverage (17% coverage increment). The MCV1 coverage did not show significant increase, however, timelines of vaccination improved significantly. Eligible children managed to receive their MCV1 at 9 months of age, and frequency to provide vaccination on a daily basis improved. Similarly, the cost analysis showed the use of measles five doses is much more cost-effective compared to the number of children expected to be vaccinated. As a result, the MoH proposed the five-dose switch, and E-NITAG and ICC approved the measles five-dose switch. Gavi has approved the application, and MoH expects the vaccine to be delivered in July 2025. The implementation date of measles switch from 10 doses to 5 doses will depend on the vaccine arrival.

1.9. Performance of preventive and outbreak response vaccination campaigns

MoH, with agencies, such as EPHI, EPSS, EFDA and partners, has been conducting preventive and outbreak response vaccination campaigns in the years 2023 and 2024, to build population immunity and protect mass population from vaccine preventable diseases.

i. Multi Age Cohort HPV Preventive Mass Vaccination

Ethiopia implemented a single-dose, multi-age cohort HPV vaccination for 9–14-year-old girls from 18-22 November 2024. Readiness of the MAC campaign was guided by the RAT level which comprises; planning coordination and funding, training, vaccine cold chain and logistics, demand promotion, and monitoring and supervision and it was periodically monitored at 3 months, 1 month, 2 weeks and a week before the actual implementation of the campaign

During the intra-campaign period, regional supervisors and technical assistants from almost all regions were assigned to different zones and woredas for the same purpose, and onsite monitoring and supportive supervision were made at the field level. Vaccination teams were monitored randomly for proper vaccine management, recording and reporting, proper screening of target girls, AEFI monitoring, waste management, and other key technical issues. Regions are encouraged to verify their admin data through RCS. Special attention was given to reaching out to schoolgirls using local community structures.

Nationally, a total of 7,342,605 girls aged 9–14 years were targeted. Of these, 7,085,236 girls have received a single dose of the HPV vaccine with an administrative coverage of 96%. Of the total vaccinated, 77% were reached through school vaccination and the remaining 23% were reached through outreach vaccination posts. The highest proportion of out-of-school girls was reported from Amhara region (69%), followed by Afar and Somali regions (30% each). Total of 6,732 mild and 30 severe AEFI cases were detected and reported through the line list and all are well managed and recovered.

The HPV MAC vaccination campaign presents a significant opportunity to bolster RI services, cervical cancer screening activities and adolescent nutrition screening in some regions. In this regard, a total of 3,323 ZD children were identified. Meanwhile, 3,759 children received penta 3 and 2,483 MCV 1 with catch-up vaccination. In addition, 2,837 children received MCV 2 vaccine. Regarding to adolescent nutrition, 26,251 girls were screened, as well as, a total of 3,715 women aged 30-49 years were screened for cervical cancer.

Table 10: Preliminary HPV MAC vaccination coverage as of January, 2025

Region	Target	Number of girls vaccinated	Coverage (%)
Addis Ababa	179,497	179,497	100%
Afar	92,840	90,540	98%
Amhara	1,503, 824	1,378,236	92%
Benishangul	61,541	61,541	100%
Central Ethiopia	411,027	411,027	100%
Dire Dawa	30,060	30,060	100%
Gambela	40,828	39,453	97%
Harari	16,889	15,482	92%
Oromia	3,223,180	3,147,145	98%
Sidama	342,625	340,474	99%
Somali	478,896	454,840	95%
South Ethiopia	487,014	480,239	99%
South West	165,816	162,481	98%
Tigray	308,568	294,221	95%
Total	**7,342,605**	**7,085,236**	**96%**

Factors facilitated the MAC implementation

- Existence of high political and professional commitment
- Strong intersectoral collaboration with Ministry of Education and Ministry of Women and Social Affairs at all levels
- Incentive for vaccinators increased commitment and resulted in better performance
- Teachers' engagement in the school vaccination have significantly increased trust and vaccine utilization by eligible girls
- Establishment of national immunization command post and presence of daily virtual meeting with RHBs (national level) and daily in-person review meeting (team level)
- Presence of cascaded training and development of HPV MAC and single dose switch guideline
- Partner's mapping and resource mobilization activities
- Use of standard RAT
- Strong demand creation activities through various media outlets
- Colourful national and regional launching ceremonies, attended by higher officials, local and international partners.
- Efforts exerted to reach out-of-schoolgirls including evening school vaccination, daily monitoring through virtual meetings, and verification of administrative data through RCS.
- Strong ODK based supportive supervision at all levels
- Establishment of outreach and mobile vaccination teams near residential areas and urban streets
- Distribution of adrenaline ampoule along with other supplies
- The MAC vaccination report was captured through a customized DHIS 2 tool.
- Engagement of humanitarian partners in distributing vaccines and supplies in conflict affected and hard to reach areas.

Promising practices

- Cervical cancer screening, ZD and under vaccinated children identification and vaccination, as well as, adolescent nutrition screening were few of the integrated activities exercised in some regions
- Increased AEFI detection and reporting, as well as, management of AEFI

Factors impeded or challenged the implementation

- Delayed and protracted regional cascaded training following postponement of the MAC campaign, due to late arrival of the HPV vaccine
- Gaps in micro plan development (denominator issues)
- Issues on data quality, because data were entered both at the PHCU and woreda level (double entry)
- Competitive priorities in some regions that resulted in delayed implementation of the MAC (For example, malaria outbreak response and harvesting time in Jimma zone of Oromia region, and Community Based Health Insurance "CBHI" in Addis Ababa)

Action taken to improve the challenge

- Re oriented the immunization officers and service providers at all levels.
- A deep dive data analysis by woreda and PHCU levels was done, and feedback was given to take action accordingly.
- Phased based implementation was conducted in areas where computing priorities like CBHI, malaria outbreaks

ii. Preventive Measles SIA preparation

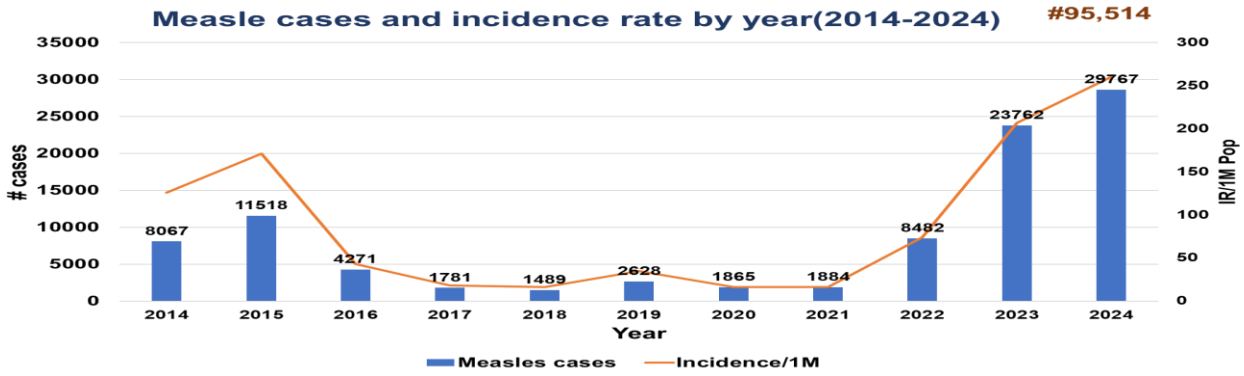
The 2025 Measles Supplementary Immunization Activity (SIA) application process, initiated in mid-2024, underwent rigorous review by immunization TWGs, E-NITAG, and key government entities, receiving final endorsement and approval in October 2024. Following the decision, planning efforts were intensified, involving regional teams, the Immunization Task Force, and TWGs, while a dedicated MOH-EPI working team developed essential implementation tools. An initial workshop that engaged 35 participants to refine these Measles SIA materials was conducted in December, 2025, with further workshops planned. Tentative campaign dates are set for March 2025, but pending operational budget disbursement and vaccine delivery may necessitate adjustments. Preparations will continue to ensure readiness, with updates shared as progress unfolds.

iii. Measles Surveillance and Outbreak Response

Measles is one of the 36 priority public health diseases and conditions which is an immediately notifiable disease. The Ethiopia measles surveillance system is established to operate at all levels of the health system with inclusion of all health facilities and community structures which also incorporate zero reporting. The Measles surveillance is part and parcel of the overall Public Health Emergency

Management (PHEM) system. The surveillance system employs both case-based and laboratory-based approaches. Strategies include passive and active surveillance, with active case searching through document reviews and/or site visits.

Ethiopia has been implementing accelerated measles control strategies (i.e. routine vaccination, supplementary Immunization activities (SIAs), measles-case management and case-based measles surveillance). In 2019, Ethiopia introduced measles containing vaccine two (MCV2) into the routine immunization programme in the second year of life. Even though the country had been working to eliminate measles by 2020, measles outbreak is being reported from different parts of the country. The number of measles cases significantly increased in 2023 and 2024, as shown by the graph below, due to different natural and human-made factors, such as the internal conflict and climate change.



Graph 4: Measles cases and Incidence rate by year 2014-2024, Ethiopia

In Ethiopia, more than 30,444 cases were reported in 2024 with 25% increment from 2023 cases.

Table 11: Measles cases and Death in 2023 and 2024

Year	Cases	Death	CFR
2023	23, 762	292	1.2%
2024	30, 444	244	0.8%

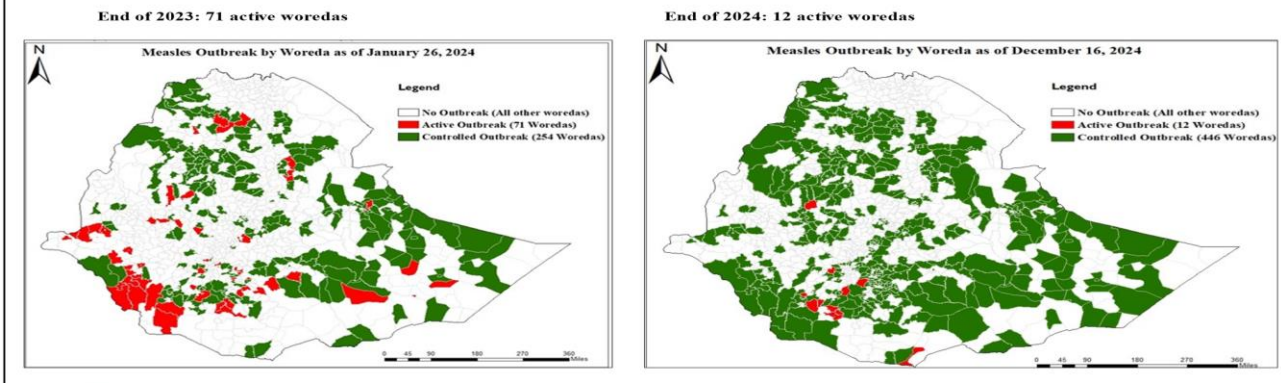


Figure 12: The number of woredas' with active measles outbreaks, 2023-2024

Efforts made to control the measles outbreak

MoH, EPHI, and partners have been working to control the measles outbreak in active woredas so far.

a. Measles Outbreak Response Vaccination Campaigns (2023-2024)

Cases and deaths of measles have significantly declined since August 2024 following effective outbreak response measures. The country had conducted 3 rounds of reactive vaccination campaigns from July 2023-2024 in outbreak-affected and the most high-risk areas. In addition to this, efforts were made to increase population immunity through catch-up vaccination activities.

Figure 13: Measles Outbreak Response Vaccination Campaigns (2023-2024), Ethiopia

b. Enhanced surveillance and case management

Ministry of health and EPHI, in collaboration with partners, were exerting efforts on measles outbreak responses. Necessary logistics for case management and surveillance activities were dispatched from the national, as well as, the regional level in areas affected by measles outbreak. School students were engaged to mobilize the community for both immunization and early health care seeking.

Factors facilitated measles surveillance and outbreak response activities

- Prior to the implementation, a coordination body was established at all levels.
- A preparedness monitoring dashboard has been developed and shared with the regional, zonal, and woreda levels for daily updates as soon as the activity was completed.
- The national team provided a virtual training for the regional team on the measles campaign implementation and cascaded to the lower level.
- Social mobilisation materials, community engagement, and messages were developed long ahead during the preparation phase and have reached all regions/woredas and communities before the commencement of the campaign.
- Root cause analysis was conducted before the campaigns, and a quality improvement plan was developed to mitigate the anticipated challenges.
- Partners were engaged throughout the campaign and provided technical and logistics (HR, vehicle) support.

Factor impeded or challenged the measles surveillance and outbreak response activities: include **d**elays in the distribution of vaccines and supplies in the Amhara and Oromia regions

Polio Surveillance and Response

i. Polio surveillance

Reliable AFP surveillance data guide targeted immunization activities in areas with continued poliovirus circulation or at risk for importation. Surveillance data is used to monitor how effectively routine and supplementary OPV immunization programs have succeeded in decreasing poliovirus transmission. Acute flaccid paralysis (AFP) surveillance is part of the National Public Health Emergency Management (PHEM) system and AFP is designated as an immediately reportable disease. Nationwide AFP surveillance is the gold standard for detecting cases of poliomyelitis. If AFP case is found, it should be thoroughly investigated and immediately reported. The key AFP surveillance performance indicators are monitored regularly and achieved the minimum requirements of NP-AFP Rate (3/100,000 <15 population) and Stool Adequacy (>80%) in 2024.

Table 12: AFP Surveillance Key Performance Indicators, 2023 and 2024

Year	NP-AFP Rate	Stool Adequacy (%)	NPENT (%)
2023	2.6	95	8.5
2024	3.4	93	7.5

ii. cVDPV2 Outbreak

Ethiopia reported the last wild polio virus (WPV) with onset of paralysis on 5 January 2014 in Dollo Zone of Somali Region. The first vaccine derived polio virus type 2 (cVDPV2) cases with onset of paralysis on 27, May 2019 was also reported in Dollo Zone. Three more cVDPV2 cases related to the first virus were subsequently detected in this zone with onsets in July and August 2019. Since then, a total of 85 type 2 circulating vaccine derived polio viruses were reported with onsets within May 2019 to the end of December 2024. In 2023, the country had 1 cVDPV2 in Tigray region, however 23 cVDPV2 (of which 2 ENV) were reported in 2024 in 6 regions of the country.

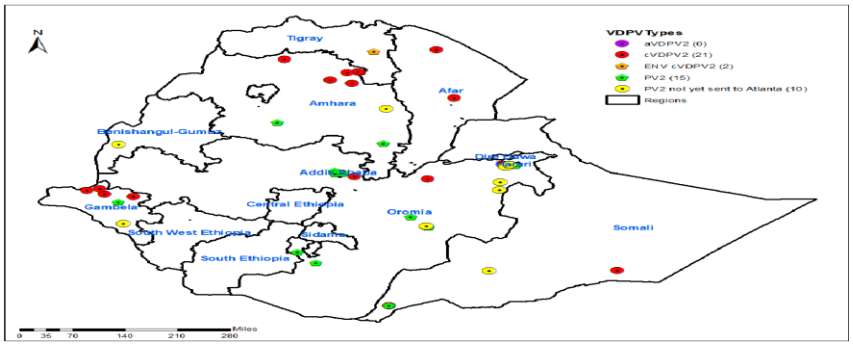


Figure 14: Distribution of cVDPV2 cases in 2024

Several rounds of mOPV2 campaigns were conducted in response to the outbreak in the country. The country also fulfilled all the requirements for the introduction of nOPV2 and implemented two successful rounds of nationwide campaign in October 2021 and April 2022 respectively. In 2023, two rounds of nOPV2 campaigns conducted in Tigray region targeting < 10 years' children to respond to an outbreak. In 2024, two rounds of nOPV2 campaigns were conducted in five regions to respond to a cluster of cVDPV2 cases reported. A total of 5,437,810 (97%) and 5,588,607 (100%) children were vaccinated during R1 and R2, respectively.

In response to the Somali Region (Dawa zone) cVDPV2 cases, we had conducted a rapid response (R0) nOPV2 campaign in two zones of the Somali region (11 woredas) and three zones and one town administration of the Oromia region (24 woredas). A total of 524,579 children were vaccinated during the Round Zero campaign.

Factors facilitated polio surveillance and response activities

- Prior to the implementation, EOC was activated, and a coordination team was established at all levels for each thematic area and all the phases of the campaigns
- A preparedness monitoring dashboard has been developed and shared with the regional, zonal, and woreda levels for daily updates as soon as an activity is completed.
- The national team provided in-person training for the regional team on the nOPV2 campaign implementation and cascaded to the lower level.
- Social mobilisation materials, community engagement, and messages were developed long ahead during the preparation phase and have reached all regions/woredas and communities before the commencement of the campaign.
- Quality improvement plan developed to mitigate the anticipated challenges and maintain the quality of the campaign
- Partners were engaged throughout the campaign and provided technical and logistics (HR, vehicle) support.

Factors impeded or challenged the polio surveillance and response activities

- Delay in distribution of vaccines and supplies in Amhara, Tigray and Oromia regions.
- Outbreaks in neighbouring countries (Somalia, South Sudan and Kenya), and high population movement across borders need collaboration from the neighbouring countries with synchronised campaigns.
- Resource constraints (vaccine and operational budget) for immediate response to the outbreaks

iv. Cholera surveillance

Cholera has affected different parts of the country relatively frequently throughout history. Target-based cholera control and elimination is one approach in Ethiopia; cholera surveillance and hotspot analysis were conducted with the purpose of identifying woredas that are at a relatively higher risk for cholera. Woredas were classified into three different priority levels: priority one, if both mean annual incidence and persistence exceeded the respective thresholds for each metric; priority two, if mean annual

incidence exceeded its threshold but the persistence did not exceed its threshold; and all other woredas were classified as priority three. The recent outbreak started on August 27, 2022, in the Bale zone of the Oromia region, in Harena Buluk Woreda. The outbreak has been on-going since then, spreading to 550 woredas across the country over the past two years. The case load was highest for 2024 during the first half of the year. The number of cases in the year 2024 is at its lowest point when compared with the number of cases at the same time in 2022 and 2023.

Table 13: Distribution of cholera cases and deaths by region, Ethiopia

Region	# of affected woreda	# of cases	# of Deaths	CFR
Afar	34	3064	48	1.57
Amhara	98	9430	146	1.55
B-Gumuz	10	480	22	4.58
CER	25	878	21	2.39
Dire Dawa	18	1583	9	0.57
Harari	17	601	5	0.83
Oromia	176	17,917	232	1.29
SER	38	7073	82	1.16
Sidama	34	1493	12	0.80
Somali	68	15,183	150	0.99
Tigray	32	579	14	2.42
Total	**550**	**58,281**	**741**	**1.27**

As of December 2024, it spread to 550 woredas (176 woredas from Oromia, 68 woredas of Somali, 38 woredas of SER, 98 woredas of Amhara Region, 34 woredas of Afar, 34 woredas of Sidama, 18 woredas of Dire Dawa, 32 woredas of Tigray, 17 woredas of Harari, and 25 woredas of CER). A total of 58,281 cases (with an AR of 102.7 per 100,000 population) and 741 deaths (with a CFR of 1.27%, above the national standards) were reported during this epidemic period.

Oral Cholera Vaccine (OCV) Interventions

During the current epidemic period (2023 to 2024), a total of 14,314,188 (17.20% of the global stockpile) doses of OCV were approved for the country by ICG, and only 12,977,029 (90.66%) doses were imported. During this period, the country had submitted 11 requests, of which 4 were approved fully and 7 requests were approved partially. ICG has set a couple of milestones as indicators for effective utilisation of the doses. Some of the milestones are extrinsic in nature. Average time of vaccine delivery is one of the indicators, which is 13.8 days, while the vaccine is expected to be delivered to the countries within 7 days.

After approval from the global stockpile, the OCV doses are expected to be shipped to the countries within 7 days. On average, it took 13.5 days for the ICG to import doses to the country. Following the importation of doses, the countries are expected to conduct a campaign within 10 days, while it took us on average 28 days to implement. In 2023, the OCV campaign was done in 107 woredas from 9 regions with admin coverage of 99.5%, which is above the 95% mark. Following the 10 campaigns, there was a sharp drop in the number of cases in all five instances.

In 2024, a total of five campaigns were conducted in 42 woredas across Tigray, Somali, Oromia, Amhara, and Afar. A total of 4,583,004 eligible populations were vaccinated with admin coverage of 99%. There is a sharp drop in the number of cases following the campaign.

Cholera Rapid Diagnostic Test (RDT)

In December 2023, GAVI has notified the country of the approval of 296,100 RDTs. Afterwards, the country made an agreement with GAVI to import the RDTs by a three-phase approach for effective utilisation. Currently, 170,000 RDTs have been imported and distributed to regions and woredas, and the importation of the remaining amount is underway.

Yellow Fever Surveillance

Yellow fever is a fatal viral haemorrhagic fever that has caused many outbreaks in the southern and western parts of Ethiopia since 1959. In 2018, a confirmed yellow fever outbreak occurred in the Wolaita Zone, where a total of 35 cases and 10 deaths (CFR = 28.6%) were reported, and outbreak response vaccination was conducted. A yellow fever outbreak also occurred in March 2020 in the Gurage Zone, where a total of 86 cases and 4 deaths (CF = 4.7%) were reported. There are no yellow fever cases in 2023 and 2024. As per the Yellow fever surveillance and response guidelines in 2022, regular surveillance and zero reporting are being done regularly, and yellow fever vaccine introduction preparation is on-going.

Key COVID-19 surveillance activities of 2023 and 2024

In 2023 and 2024, Ethiopia's COVID-19 surveillance efforts were significantly enhanced by integrating COVID-19 monitoring into the existing Severe Acute Respiratory Infections (SARI) and Influenza-Like Illness (ILI) surveillance within the primary healthcare system. Comprehensive training programs were developed and implemented to cover common respiratory diseases such as influenza and RSV, thereby boosting overall surveillance capabilities. Joint supportive supervision was conducted to ensure strict adherence to surveillance protocols, which in turn improved case detection and reporting. Additionally, the Public Health Emergency Management (PHEM) system was fortified to enforce the immediate reporting of COVID-19 cases and AEFI.

The outputs of these surveillance efforts were substantial. A total of 5,593,534 laboratory tests were conducted, with over 179,601 individuals tested in 2023 and 2024, of which 168,188 (94%) testes conducted in 2023. About 3,558 (2%) of those individuals tested were positive for COVID-19. The positivity rate varied significantly across the year, ranging from <1% to 3% depending on the test kit availability and emerging co-infections. Genomic surveillance initiatives, such as the establishment of the Core Pathogen Genomic Surveillance Center (CPGSC), were launched to enhance molecular detection and data sharing. From 2021 to 2023, over 18,724 SARS-CoV-2 samples were sequenced, identifying multiple variants of concern, including Delta and Omicron. The Omicron variant accounted for approximately 98% of the sequenced cases, with JN.1 being the dominant variant at 40%. Significant regional differences were observed, with a higher prevalence of Omicron/JN-1 in urban areas, such as Addis Ababa.

Despite these achievements, Ethiopia faced several challenges in its surveillance efforts. Limited testing capacity and resources hindered comprehensive surveillance. Variations in positivity rates indicated uneven access to testing and healthcare services. Integrating genomic data with clinical reports posed logistical and analytical challenges. Implementing genomic surveillance required significant investment in technology and training. Additionally, the long-term effects of COVID-19, such as Long COVID and mental health disorders, emerged as significant challenges, necessitating on-going monitoring and support, which added to the burden on the healthcare system.

To address these challenges and build on the successes of 2023 and 2024, Ethiopia needs to strengthen its infrastructure by investing in testing facilities and healthcare infrastructure to ensure equitable access across regions. Expanding genomic surveillance to complement traditional methods is crucial. Capacity building through training healthcare workers and improving data management systems will enhance the efficiency and accuracy of surveillance efforts. Integrating surveillance data with primary health services will provide a comprehensive approach to the health system's recovery and resilience. Leveraging available resources effectively and fostering coordination among various stakeholders will strengthen the overall response. Additionally, addressing the long-term effects of COVID-19 and mental health disorders requires dedicated resources and specialized care programs to support potentially affected individuals.

Cross cutting issues implemented to strengthening surveillance and responses

The Ethiopian Public Health Institute (EPHI), with funding from GAVI and in collaboration with partners, has successfully conducted a series of public health activities aimed at immediate VPD outbreak and disease surveillance across the nation. This report summarises the key activities and their outcomes.

- Training was provided to 322 healthcare workers and surveillance officers across seven regions with the GAVI funding support. This initiative aimed to strengthen the capacity of healthcare personnel to manage public health emergencies effectively.
- A series of sensitisation workshops were conducted with the support of the GAVI fund at the regional and zonal levels for the Rapid Response Teams (RRT). These workshops aimed to equip the task force with the necessary knowledge and skills to conduct effective investigations during public health emergencies.
- EPHI, in collaboration with the partners, distributed updated case investigation and reporting formats, guidelines, and Standard Operating Procedures (SOPs) to healthcare facilities and surveillance officers. These tools, funded by GAVI, are crucial for maintaining accurate and timely reporting of VPD cases.
- The institute integrated vaccine-preventable disease (VPD) surveillance and RI with humanitarian response efforts in conflict-affected areas. This integration ensured that public health interventions reached vulnerable populations in these regions.
- EPHI conducted root cause analyses to identify the factors contributing to measles, cholera and meningitis outbreaks in selected hotspot woredas, as well as outbreaks. The findings from these analyses will inform future prevention and control measures. The RCA was conducted in woredas affected by the measles outbreak in 2024, and outbreak response vaccination was conducted in July/August 2024. A total of 11 woredas selected that were affected by the measles outbreak in 2024.

A total of 135 (125 males and 10 female) personnel, including epidemiologists, public health officers, and data collectors, were deployed to the five regions.

- Regular supervision activities were carried out to ensure the proper implementation of public health interventions.
- Review meetings were held at both national and sub-national levels to assess the progress of public health activities. These meetings have provided a platform for stakeholders to share their experiences, challenges, and best practices

Activities needs support to strengthen surveillance

VPD surveillance and outbreak response greatly need the financial and technical support in the following areas to improve timely detection and response to vaccine-preventable diseases and outbreaks:

- To provide training for silent zones and NP-AFP low-performing areas.
- Conduct targeted supportive supervision in the low-performing zone and woredas.
- To provide training for health care workers and surveillance officers on VPD diagnosis, reporting, sample collection, and transportation in the high-risk regions.
- Triangulate disease surveillance data, including diagnostic test-confirmed case-based surveillance data, with coverage to inform the access and quality of vaccination.
- Conduct root cause analysis (RCA) for the cause of the outbreaks.
- Integration of VPD surveillance and RI with humanitarian response in conflict-affected areas and IDPs.
- In collaboration with humanitarian partners, to enhance surveillance and outbreak response in security-affected areas.

1.10. Vaccine Safety (Adverse Event Following Immunization) Monitoring System

Immunization vaccination safety or Adverse Event Following Immunization (AEFI) monitoring is key task of to the successful immunization program. Vaccine safety monitoring activities conducted during RI, SIAs and Outbreak Response (OR) vaccination campaigns by the Ethiopian Food and Drug Authority (EFDA), working closely with MoH and other stakeholders. EFDA had been conducting active and passive AEFI surveillance to monitor safety of vaccines.

As part of the system strengthening, the authority has conducted various vaccines pharmacovigilance related tasks through financial support from GAVI. Major activities performed include: -

Regional Taskforce training: Revitalized regional AEFI investigation taskforce at five regions (Tigray, South West Ethiopia, Oromia, Amhara and Addis Ababa) and established new regional investigation taskforce at South Ethiopia and Central Ethiopia.

Consultative workshop: To integrate AEFI monitoring activities with EPI and PHEM activities; two rounds of consultative workshops were conducted with MoH and EPHI.

Evaluation of AEFI reporting tools: Workshop conducted to evaluate the use of different AEFI reporting tools to select appropriate reporting system such as paper based tools (yellow reporting format, line list), web based (e-reporting) system, Mobile Apps and Others (8482-toll free call and email pharmacovigilance@efda.gov.et) .

Guideline revision: EFDA has revised AEFI Surveillance guideline (June 2024), consumer reporting guideline (English, Amharic version) and developed sub national PVC guideline.

Training on Vaccine safety/AEFI monitoring: About 350 healthcare professionals from 447 woreda trained on vaccine safety/AEFI monitoring system from five different regions (South Ethiopia, Central Ethiopia, South West Ethiopia, Oromia and Tigray). Training for PAC also provided by experts from WHO and Brighton collaboration center provided training on how to evaluate a causal relationship between vaccine administered and its subsequent medical problem/serious adverse event using Brighton Collaboration case definition and general causality assessment methods.

Supportive supervision: Supportive supervision was conducted in 12 regions and two city administrations by prioritizing low performing zones/ sub cities/woredas and health facilities.

Review meetings on AEFI monitoring system: Annual review meeting was conducted to evaluate the progress of vaccine safety /AEFI monitoring engaging each region, MoH, regulatory bodies and other stakeholders.

There are promising practices implemented by the authority;

Improved AEFI detection, collection and reporting: As of January 09, 2025 there are 78,118 individual AEFI cases, of which 128 serious cases, were detected and reported from the Routine immunization, campaigns, Big Catch-Up (BCU) and outbreak response vaccinations. All are shared to Vigibase of Uppsala Monitoring Centre (UMC). The UMC report on December, 2024 shows Ethiopia has ranked the 2nd level from Africa next to Egypt and 20th from world by data vigilization/shared Individual Case Safety Reports (ICSRs) which are encoded in to Vigiflow mainly by routine activities. About 1140 AEFI cases were detected and reported from BCU Vaccination; these include AEFI from, IPV (94), Rotasil (61), Pentavalent (560), Measles vaccine (223), PCV13 (122). In addition, AEFIs detected and reported from Pfizer vaccine (46), Johnson and Johnson (1) and others (33). The AEFI detection and reporting from HPV single and HPV-MAC vaccination was 8373 cases with spontaneous surveillance. A total of 39 serious AEFI cases were detected and reported from BCU, HPV Single age cohort and Multi age cohort.

Availability of multiple options of AEFI recording and reporting tools: EFDA has provided multiple options of standard AEFI reporting forms of paper based and electronic and AEFI line list considering reporters can use more familiar or convenient one. User friendly a single page AEFI line list prepared and shared to sub national level to be utilized at health facilities.

Integration of AEFI activities: The Gavi's financial support helped EFDA to enhance detection, collection and reporting of AEFI from the vaccination campaigns, routine immunization and outbreak response vaccination.

Establishment of sub national pharmacovigilance centres: In order to strengthen pharmacovigilance activity, EFDA has established seven regionals sub national pharmacovigilance centres (at Jimma Medical Center, Wachamo University CSH, Haramaya University Hiwot Fana CSH, University of Gondar CSH, Hawassa University CSH, Mekelle University Ayder CSH and Tikur Anbessa Comprehensive Specialized Hospital).

Regional AEFI task force (TF): Established regional Adverse Event Following Immunization (AEFI) Task Force which is composed of multidisciplinary experts in all regions (100%). The national pharmacovigilance centre supports and follows its operation.

Boosted serious AEFI detection and reporting: Currently more than 128 serious AEFI cases were investigated by regional investigation taskforce and national Pharmacovigilance centre collaboration. The AEFI surveillance activities are undergoing from RI. About 84.5% of reports were detected by spontaneous/passive surveillance while 15.5 % were via active surveillance.

Established PAC: A strong, dedicated and well functional national pharmacovigilance advisory committee with high expertise of senior physicians, senior pharmacists and public health specialists was established.

WHO-GBT Maturity Level 3 (ML3): The Pharmacovigilance attained Maturity Level 3 (ML3) by external auditors/evaluators of World Health Organization's Global Benchmarking Tool (GBT).

Face to face discussion (F2FD): The health care professionals and the experts working in vaccine safety at health facility communicate face to face; provide orientation of vaccine safety surveillance, demonstration and detailed discussion in small group of individuals. Consequently, 602 sessions of F2FDs are conducted with participation of more than 3549 healthcare professionals participated.. This helped for mutual and clear understanding/communication, reaching to agreement, providing immediate feedback, and a more expert connection and stronger relationships among vaccine safety experts and reporters. This in turn helped reporters to detect and report AEFI cases as per consensus using standard reporting tools. The F2FD sessions will be conducted and health care professionals update reports that will be submitted in weekly bases.

Serious AEFI Causality Assessment: The national pharmacovigilance advisory committee (PAC) have conducted different rounds of causality assessment meetings. Hence, based on WHO causality classification system categorized the 128 cases as below

- **Consistent**: Vaccine product-related reaction/A1 (54), Immunization error-related reaction/A3 (14) and Immunization anxiety related reaction /A4 (8).

- **Indeterminate**: Indeterminate (temporal relationship is consistent but there is insufficient definitive evidence for vaccine causing event)/B1 (12) and Indeterminate (qualifying factors result in conflicting trends of consistency and inconsistency with causal association to immunization /B2 (6).
- **Coincidental** (34) and **Unclassifiable** (2).

Based on magnitude of serious AEFI case detection and reporting of vaccines, Measles vaccine (31) was at the top followed by Janssen COVID-19 vaccine (25), n-OPV2 vaccine (22), AstraZeneca COVID-19 vaccine (15), Pfizer COVID-19 vaccine (13) and HPV vaccine (6).

The challenges to be mitigated in order to improve the AEFI monitoring activities

- AEFI indicators are not integrated or part of DHIS-2 system
- Inadequate professional mixes and training gap on AEFI detection and reporting due to shortage of budget
- Absence of no-fault compensation for eligible serious AEFI cases
- Absence of reimbursement for unplanned cost/expenditures of parents or health facilities are not included in exempted service while managing serious AEFI cases encountered following vaccination
- Awareness gaps among caregivers/parents and vaccinators lead to low detection and reporting of AEFI cases.
- Difficulty in collecting AEFI data/line list, inconsistency in national and sub-national plans.
- Minimal attention and commitment to AEFI monitoring system
- Budget shortages, staff turnover, and unavailability of AEFI kits in some health facilities
- No or very low number of partners supporting vaccine safety activities
- Some health facilities and outreach sites do not avail AEFI kits including adrenaline

1.11. COVID 19 Vaccination performance

Learning Question: What is the current status of your COVID-19 vaccination?

Coronavirus disease has been declared as a public health emergency of international concern by WHO on 30 January 2020. The first COVID-19 case in Ethiopia was reported on 13th March 2020. Since then, Ethiopia has taken significant steps in the preparations for COVID-19 vaccine introduction and rollout using various strategies at all levels. During the epidemic response, mass vaccination campaigns were used as a main delivery approach to reach targeted populations quickly and widely in addition to routine vaccination approach. However, the implementation feasibility, operational costs for mass vaccination (campaigns) would take the concerns for the sustainability of the program and the on-going COVID-19 epidemiology shifting demands continued vaccination of high-risk population groups with targeted strategies.

Ethiopia introduced COVID-19 vaccine on March 13, 2021 after conducting nationwide synchronized launching on the same date and time. During the vaccine introduction and rollout, about 72 million doses of COVId-19 vaccine administered as first dose, second dose and booster dose.

Following the WHO declaration of COVID-19 is no more public health international concern on May 5, 2023, the country has developed and endorsed the integration of COVID-19 vaccination in to the RI and other PHC services on January, 2024 for the period of 2023 to 2025. The service delivery strategies for COVID-19 vaccine introduction and rollout are continued as the main vaccination delivery strategies during the integration of COVID-19 vaccination in to RI and PHC services. The strategies of COVID-19 vaccination service delivery include fixed post in health facilities, outreach within limited distance of health facilities, mobile with extended distance from health facilities, and targeted mini campaigns in high-risk and low-performing areas have been implemented to deliver COVID-19 vaccination services.

The following activities were conducted as part of COVID-19 vaccination service integration into RI and other PHC services coordination.

- COVID-19 vaccination service integration, coordination and governance have been managed through existing routine immunization coordination platforms at the national, regional, and zonal levels. During the COVID-19 vaccination service integration process, the roles and responsibilities of the coordination platforms were considered and their functionality monitored.
- COVID-19 vaccination service Integration was included as one of the agenda items in every coordination meeting, and implementation status updates were provided in every coordination platform at the national and subnational level.
- COVID-19 disease and the vaccine was included in the revised immunization in practice training manual
- Guidance given to all regions to let the facilities to request COVID-19 vaccine with the routine vaccines using the revised VRF,
- Regions are advised to include COVID-19 service integration in their annual plan,
- Cascaded orientation provided on the endorsed integration guideline
- Guidance given to regions to use all possible immunization events and other Maternal, Child and Adolescent Health Services (MCAHS) and other health programs as an entry to provide COVID-19 vaccination to high priority groups
- The concept of COVID-19 service integration and the planned activities were presented to the EPI taskforce meeting and discussed.
- COVID-19 vaccination service integration weekly virtual meeting platform was created, and multiple follow-up meetings were conducted. (Regional progress status reviewed, and the implementation of the nationally sent guidance at regional and lower level followed)
- Capacity building on the COVID -19 vaccine integration following the endorsement of the national and subnational COVID-19 vaccine integration, regional cascading training provided for 55,533 health care workers in all regions. In addition, in collaboration with the USAID GHSC-PSM project, 584 participants from EPSS, hubs, RHBs, ZHDs, the Woreda EPI coordinator, and cold chain officers were trained on integration modalities.
- Demand creation activities conducted;131 sessions of advocacy workshops at the national and subnational level were conducted, and a total of 11,540 participants attended the meeting, sensitization workshop on the integrated COVID-19 vaccine for 5434 participants in 14 refugee and 50 IDP sites in the Amhara, Afar, Oromia, Benishangul Gumuz, Gambela, and Somali

regions. National-level sensitization workshops were also conducted with 952 and 8,335 hotline counsellors on the integrated COVID-19 vaccine.

- At the national level, TV and radio spot messages were developed, produced, and broadcasted by national media outlets like ETV, FANA, and EBS, as well as Orthodox Church, Muslim church, and protestant church media. Panel discussions and expert interviews at different media have been conducted with different media like Fana TV, Arada Radio, Sheger Radio, ETV, and so on. Regions have also developed, produced, and broadcasted TV and radio spot messages using regional media. Additionally, subnational-level panel discussions and expert interviews were also conducted on integrated COVID-19 vaccination. Also 290,000 people were reached using both national and subnational social media platforms.
- Different social mobilization and community engagement activities were conducted at each level, for which around 477,572 people were reached with 10,740 sessions of community sensitizations 8 on integrated COVID-19 vaccine and HPV vaccine, as well as, 12,851,857 people were reached by using audio-mounted vehicles, and 8,130,200 people were reached by house-to-house visits as well. Similarly, around 1,030 social mobilizers were deployed, and they mobilized around 1,356,454 community members and reached 1521 people through community sensitization. Messages on integrated COVID-19 vaccine messages were given to around 12,800 school girls through school-based health education. Community dialogue was also conducted for 62 participants on these integrated COVID-19 vaccinations.
- The technical supports of the technical assistants recruited during the introduction and rollout period, continued during the COVID-19 vaccination service integration.

With the fund received from different partner organizations, technical assistants were recruited to support the leadership management and coordination, demand generation activities, strengthen supply chain management, vaccine safety monitoring, service delivery and monitoring and evaluation of the COVID-19 vaccination introduction, rollout and integration.

Table 14. Technical assistants recruited for COVID-19 and RI support

Support Area	LMC	Demand	Supply	AEFI	SD	Total
Number	14	18	89	27	205	333

With the fund of GAVI-CDS-1, a total of 81 regional and zonal TAs were recruited to support the COVID-19 vaccination introduction and rollout in all regions. With the continued fund support of GAVI CDS-2 and CDS-3, their contract was extended to end of December, 2025. They have significant support in the COVID-19 vaccination introduction and rollout initially and their support continued in the concept of COVID-19 vaccination service integration in to RI and other PHC services. They supported the critical human resource shortage of the national and sub-national level to strengthen the RI, identification of ZD and UV children and vaccination, planned SIAs, outbreak response activities, VPD surveillance, supply chain management activities, demand generation activities, and vaccine safety monitoring activities.

Table 15: Overall COVID-19 vaccine introduction and rollout performance as of November, 2023

S/N	Region	Target Age 12+	1st dose Administered	2nd dose administered	Booster dose Administered	Total doses given	Completed	Coverage of Completed
1	Addis Ababa	3,026,101	1,479,344	341,061	400617	2,236,209	1,211,104	40%
2	Afar	1,502,499	1,681,016	53,211	110765	1,854,207	850,659	57%
3	Amhara	16,460,845	12,792,902	744,202	1,046,909	14,709,524	12,179,094	74%
4	Benishangul-Gumuz	876,559	506,012	76,578	107680	706,777	494,782	56%
5	Dire Dawa	419,277	88041	141910	46946	309,799	161,307	38%
6	Gambella	383,495	387,163	93,127	79863	567,012	260,610	68%
7	Harari	211,240	149,214	66,016	30359	251,924	130,568	62%
8	Oromia	27,535,429	19,459,774	3,983,913	2540719	26,433,715	16,351,421	59%
9	Sidama	2,820,731	2,772,645	662,792	280,953	3,776,005	2,041,996	72%
10	SNNPR	10,074,406	8,411,487	2,529,899	1054291	12,151,755	6,254,920	62%
11	Somali	4,391,846	3,713,435	434,651	365276	4,577,609	3,207,983	73%
12	South West Ethiopia	2,048,455	1,770,395	372,918	201903	2,357,343	1,325,300	65%
13	Tigray	4,167,249	2836705	0	0	2,873,093	1,397,461	34%
	Total	73,918,132	56,048,133	9,500,278	6,266,281	72,804,972	45,867,205	62%

Table 16: Over all COVID-19 vaccination integration Performance as of June, 2024

Region	1st dose	2nd dose	Booster dose	Mix and match	overall dose Administered
Addis Ababa	9119.00	0.00	6179.00	0.00	15298.00
Afar	9,046	-	1,019	-	10,065
Amhara	92,220	-	36,493	-	128,713
Benishangul Gumuz	9,550	-	4,504	-	14,054
Dire Dawa	13,555	3,764	17,025	-	34,344
Gambella	6,405	-	4,558	-	10,963
Harari	3,946	-	1,610	-	5,556
Oromiya	319,191	124	148,748	-	468,063
SNNP	123,225	-	82,501	164	205,890
Sidama	65,794	-	40,781	-	106,575
Somali	54,118	-	10,129	-	64,247
Southwest Ethiopia	8,427	41	2,070	-	10,538
Tigray*	0.00	0.00	0.00	0.00	-
National	**714,596**	**3,929**	**355,617**	**164**	**1,074,306**

***** *No data for Tigray region in the DHIS2*

Table 17: Special population vaccinated as part of COVID-19 vaccination service integration

National	HCW 1st Dose	IDP 1st Dose	Person with Medical Condition 1st dose	People with Disability 1st Dose	Refugees' 1st Dose	Sum of HCWs Booster	Sum of IDPs Booster	Person with Medical Condition Booster dose	People with Disability Booster	Refugees Booster
Total	**15974**	**12785**	**6414**	**236**	**2085**	**1307**	**4302**	**2925**	**34**	**2602**

Lessons learned and Challenges

Lesson learned

- The global health community takes steps to recover from COVID-19 and aims to highlight the good practices and lessons learned on COVID-19 vaccination despite the wide-reaching impact and challenges caused by COVID-19
- The MOH ISD team, with COVID-19 integration impending partners, formed a learning initiative for national and subnational service planners, managers, and providers, especially on targeted integrated mass campaigns as part of the COVID-19 vaccine integration with RI and other PHC services in selected regions.
- This learning initiative emphasized a collection of lessons to inform action within and beyond the health sector, identify and scale up effective interventions, promote informed action at various levels of the immunization system, and facilitate sharing of experiences.
- Weekly virtual performance reviews enabled the timely utilization of near-expiry COVID-19 vaccines and saved a lot of resources
- Close follow-up and monitoring of COVID-19 vaccination service integration improves vaccine uptake.
- Leveraging COVID-19 resource to strengthen routine immunization and other health services

Innovation

- The use of COVID-19 vaccination data tracking (Parallel COVAX-DHIS2) platform created and implemented

Challenges

- Low vaccination service uptake/ low risk perception about the COVID-19 disease of the community and service providers
- Weak inter-referral linkage with other services to get priority targets like comorbid people
- The demand generation activities at sub-national level decreased from time to time
- Inconsistent COVID-19 vaccination data tracking and data quality
- Security/ conflict affected the logistics distribution and implementation

Next step

- Intensifying and following the implementation of COVID-19 vaccination service integration in to RI and other PHC services.

1.12. Trajectory and progress against targets set

Learning Question: How does the progress over the past year compare with your Theory of Change or programme objectives? How has **COVID-19** and **COVID-19 vaccination** impacted your routine immunisation programme, what has been done to maintain and restore immunisation and what has been

the impact of it (please include reference to trends in DTP3 and MCV1 coverage)?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.

Ethiopia has demonstrated commendable progress in its efforts to identify and address zero-dose and under-immunized children, a critical step towards achieving national and global immunization targets. By employing tailored strategies and fostering strong partnerships, the country has reached [insert updated figure] zero-dose children by [insert date], marking significant strides towards the goal of addressing 50% of Ethiopia's total zero-dose burden by 2025.

Despite the disruptions caused by the COVID-19 pandemic, coverage rates for critical vaccines such as DTP3 have shown signs of recovery. For instance, DTP3 coverage reached 72% in 2023, up from 68% in 2019 (WUNIC, 2023). This recovery highlights Ethiopia's resilience and determination to restore immunization services while adapting to emerging challenges.

Factors Facilitating Better Routine Vaccination

Several factors have contributed to Ethiopia's progress in routine immunization:

- Community engagement and awareness: Targeted campaigns have raised awareness of the importance of routine immunization and addressed fears related to COVID-19.
- Integration of Services: Combining COVID-19 vaccination efforts with routine immunization programs has ensured continuity and enhanced service delivery.
- Catch-Up Campaigns: Focused initiatives to vaccinate children who missed their doses during the pandemic have narrowed immunization gaps.
- Strengthened Partnerships: Collaborations with local CSOs, Gavi, and other stakeholders have boosted resources and expertise for immunization efforts.
- Policy and Planning Innovations: The Full Portfolio Planning (FPP) initiative has prioritized demand generation and improved access to immunization services in 80 prioritized woredas with high burden of ZD and UVC.

Challenges Impeding Routine Vaccination Efforts

While progress has been made, significant challenges continue to hinder routine immunization efforts:

- Impact of COVID-19: Disruptions in healthcare services during the pandemic led to reduced health facility visits and a notable decline in vaccination rates.
- Conflict and Natural Disasters: Ongoing security issues and natural disasters have created barriers to accessing children essential health services, including immunization in remote and conflict-affected areas.
- Vaccine Hesitancy: Misinformation and fear surrounding vaccination, particularly during the pandemic, have affected vaccine uptake.
- Data Discrepancies: Variations in data from various sources complicate tracking progress and addressing gaps effectively.

- Resource Constraints: Competing priorities and limited resources in crisis-prone areas pose additional challenges.

Promising Practices in Routine Vaccination

Ethiopia has adopted several innovative practices to enhance routine immunization:

- Intra-Action Reviews: Systematic evaluations to identify enabling factors and address barriers to vaccination efforts.
- Digital Solutions: Implementation of digital tools to improve data collection, reporting, and monitoring of immunization indicators.
- Targeted Communication Strategies: Focused efforts to address vaccine hesitancy and rebuild trust in immunization services.
- Humanitarian Collaboration: Working with humanitarian organizations to deliver vaccines in conflict-affected and remote areas.

Role of Partners in Routine Immunization Efforts: Immunization partners have played a vital role in Ethiopia's immunization recovery and progress. The partnership, as mentioned in the various sections of this report and reflected below, has been instrumental in revitalizing immunization services and addressing zero-dose and under-immunized children.

- Gavi and Global Partners: Provide financial and technical support in resource mobilization, planning, and technical expertise.
- Local Civil Society Organizations: Engagement in demand generation and service delivery improvements in 80 prioritized woredas with high number of ZD and under-immunized children and limited demand and access to immunization services.
- Health System Stakeholders: Collaborative efforts to integrate COVID-19 responses with routine immunization programs.

Top Risks Needing Mitigation

Several risks require urgent attention to sustain and accelerate progress:

- Persistent Zero-Dose Burden: The high number of zero-dose children necessitates focused interventions to achieve equity in immunization.
- Security Challenges: Conflict and instability in certain regions demand tailored approaches for service delivery.
- Data Quality Issues: Improved data systems and digital tools are essential for accurate monitoring and decision-making.
- Natural Disasters: Climate-related challenges call for resilient healthcare infrastructure and adaptive strategies.
- Vaccine Supply Chain Disruptions: Strengthening cold chain systems and logistics is critical for uninterrupted vaccine delivery.

Future Directions

Ethiopia aims to achieve equitable immunization coverage, reduce zero-dose burden, and safeguard public health, ensuring every child receives life-saving vaccines. To build on the progress and address existing challenges, Ethiopia will focus on the following priorities:

- Scaling Innovations: Expand digital health solutions and integrate technology into immunization programs.
- Strengthening Health Systems: Enhance infrastructure, workforce capacity, and service delivery mechanisms.
- Targeted Interventions: Increase outreach efforts to reach zero-dose and under-immunized children in marginalized and conflict-affected areas.
- Sustained Partnerships: Deepen collaboration with global and local partners to leverage resources and expertise.
- Robust Data Systems: Implement advanced tracking systems to improve data accuracy and ensure informed decision-making.
- Policy Alignment: Update and enforce comprehensive immunization policies to guide future efforts.

1.13. Performance of Immunization Leadership Governance and coordination (LMC)

Immunization LMC is very critical in overall guiding the program, establishing partnerships, strategizing the program activities, leading flagship agendas, mobilizing finance, and advocating immunization program agendas. Immunization program has different coordination platforms at different ICC, task force, and NITAG and working groups.

As part of planning and coordination programs, ICC has guided the development and endorsement of different initiatives in this reporting period as follow;

- Reviewed and endorsed the catch-up vaccination and BCU vaccinations
- Reviewed and endorsed the new vaccine introduction of yellow fever, Measles Five dose switch, malaria vaccine introduction.
- The ICC reviewed the progress of previous endorsed and approved activities
- The ICC supported resource mobilization for the activities

The immunization program has revised the 3rd term NITAG and nominated NITAG members, chair and co-chair, the existing ToR was revised considering the WHO guide. In the reporting period the NITAG delivered recommendations on following new vaccine introductions and program areas

- NITAG thoroughly reviewed the malaria vaccine introduction and recommended MoH to introduce malaria vaccines, yellow fever vaccine into the routine immunization, Measles 5 dose switch, Hep B birth dose,
- NITAG also reviewed Measles SIA proposal and enriched and provided recommendations for the MoH to conduct Measles SIA to prevent children.
- NITAG also conducted special meeting on cVDPV outbreak response

- NITAG is currently working on vaccine prioritization activities, NITAG with MoH and partners working on vaccines that have MoH potential in the next five years.

Immunization task force has been coordinating several immunization activities with stakeholders over the reporting period, the task force held several coordination meetings and conducted several activities, such as;

- The task force coordinated the BCU vaccination
- The task force coordinated the HPV MAC campaign
- The MoH and Partners decided conducted supportive supervision together for at subnational level
- The MoH and Partners conducted joint review of the programs
- The Task force worked on several new vaccine application document preparations and others.

There are platforms that MoH organizing to coordinate and review the performance of partner's project implementation in the presence of regional health bureaus, and partners also submit their reports officially to MoH. In order to ensure accountability and transparency, MoH has annual exercise of plan alignment with partners, and conduct partner mapping to minimize or avoid project overlaps.

Overall, the LMC is vital to coordinate and lead the activities run by the program, despite good progress there are factors that impede effective coordination.

- High computing priority from the top officials
- Subnational coordination is suboptimal due to staff shortage and capacity
- Turnover of staff and officials

1.14. Gavi Fund Absorptions

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.)
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**?**

Performance of Gavi Finance management

In general, MoH has three financial management mechanisms called Channel 1, Channel 2 and Channel 3. Channel-1 consists of funds directly disbursed from the MoF, Channel-2 funds come directly to MoH from donors. Channel-3 refers to funds that do not come to MoH, but are channelled to implementing partners, with MoH monitoring the implementation of activities. The Gavi funds directed to MoH are considered channel 2 funds, and the management of Gavi funds is generally based on the principle of Channel 2 fund management.

Channel two fund management has the following management mechanisms;

- First, program or project proposal will be developed by the program and will be applied to donors, and after agreement donors will award the grants.

- After fund is awarded, the budget disbursed directly to the MoH account. The implementation of activities is based on the agreed proposal.
- There are periodic technical and financial reports to donors per specific donor agreement.
- After the project completion, final technical and financial report is submitted.
- Close out reports that include inventory will be done.

In terms of Gavi financial management

- MoH has separate Gavi fund account and similarly RHBs also have separate accounts to manage the transactions.
- For activities implemented at regional, zonal, and woreda level; Gavi funds will be disbursed per the proposal.
- Fund disbursement is conducted based on new Channel-2 fund management guide to minimize the risk of low absorption.
- After the activity implementation, statement of expenditure will be collected from each level of implementation.
- Financial recording is conducted using Peachtree and Integrated Financial Management System (IFMIS) and the report generated is shared to Gavi and health programs within the MoH.
- Annually, internal and external audit also conducted on grant type including Gavi grants.
- Periodic financial expenditure and performance review is conducted to strengthen the financial management.

Table 18: Active Gavi Fund Utilization Report

As of December 31/2024										
Grant	**Recipient**	**Period**	**Grant Value**	**Disbursement**	**Expenditure**	**Commitment**	**Total Utilization**	**%**	**Cash Balance**	**Audit**
Gavi CDS2	MoH	2022-2025	17,605,795.71	13,970,892.71	8,636,513.42		8,636,513.42	62%	5,334,379.29	**Progress**
Gavi CDS3	MoH	2023-2025	21,115,178.00	6,227,443.87	530,803.45	292,772.90	823,576.35	13%	5,403,867.52	
HPV MAC	MoH	2023-2024	4,767,054.00	4,767,054.00		4,767,054.00	4,767,054.00	100 %	-	
HPV Single Dose Switch	MoH	2023-2024	1,211,126.00	1,211,126.00	864,012.67	347,113.33	1,211,126.00	100 %	-	
Rota	MoH	2023-2024	3,086,892.00	929,283.00	792,273.31	63,937.05	856,210.36	92%	73,072.64	

IPV2	MoH	2023-2024	882,422.00	882,422.00	835,205.60	2,680.05	837,885.65	95%	44,536.35	
HSS4/ SDG	MoH	2023-2026	99,947,139.00	5,832,103.79	2,137,435.29	3,242,576.01	5,380,011.30	92%	452,092.49	
EAF	MoH	2023-2025	44,180,347.00	11,728,629.69	7,816,662.07	1,963,947.92	9,780,609.99	83%	1,948,019.70	
ITU	MoH	2023-2025	3,029,254.00	2,646,801.81	231,018.63	1,200,000.00	1,431,018.63	54%	1,215,783.18	
			195,825,207.71	48,195,756.87	21,843,924.44	11,880,081.26	33,724,005.70	70%	14,471,751.17	

From the year 2022 to date (December, 2024), Gavi approved a total value of grants is $195,825,207.71 and of which $48,195,756.87 disbursed to MoH for program implementation. From the disbursed budget a total expenditure is $21,843,924.44 and $11,880,081.26 committed (under collection of SoE), thus the total utilized is 33,724,005.70. In general 70% disbursed grants are utilized.

For the remaining cash budgets of the active grants, there are specific reasons for not being utilized so far;

- The cash balance for CDS2 is $5,334,379.2. The reason it has not been utilized is due to delays in the approval of reprogramed funds. This budget has recently approved and it will be utilized according to the timeline.
- The cash balance for CDS3 is $21,115,178.00, which was approved in May 2023. However, the fund disbursement from Gavi has been delayed. Yet, 6, 227.443 of the grant will be disbursed soon, and MoH is preparing to utilize it. For the remaining unutilized amounts, EAF is $1,948,019.70 and ITU is $1,215,783.18. MoH has planned to utilized these budgets in the coming months

Old grants liquidation and closer performance

Table 19: Old grant budget close status

N.O	GRANT	USD	ETB	Receivables/advance (Birr)	Commitment /Liability
1	PCV	115,272.82	33,000.00	710,420.39	
2	ROTA	0	0	170,682.31	
3	IPV			240,313.22	
4	HPV	81,974.97	635,063.46	1,586,380.08	18,141.95
5	MEN A	96,246.69	0	55,523.10	11,050.00
6	COVID-FROM			4,458,426.54	34,407.79

	HSS	80,413.58	(25,080.08)		
7	MEASLES 2016			1,435,305.90	8,432.00
8	GNVS			29,478,504.24	42,358.05
9	CDS 1			15,677,236.14	39,621.09
10	MEASLES 2022		2,185,899.93	27,500,601.66	75,855.07
11	HSS2		2,529,653.78	11,216,384.17	78,116.21
12	HSS3	543,287.34	17,583,452.33	129,791,466.90	63,420.05
13	PIRI	28,699.24	68,150.00	2,235,885.16	38,000.00
	TOTAL	**945,894.64**	**43,010,139.42**	**224,557,129.81**	**409,402.21**

- There is $1.5Million cash balance and the MoH has requested to reprogram this old grant money and is waiting for the reprogram decisions from Gavi.
- For receivables 335 Million ETB, MoH has been progressing in liquidating the budget. Majority of the budget is the procurement handled by UNOPS.
- MoH has conducted budget liquidation support for regions to settle their budget in advances;
- MoH is working to close old grants.

MoH acknowledges delays in collection of statement of expenditure from lower level structures. In fact, each grant has its own contexts and justifications for delays as detailed below;

- Delay in activity implementation, especially in conflict affected areas:
- Some activity implementation delays because of supply shortage and related reasons. For instance, delay in HPV MAC budget utilization was due to the global vaccine HPV shortage for HPV MAC implementation, which delays the HPV MAC budget utilization for more than a year.
- Ethiopia has more than 1100 woredas, and funds are disbursed for activities and collecting SoE from these huge numbers of woredas is time taking.
- Limitations of digital tool that shows subnational financial data visibility
- Limited capacity and expertise at lower level in recording and timely reporting financial data
- Long process of procurement due to procurement legislations, so it takes prolonged time and may slow down the implementation process,
- Inconsistency reporting system (zone and woreda level use pool fund system)
- Pooled finance system at the zone and woreda level
- There is limited local capacity to implement the health activities as per the planned timeline, due to several computing priorities on the ground.

MoH has taking several system improvement actions to improve the timely budget utilization and liquidations.

- MoH has developed and deployed new Channel-2 financial management guide to improve fund utilization and liquidations
- MoH top level management review and follow utilization and liquidations of funds in bimonthly manner,
- Capacity building of subnational finance and grant management experts and officials
- MoH with partners has been developing digitalized grant management system to visualize and track financial and program data.
- Technical assistance also deployed to support sub national level to improve recording, reporting and utilization and liquidations.
- Regular reporting to donor and partners, annual review, Joint Supportive Supervision, collaborative meetings, such as JCF, JCCC, Partners forum, and HPN Donors Group.
- Engage UN procurement agencies UNICEF/UNOPS/GF-bamboo/World Bank/AfCDC to fast track the procurement.
- Cash follow plan developed every quarter and monitoring of disbursement followed.

Assurance mechanisms

The MoH has robust internal control mechanisms to comply with financial procedures and internal audit mechanisms to self-assess and assure compliance. In addition, external audit also conducted periodically and MoH is working to address audit findings accordingly. Gavi also conducted program and finance audit in 2022. There are recommendations given by external and Gavi audits findings. MoH has taken strategic action following the Gavi audit to improve the program and finance management. The following the key actions are taken as assurance of audits recommendation;

- Approval of Channel 2 finance directives by the Ministry of Finance (Directive number 979/2024) to expedite timely fund disbursement and utilization.
- Establishment of separate bank accounts for Gavi standalone grants at all RHBs to enhance tracking.
- Deployment of the new DHIS2 V2.40 to improve data quality.
- Implementation of SAP/ERP by EPSS for supply chain management, providing reliable, real-time vaccine supply data and streamlining processes.
- Refund of ineligible funds (49,385,398 Birr) to Gavi account, with receipt #201357, to ensure compliance with recommendations and proper utilization.

Assurance providers (for e.g., Fiscal Agents, Monitoring Agents, and Financial Management Technical Assistance) have contributed to the MoH to improve financial management and risk assurance. Some of the contributions were,

- MoH has identified gaps in financial management and risks
- Utilize grants and prepare reports timely
- To maintain compliance to terms and rules or conditions
- To develop new financial management mechanisms, such as Channel-2 Guide

- To capacitate and skill transfer to financial and grant experts.

1. 15. Gender related performance

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)?

As articulated in various literatures, mothers and/or female care-takers are primarily responsible and play central role in wellbeing of children including access to immunization services. In Ethiopia, women also play key role in delivery of child healthcare; including immunization services- at all levels of the health system; and most importantly as health extension workers- at the primary healthcare facilities. Thus, the role of women at demand, supply and ultimately uptake of immunization services is indispensable.

Figure 15: *ECredit: Gavi/2024/Mulugeta Ayene*

However, in most rural communities and the urban poor they often lack power; resources and knowledge to access these services. As a result, gender barriers remain among critical determinants of health outcomes. Their multiple and over-burdened roles and tasks in running the day-to-day household chores further adds to the complexity of the problem. Even when they have some decision-making power, these competing priorities make it difficult to visit health facilities for essential health services, including immunization at the recommended schedules- hence contributing to high number of zero-dose and under-vaccinated children. Thus, empowering women- including enhancing males involvement to immunization and fostering male-female shared decision-making- are central to address these gaps. Corroborating this, a study conducted in Ethiopia found that mothers who made health care decisions jointly with their husbands were nearly twice as likely to vaccinate their children fully as when decisions were made by the husbands alone.[1]

[1] Darebo, T.D.; Oshe, B.B.; Diro, C.W. Full vaccination coverage and associated factors among children aged 12 to 23 months in remote rural area of Demba Gofa District, Southern Ethiopia. PeerJ 2022, 10, e13081

Cognizant of the above, Ethiopia has developed gender policies, strategies, and guidelines- with focus on mainstreaming gender issues at all public sector ministries and bureaus. These affirmative actions are aimed at promoting gender equality by bridging gender-gaps to addressing the unique needs of women and girls in all sectors. Key among these, include the National Policy Ethiopia Women (1993), Gender Policy (2010), National Gender Strategy (2016) and the Health Sector Gender Strategy. Moreover, Ethiopia's Health Policy and the Ethiopia National EPI Comprehensive Multi-Year Plan underscore the central role of addressing gender issues in expanding coverage, enhance service access and achieving better health outcomes, including immunization.

While progress has been made in translating the above policy commitments to practice; there are still several areas for improvement. Assessments conducted in Ethiopia on gender barriers for health services show that addressing gender dimensions of immunization require tackling the broader social context, individual health behaviour and community-level dynamics. It requires empowering individuals and communities for positive change, and fostering the transformation of gender inequities including in the design and implementation of immunization programs.

Bridging of the gaps identified in these assessments indicated that gender barriers requires a multi-faceted approach that includes community education, improving access to healthcare, and ensuring that women's voices are heard in health decision-making processes. In line with this, Ethiopia has taken important actions that improve demand generation, access; and ultimately uptake of immunization by addressing gender barriers. The Table below summarizes gender barriers faced by various groups, implemented interventions to address gender barriers to immunization; and the impact of activities.

Table 20: Gender barriers faced by various groups, implemented interventions and impact for immunization

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)?**

Children of illiterate mothers, poor households; and remote communities have low immunization coverage due to low income, lack of knowledge, distance to reach vaccination sites- all affecting demand and access for vaccine uptake. (Key barriers include poverty, busy schedule, lack of knowledge, lack of decision-making power; and difficult to access immunization services) Limited male involvement to immunization services	Immunization services provision through various modalities based on context; service integration The Ethiopia Health Extension Program (HEP) is working to promote demand; and deliver vaccines closer to the community Advocacy and social mobilizations to increase boys and men involvement to immunization Economic empowerment through Income Generation Activities (IGA) and education to poor mothers in some urban areas	Immunization service is provided using various modalities and the HEP is implemented all over the country. However, disruption of services, displacement of both local populations and healthcare workers; and other logistics and security barriers in areas affected with conflict hindered full implementation. There are efforts, including social mobilization and community conversation are underway to enhance boys and male involvement to improve immunization services Productive safety net program (PSNP) in implemented in some urban settings	Contributed to improve coverage increase and reduction in zero-dose and dropout children as detailed in the section A1 of this report Increased boys and male involvement to immunization as evidenced by program reviews, such as HPV-MAC
Lower level of awareness and demand; that affect immunization uptake	Activities implemented as detailed in the above demand promotion and communication section of this report	These were mostly implemented in the country-with in-frequent activities in conflict situations due to insecurity	Contributed to increase immunization uptake
Long distance and clinic waiting hours in pastoral and remote rural areas	Making immunization services more accessible to the community, by integrating immunization with other health services and delivery strategies using Gavi FPP money; namely; IOR; PIRI, and	Yes, these are implemented; in collaboration with humanitarian organizations, such as ZIP/IRC in areas with security challenges, and five local CSOs engaged in remote rural and pastoral settings of eight regions to increase	Immunization service provision to settings with security challenges and hard to reach

	Mobile services are implemented based on the context	demand and access to immunization	

Barriers faced by health workers

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)?**
Low quality facilities and work environment, unreliable vaccine supplies, poor inter-personal communication and negative experiences with healthcare providers can deter women/care givers from seeking immunization services.	Provided various capacity building trainings, such as Human Cantered Design (HCD); Immunization In Practice (IIP) to service providers and immunization officers Improving the immunization rooms and service delivery settings through Early Childhood Development (ECD) and Clean and Safe Health Facilities (CASH) initiatives	These trainings are being given for immunization managers, officers and service providers. This training will continue to the community level ECD is implemented in model health facilities CASH is implemented in most health facilities	Several of these challenges are being addressed through government and partners-support including Gavi funding activities. These have enabled delivery of vaccines with improving access over the years. Yet, more to be done to develop a sustainable capacity at all levels
Sub-optimal women representation at leadership and policy-development level	National gender policies and strategies including gender mainstreaming in public sectors**;** affirmative actions to enable and develop leadership skills of women	Mainly implemented at federal level; less so at sub-national levels-hence gaps in representation in leadership and policy development that requires enhancements	Successive women leadership at Federal MoH- both ministerial and director/ lead executive Officer - with leadership the maternal, child and adolescent health services, including immunization
Safety and security for health workers working in some	Closely working with humanitarian organizations and awareness on security	Safety and security issues remain a huge challenge	With the support of humanitarian organizations and dedication of healthcare

areas, such as conflict affected areas	and safety requirements to healthcare providers		workers in difficult situations, many children are getting vaccination

Barriers faced by adolescents

Barrier (state the barriers that restricts adolescents from accessing services)	**Intervention that addresses barriers (state the interventions planned)**	**Was the intervention implemented? (no, partially, fully)**	**What was the impact (provide evidence)?**
Fear of social stigma can prevent adolescent women from seeking healthcare, including immunization for themselves or their children.	Social mobilization and community conversations to address these barriers Cascaded HCD trainings to HWs and the community level to design context specific solutions Sensitization of the MoH hotline/call centre counsellors at national and regional level on immunization demand promotion	The HCD training is given for the immunization and health promotion officers, immunization service providers, including health extension workers in some regions .Hotline/call centre councillors provide toll-free counselling services on essential health services, mainly on maternal and child health issues, at national and regional level	Mother age >40 years was positively associated with children being fully vaccinated (Gelagay A, 2021) Efforts are made by the country to overcome this challenge
Some harmful traditional practices, such as early marriage are not effectively tackled; and resolve issues of young married women from their husband contribute for low immunization rate both among women and their children	The national gender policy and strategies identify early marriage as an issue to be addressed as core element of women empowerment and advancing their SRH rights; and engagement of males as essential for combating both early marriage and empowering married women	Male engagement for the immunization services through the HEWs and involving community health leaders Community awareness campaigns, such as community conversation, community sensitization, and the likes based on the findings of the co-creation sessions of HCD;	Male engagement for the immunization services through the HEWs and involving community health leaders

What new programming or reprogramming is required to improve impact?

- Reinforcing and application of the national gender policies and strategies; and relevant legal provisions that promote the rights of adolescents, young girls and women in the society through multi-sectoral and whole of society approach. While the country has ratified important policy and legal instruments that advance women empowerment and child health; enforcement remains a challenge- requiring grass-roots engagement including community-led organization, education and other social sectors at all levels of the system.
- Providing training for healthcare workers on gender-sensitive approaches to improve the access and quality of health services, including immunization for women and adolescent girls.
- Reinforce various immunization service delivery strategies, including RI, provide immunization service through working hours or specific schedule to accommodate the schedules of adolescent mothers and their families, Integrated outreach, PIRI and mobile services;
- Strengthening service integration and gender mainstreaming to improve access for immunization services
- Continue educating the communities about the importance of immunization; targeting adolescents, men and women to foster support for vaccination. The activities include close collaboration with other sectors, such as education and providing cascaded the HCD trainings to service providers, including health extension workers, and community dialogue at the community level with key community players. The community dialogues will focus on strengthening men and boys' engagement to promote shared responsibility for immunization
- Create awareness and working closely with non-governmental organizations and local CSOs (the CSOs identified to work in 80 prioritized woredas) to implement gender-focused health programs and raise awareness about the importance of immunization.

1.16. Health information system

Learning question: What is the progress of planning and implementing health information systems and data strengthening, monitoring, and learning activities? Do these collectively constitute at least 10% of your HSIS/EAF grant budget?

The MoH Strategic Affairs Executive Office (SAEO) has been enhancing the routine health information system by redesigning recording and reporting tools to improve data collection and program monitoring. Efforts toward digitalization, with the introduction of new tools and systems, aim to elevate data quality, reporting, and analysis, ultimately resulting in better healthcare delivery and outcomes, particularly in immunization services.

Furthermore, MOH SAEO has been emphasizing the importance of data management and quality in healthcare delivery, focusing on building capacity, providing data quality feedback, and conducting facility-level data quality assessments. Routine reports' completeness and timeliness are crucial, with notable improvements observed in 2016 EFY. Integrated supportive supervision was carried out across 12 regions, and the National HIS performance review meeting identified gaps and developed action points for improvement. The Sectoral Annual Review Meeting (ARM 26th) brought together various stakeholders to discuss key health issues, including immunization strategies for ZD & UV

Children. Through these concerted efforts, digital health tools and systems, such as DHIS2, are being utilized to enhance health data management and utilization, leading to better health outcomes and more efficient healthcare delivery.

Routinely ensuring the completeness and timeliness of health reports is crucial for quality evidence generation towards effective healthcare management and decision-making. In 2016 EFY, the national report completeness and timeliness rate were 85% and 57% respectively. Compared to the previous fiscal year, report completeness is the same while timeliness is improved by 16%. Based on the DHIS2 performance data quarterly, data quality feedback was sent to RHB. The feedback is more programs-based and the on-going follow-up is done based on the feedback. The integrated supportive supervision was conducted across 12 regions nationwide, covering 31 districts, 19 hospitals, 48 health centers, and 71 health checkpoints. The major finding was thematizing by program and disseminated to stakeholders. The National HIS performance review meeting was conducted in the fiscal year to evaluate the status of HIS functions, identify gaps, and develop agreed action points. Key stakeholders including RHBs, Capacity Building and Monitoring Program (CBMP) universities, and partners participated in the performance review workshop, and action points and recommendations were developed, presented to the audience, and shared with the participants. Finally, the Sectoral Annual Review Meeting (ARM 26th) was conducted with the participation of different stakeholders including RHBs, implementing partners, donors, different professional associations, private health associations, etc. At the event, various group work discussions and side meetings were held focusing on immunization such as ZD and UV Children.

Immunization program planning, monitoring, evaluation, and learning progress

1. **Digital headcount and RED micro plan:**

The MoH has been implementing woreda-based health sector planning (WHSP) to deliver public health and clinical services through a community and individual-centered approach. Within the framework of the WHSP and e-CHIS platforms, both national and subnational level EPI and M&E leadership have developed a short-term, digitally supported ODK-based headcount tool and RED/REC tools. These initiatives aim to enhance RI by identifying and reaching immunization program targets throughout the life course.

During this Ethiopian fiscal year, using ODK frontline health extension workers (HEWs) reached 3.3 million households and validated the vaccination status of 1.4 million children. Of these children, 1,242,261 (88%) are fully vaccinated, while 177,427 (12%) have been identified as ZD and UV Children.

A bottom-up micro plan, developed at the PHCU level, aggregates data from each district, which is then shared with regional and national levels. According to the reported RED micro plan, there are 3,708,698 surviving infants, over 850,000 ZD children. Additionally, 7,339,313 targets for HPV vaccination have been identified. These targets will receive vaccination services through 21,988 fixed sites, 43,376 outreach sites, and 2,148 mobile sites, all supported by existing and newly deployed cold chain equipment (18,315 refrigerators, 16,242 cold boxes, and 40,395 vaccine carriers). Moreover, the micro plan

encompasses the vaccines needed for each district, social mobilization activities, and integration with nutrition services.

2. Electronic immunization registry progress:

2.1. Wellness Pass/DHIS2 Tracker

The Wellness Pass DHIS2 EPI tracker, a collaboration effort among the MoH, GAVI, Mastercard, and JSI, is designed to enhance the relevance and utility of a client-owned digital health tool that tracks and improves COVID-19 and RI data and service delivery, especially for women and children. Launched in November 2022, the project has been implemented in nine regions and two city administrations, covering 197 woredas and 687 health facilities. The Wellness Pass initiative supports immunization efforts by migrating clients' data to the EPI DHIS2 tracker and empowering communities with their health data. Currently, the wellness pass has been implemented in 687 health facilities that are registering and issuing e-cards.

The wellness pass project has distributed over 1,520,000 e-cards to various regions and health facilities. To support this initiative, 687 mobile phones and data SIM cards were distributed, and 2,520 healthcare workers have been trained on the DHIS2 tracker and wellness pass solution. Quarterly supportive supervision and review meetings have been held at regional and national levels following the successful rollout of the wellness pass. Over 600 healthcare professionals and managers have been sensitized to the DHIS2 tracker and wellness pass solutions. The DHIS2 tracker shows that 636,871 clients have been registered, including 305,723 for COVID-19 vaccinations and 331,148 for RI. Of these clients, 26,922 received wellness pass e-cards for COVID-19 vaccinations, while 276,079 received e-cards for routine immunizations, totalling 303,001 e-cards issued. This innovation aids in tracking ZD and UV children, and defaulters. Additionally, the MOH middleware app is optimized to send notifications to EPI clients and enhance referral linkages within the DHIS2 tracker.

Electronic immunization register (EIR) serves as a digital platform for managing immunization data, improving accuracy and decision-making compared to traditional paper systems. The EIR desktop web-based version will be implemented nationally in twelve regions and two city administrations across 605 health facilities to support these activities 725 desktop computers were procured and ready for distribution. Training is being provided on the DHIS2 tracker/EIR and Wellness Pass solution. Efforts are also underway to fully implement Electronic Medical Records (EMRs) in various facilities, with EIR serving as a crucial tool for EPI program managers and policymakers in their decision-making until EMRs are fully operational. In 2016 EFY, the MoH expanded the implementation of EMR systems to 58 facilities, including hospitals and health centers. The Ministry is also setting up hubs to enable these facilities to fully utilize the system for service delivery. The procurement process for these hubs is currently underway, although budget constraints and local market inflation for ICT equipment remain challenges.

2.2. Electronic Community Health Information System (e-CHIS)

Currently, more than 9,887 health posts (HPs) have implemented the electronic Community Health Information System (e-CHIS) with over 26.5 million clients and 6 million households registered to facilitate the registration of vital family health data. These health posts have started providing essential services, including immunization, maternal and child health care, and family planning, thereby expanding their role in delivering comprehensive health services to the community.

Despite these positive developments, several challenges hinder the effective utilization of eCHIS. One major limitation is the inconsistent registration and updating of family health information. This inconsistency can lead to gaps in data, hindering the ability to track individuals and families effectively. Moreover, there are significant challenges in monitoring and tracking the services related to the immunization program. Such challenges may impact health coverage and the ability to respond to immunization needs promptly.

To overcome these obstacles and improve the overall efficiency of the healthcare services offered at these health posts, it is essential to strengthen collaboration among key stakeholders. This includes working closely with partners involved in the immunization program, primary health care, and the broader health system. By fostering cooperation and coordination among these groups, we can promote better data management practices, streamline service delivery, and ultimately enhance health outcomes for families within the community.

Table 21: Client data registered through DHIS2 tracker and e-CHIS

Tool	Health Facilities	Registered Clients	
		HH Family information	Individual
DHIS2 Tracker	687	NA	636,871
eCHIS	9,887	26.5Million	

3. **DHIS2 optimization and rollout with new features:** MOH has been using DHIS2 for different purposes such as electronic National Health Management Information System (eHMIS), Multi-sectoral Nutrition, COVID-19 tracker, COVAX tracker, routine Immunization tracker Woreda Base plan, Woreda transformation, Activity Budget Tracking, Stakeholder map. During the fiscal year, the customization of DHIS2 version 40 was completed and deployed. The new version includes data quality tools such as content completeness, LQAS, Validation rule analysis, and outlier detection. The system is deployed both online and offline. This deployment is unique as it was achieved through the interoperability of the Master Facility Registry (MFR), with all facility records synchronized directly from the MFR.

4. **Data use for informed decision-making:** Data use for informed decision-making in Ethiopia is essential for improving the quality of care and service delivery. To bolster evidence-based decision-making, various existing platforms are in place, including Performance Monitoring Teams (PMTs) at all institutional levels, planning platforms, and review meetings. Additionally, several dashboards, such as the Public Dashboard, Power BI Dashboard, and HIS Dashboards, are under development and pipeline for endorsement to further enhance evidence-driven decision-

making. The Ministry of Health (MOH) is actively working to strengthen evidence-based practices by generating various forms of evidence, including implementation research, best practices related to health information systems (HIS) in collaboration with stakeholders and universities (through capacity-building and mentorship programs), and evaluations of immunization program surveys.

4.1. Immunization program evaluation: Despite advancements in national immunization performance in line with the global health agendas, the program faces numerous challenges related to the health system, service providers, and community factors. While routine data indicates improvements in immunization metrics, there have been outbreaks of various VPDs in different regions of Ethiopia. In response, the Ministry of Health in collaboration with CBMP Universities, AMREF, WHO, UNICEF, JSI, and PATH conducted immunization program evaluation by adapting the WHO's National EPI Review guide into a tailored scientific evaluation tool that focuses on leadership, management, governance, service delivery, supply chain management, demand generation and communication, adverse events following immunization (AEFI), as well as VPD surveillance and monitoring and evaluation.

The study involved 471 enrolment areas (EAs) and included data from 14,000 children, with 5,245 receiving the HPV vaccine, 13,942 vaccinated against COVID-19, 2,945 exit interviews, 291 health posts, 321 health centers, 64 hospitals, 2,970 observed vaccination sessions, as well as data from 233 districts, 52 zones, and 12 regions. The findings showed coverage rates for Pentavalent 1 at 75%, Pentavalent 3 at 65%, and measles-containing vaccines (MCV) 1 and 2 at 60% and 55%, respectively. The study also provided detailed insights into SARA, LMG practices, EVM, demand generation platforms, monitoring and evaluation (M&E), VPD surveillance, and vaccine safety. As a result, it informs the measurement and design of immunization programs across all levels of the health system.

5. **Digital supported supportive supervision and RCS:** To mitigate the long-standing immunization data quality challenges, absence of realistic denominator at a sub-national level, data used for decision making, and quality of program implementation, the Ministry of Health in collaboration with digital health LEO, Strategic affairs executive office and partners to standardize the supportive supervision tool, develop rapid community survey tools and standard operating procedures. Furthermore, both Supportive supervision and RCS tools were uploaded in the ODK tool and regional EPI focal were trained for utilization. Hence the ODK tool is Geo-coded with GIS options to track and monitor the progress of locating ZDs/missed communities and missing various disaggregated data.

6. **Immunization and other integrated MCH service review meetings:** besides health sector review meetings, immunization-specific review meetings are conducted together with other MCH services, with the involvement of strategic affairs, digital health, etc to assess the progress made, challenges, and action taken to improve vaccination coverage, data quality issues, narrow equity gaps.

Actions taken to address immunization program data-related gaps

Surveys/Estimates: The program has been undertaking significant efforts to manage data quality issues and obstacles to immunization initiatives by conducting immunization program evaluations, utilizing the latest WUENIC data, and actively engaging in the Countdown 2030 RMNCH-Immunization program equity analysis and sub-national estimates. Current findings on national immunization coverage for Pentavalent 1 show rates of 75% (EPI Evaluation), 77% (WUENIC), and 72% (Countdown). There is a notable consistency in the national coverage figures from these three sources, and we plan to conduct a more in-depth data analysis at the woreda and PHCU levels.

Data triangulation exercise: Despite the progress being made the program has been challenged by data quality issues. With regards, the Ministry of Health conducted a triangulation of administrative coverage data with VPD surveillance, and vaccine and logistics were distributed to lower levels. Initially, standard operating procedures were designed and training was provided to health workers from regional teams to cascade it down. The 1st analysis triangulation result shows measles vaccination coverage is not sufficient enough to show the actual population immunity it justifies the occurrence of frequent measles outbreaks; the immunization program used this opportunity to conduct a joint review meeting with EPHI to assess the challenges and areas for joint implementation of VPD surveillance activity and immunization services. Moreover, the analysis and triangulation result shows inconsistencies, underreporting, and over-reporting of data among coverage data and supply distribution, measles outbreak reports.

Estimation of ZDs in Ethiopia by region: In the effort to reach ZDs and UV children, the MoH conducted an estimation of ZDs using triangulated data from Admin data, WUENIC estimate, EDHIS survey, Project Hope ZD evaluation, and considering other factors such as outbreak data, conflict, IDPs, etc to estimate woreda level data. The estimation found that Ethiopia has more than 3.9 million ZDs from under-5-year-old children 2019-2022.

Data quality check and sub-national level estimation: Recently, the MoH has been collaborating closely with UNICEF's data analytics division to improve local data management and analysis capabilities through the "Actionable Health Analytics for Decision-making" (AHEAD) initiative. This involves integrating data from multiple sources including health facility records, surveys, population census information, health logistics, climate, spatial data, agricultural data, educational data, and other sectoral information to produce immunization coverage estimates and analytical products. These efforts aim to enhance decision-making at both the national and subnational levels, with a particular focus on monitoring the performance of immunization, maternal, child, and nutrition programs, identifying data gaps, and developing targeted interventions. The first report is under process and will be finalized within the upcoming week.

Performance of routine information management system assessment (PRISM): In 2024 National assessment of the performance of routine information management system (PRISM) was conducted focusing on measuring data quality, information use, and data management practices across Woreda health offices, health facilities (i.e., health centers and primary hospitals), and health posts in which immunization indicator was also included. The study examined organizational and behavioral

determinants of HIS performance. A total of 35 woreda health offices, 120 health centers, eight primary hospitals, and 90 health posts were assessed using the diagnostic tool and facility/office checklist. In addition, 507 health workers drawn from these health institutions were interviewed using the OBAT tool.

Key results and learning

Immunization program Knowledge management: The MoH conducted a deep dive intra-action review related to ZD identification and reaching. The event was conducted with the presence of regional health offices, partners, and agencies from Oct 18-20, 2024. The team documented best practices, challenges, and enabling and limiting factors by thematic areas of immunization component (leadership, coordination, and governance, service delivery (identification and reach ZD and UV Children), demand creation, logistics, and supply management, human resource and training, monitoring, and evaluation (Recording, reporting, supportive supervision, rapid community survey, review meeting, and others), AEFI and VPD surveillance, and financing). Following the interaction review, action plans were developed and shared with all stakeholders.

Using the data analysis findings, the country conducted nationwide Big-catch vaccination targeting under five children to address the estimated zero-dose and under-vaccinated children reaching 635,110 zero-dose children contributing 16% of the total estimated 3,987,986. The efforts were continued as routine catch-ups, with a particular focus on regions with high ZD proportions such as Oromia, Amhara, and Somali.

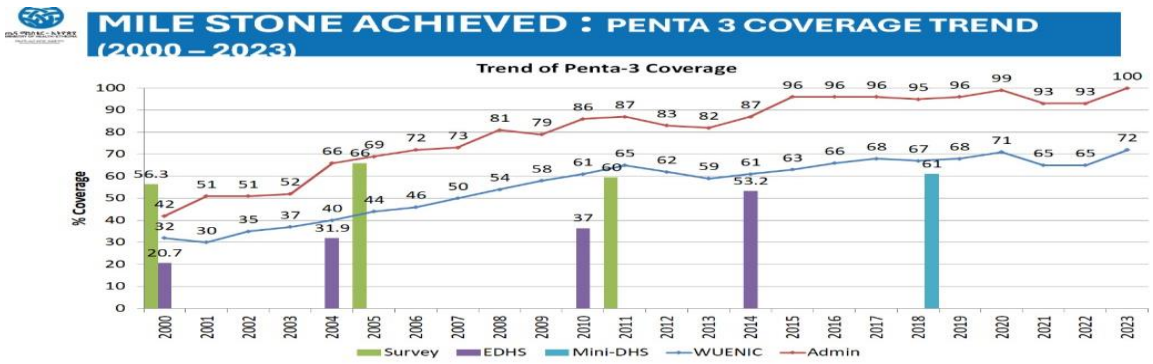


Figure 16: *Penta 3 coverage with different data sources*

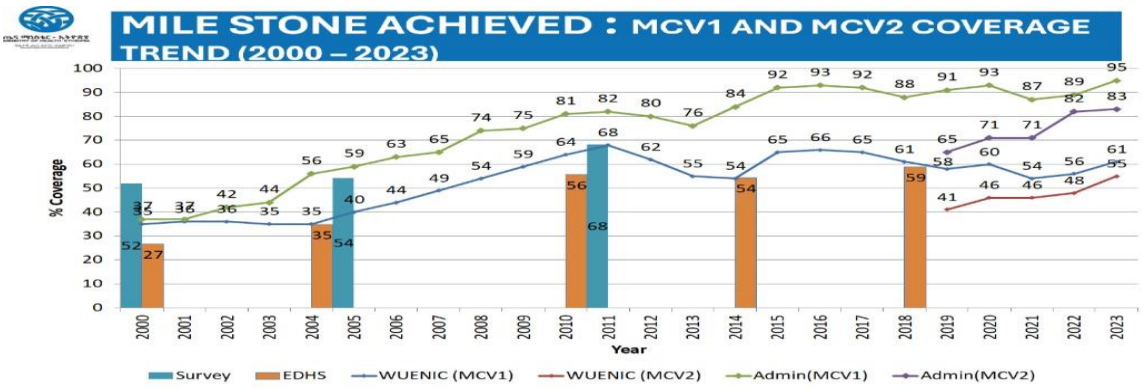
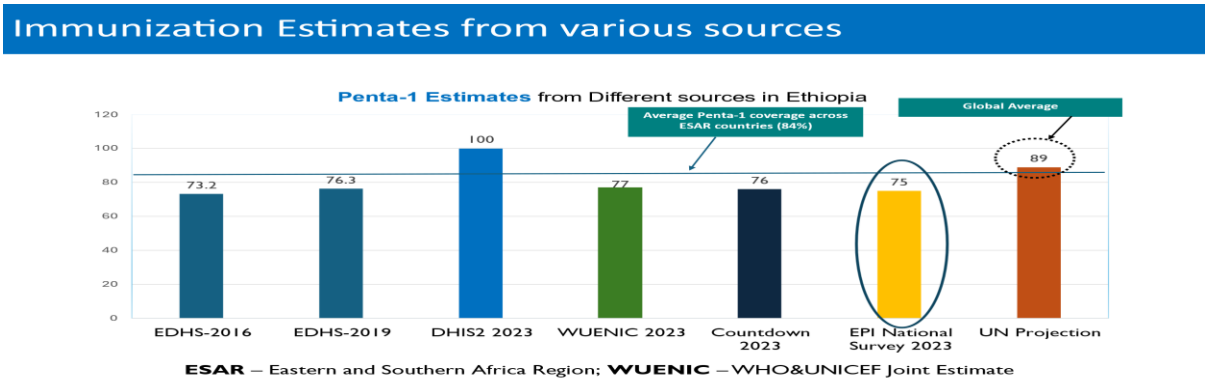


Figure 17: Measles vaccination coverage using different data sources



Graph 5: Denominator Selection for Immunization Program Performance monitoring, Data Source: Countdown2030.

There is a notable discrepancy between the estimates derived from surveys and those from facility data, especially when comparing the DHIS2 and ANC1 estimates to the WUENIC and Penta1 estimates. For both 2019 and 2022, the Penta1 and WUENIC estimates for Penta3 and MCV1 are closely aligned with the survey estimates. The trends show consistency over the years, with an increase in coverage rates across all data sources. This positive growth indicates that program interventions are progressing well, but it's crucial to focus on addressing the gaps between survey findings and facility data.

The national immunization coverage trend increased across the years through utilizing the existing robust primary health care (PHC) and HEP platform at the community level, the global immunization agenda, the political commitment of leaders, digital innovations, community structure, and monitoring and evaluation.

In summary, the implementation of health information systems (HIS) and data-strengthening initiatives in the country has shown significant progress, particularly in enhancing routine health data management and digitalization. The successful redesign of recording tools, upgrades in data collection software like DHIS2, and the establishment of robust frameworks for monitoring and evaluation reflect a commitment

to improving healthcare delivery and outcomes including immunization services. Despite challenges such as data quality issues and budget constraints, the collaborative efforts among various stakeholders have led to increased data completeness and timeliness, which are essential for informed decision-making in health management. Currently, there are some activities in the pipeline.

Factors facilitated the progress

The alignment of global and national health information system agendas, along with the support of innovation platforms, available funding, and expertise, plays a critical role in accelerating the deployment of digitalized tools within healthcare systems. Global initiatives provide strategic direction and set priorities for digital transformation, while national policies adapt these frameworks to the local context, ensuring a cohesive and responsive approach. Access to some funding and technical expertise further facilitates the initial implementation of digital tools, enabling improvements in data collection, management, and decision-making processes. GAVI TCA-MCF, other Donors like the World Bank, USAID, BMGF, CIFF, US/Africa CDC, and implementing partners have contributed significantly to the HIS digital immunization program.

However, significant challenges remain in scaling up advanced digital tools such as Electronic Medical Records (EMR), the Electronic Community Health Information System (eCHIS), and DHIS2 trackers. Limited and inconsistent funding affects the ability to expand these technologies beyond pilot projects or select areas. Additionally, inadequate infrastructure, including unreliable power supply, limited internet connectivity, and insufficient ICT hardware, further restricts the widespread adoption and functionality of these tools.

Addressing these limitations requires increased investment, strengthened infrastructure, and strategic partnerships to ensure that advanced digital tools can be deployed at scale, enabling equitable access to improved healthcare services and supporting sustainable system-wide transformation.

Promising practices, innovations

The effective identification of children for healthcare services, including immunization and routine interventions, is greatly enhanced through the integration of digital tools and technologies. GIS mapping aids in visualizing population distributions and identifying underserved areas, enabling targeted microplanning and efficient resource allocation. The DHIS2 tracker facilitates personalized health profiles, ensuring timely vaccinations and data-driven decision-making. The eCHIS platform supports community-level data collection and seamless coordination between health workers and healthcare facilities. Digital supportive supervision strengthens health worker performance through real-time monitoring, feedback, and quality assurance. Together, these tools form a comprehensive approach that improves immunization service delivery, enhances vaccine equity, and boosts overall system performance.

Risk mitigated

Key external challenges requiring additional support include conflict, currency inflation, and a shortage of lower-level human resources. Conflict disrupts healthcare service delivery and access, while currency inflation undermines financial stability, increasing operational costs and limiting resource availability. Simultaneously, the shortage of lower-level human resources hampers service efficiency and coverage, highlighting the need for targeted interventions to address these interconnected issues effectively.

Way forward

To further enhance the effectiveness of health information systems and immunization programs, it is highly recommended that the Ministry of Health intensifies its efforts to build the capacity of health workers. This should include comprehensive training programs to ensure that health workers are proficient in utilizing a variety of digital tools. These tools include the DHIS2 tracker for monitoring health data, the eCHIS (Electronic Community Health Information System) for streamlining community-level healthcare delivery, GIS mapping for headcount accuracy and session monitoring, and Digital RED/REC MP for planning and implementation of immunization activities. Additionally, investments in robust ICT infrastructures are essential to support the expansion of Full Electronic Medical Records (EMRs), a transformative initiative that significantly enhances data accessibility and facilitates evidence-based decision-making at all levels of the healthcare system.

In parallel, the Ministry should actively foster stronger collaboration with local and international donors and partners. Such partnerships are critical for addressing challenges such as budgetary constraints, technical gaps, and the need for advanced data triangulation methods. Collaborative efforts can provide access to additional resources, expertise, and innovative solutions that strengthen the overall effectiveness of health information systems and immunization programs.

Finally, integrating regular assessments and evaluations into routine practices is essential to ensure continuous improvement. These evaluations should focus on assessing the performance, impact, and scalability of strategies while identifying opportunities for refinement. By adopting a dynamic, data-driven approach to strategy development and implementation, the Ministry can adapt its programs to the evolving needs of the healthcare system and the communities it serves. This iterative process will contribute to sustainable improvements in service delivery, health outcomes, and the overall resilience of the healthcare infrastructure.

1.16. Implementation status of Partnership Engagement Framework (PEF) Targeted Country Assistance (TCA) and COVAX TA

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

In line with the National Immunization priorities, GAVI TCA and CDS are helping the country to implement the immunization Full Portfolio Plan (FPP) and comprehensive multi-year immunization plans (cMYPs) aligned with broader health objectives of the country. Based on the plan of the country, TCA

partners (core and extended) deployed technical assistants at national, regional and zonal level in various thematic areas, including service delivery, demand, M&E, vaccine logistics/cold-chain and LMC. The partners have supported the country to generate evidence, engage stakeholders, extend immunization service delivery, improve demand generation, data quality, human resource and capacity building, enhanced leadership, planning and coordination and have facilitated stronger government commitment and funding for immunization programs. GAVI TCA and CDS have assisted in resource mapping and funding proposals and aid the country in securing additional funds for immunization programs.

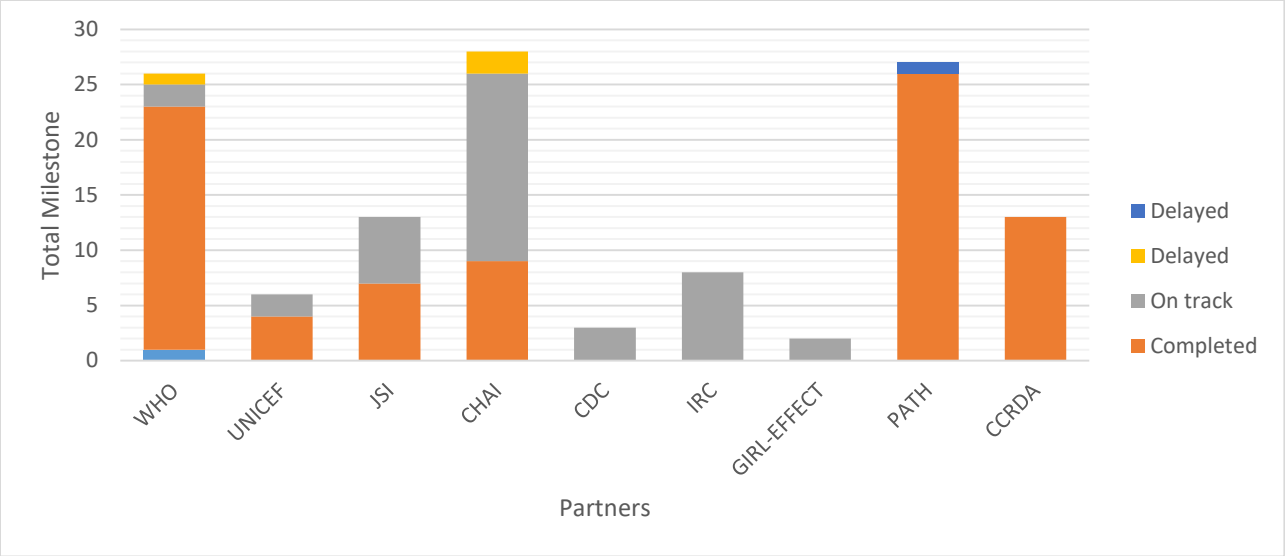
TCA support enhanced the cold chain infrastructure to ensure vaccines remain potent even in remote areas. It supported micro-planning and outreach strategies to increase vaccine coverage and equity, particularly for under-immunized populations in conflict-affected areas, remote-rural, urban slums, and pastoralist areas. Additionally, it has been providing technical support to contribute to the improvement of data collection, reporting, and use at all levels, which enables better planning and monitoring of immunization programs. This includes integrating digital platforms for real-time monitoring and analysis of vaccine delivery and coverage.

Support from GAVI provided rapid technical and operational assistance for mass vaccination campaigns including HPV MAC, BCU campaigns, and targeted vaccination in underserved communities. GAVI TCA and CDS TA also actively supported the ministry during introduction of new vaccines such as HPV single dose, IPV2, and Rota switch from Rotarix to Rotasill.

Overall, GAVI TCA and CDS TA supports are very crucial to implement the immunization activities and enhance the partnerships between government, civil society, and the private sector for sustainable immunization efforts in alignment with the country health goals towards Universal Health Coverage (UHC). The ministry also leveraged the TAs to strengthen and facilitate all routine immunization activities in the country including BCU and VPD outbreak responses.

MILESTONSES STATUS BY PARTNERS FOR REPORTING PERIOD 2023-2024

The status of the milestone for each partner is shown in the following graph. Most of the milestones are on track or completed with very few delays. Sixty four percent of the milestones set for the reporting period are completed while 32% of the milestones are on track to be completed within the TCA and COVAX period. There were only 4 (3%) delayed milestones. As most of the data on the milestone status was not available on Gavi's reporting portal, the number and status of the milestones on this report was collected from each of the TCA partners.



Graph 6: Performance of PEF TCA

Support of TCA to Leadership, coordination, and management

GAVI TCA and COVAX TA assisted with applications for new vaccines against malaria, yellow fever, and Hepatitis B birth dose by providing technical expertise during operational and strategic document preparation, including training materials and field guides. The application for the new vaccines was successfully submitted and addressed comments from GAVI. The TCA and COVAX TAs supported the planning coordination, training, and monitoring of the HPV MAC campaign implementation at all levels and contributed for the achievement the national coverage. WHO supported the coordination, planning and implementation of the Post Measles Campaign Coverage Survey (PMCCS), and the survey findings were shared with the National team during the National EPI research dissemination workshop.

JSI provided TA support to MOH and RHBs on budget distribution, utilization and liquidation as one of the major activities under the Gavi CDS3 project. All TCA and COVAX partners participated and delivered a comprehensive presentation on immunization program's annual performance.

Support to Human Resource and Capacity Building

One of the major contributions of TCA and COVAX was strengthening the human resources of the country on immunization at all level of the health system. Partners deployed TAs to national and sub national levels through TCA and COVAX. A total of 162 TAs recruited and deployed throughout the country by various partners including WHO, UNICEF, CDC, JSI, CHAI, PATH, CCRDA, Acasus and OPM. The number of TAs deployed is almost 100% of the planned TAs (see the following table).

Table 22: Planned, Deployed and Achieved of technical assistance providers deployed by partners from TCA and COVAX

Name of Partner	TA Planed	TA Deployed	Accomplishment (% from the plan)
WHO	30	30	100%
UNICEF	17	17	100%
JSI	32	32	100%
PATH	4	4	100%
CHAI	32	32	100%
CCRDA/CORE Group	22	22	100%
CDC	1	1	100%
ACASUS	1	1	100%
Mannion-Daniels and Oxford Policy management (OPM)	2	2	100%

TAs were deployed to support and strengthening the Ethiopia's health system on immunization at national and sub-national level. The health system needed additional TAs due to

- Inadequate number of immunization expert at national, regional and zonal level necessitates deployment of TAs. While the country is introducing new vaccines and additional initiatives within immunization, such asBCU, SIAs, HPV MAC, etc, the number of immunization experts within the health system remained very few. Additionally, there is high turnover of experts that further demands for additional TAs. TCA supported and contributed in training and capacity building of the existing system, ensuring that healthcare workers are well-equipped to manage immunization programs effectively and fill the larger gaps of skilled health professionals at both national and sub-national levels.
- Inadequate expertise: There is a shortage of specialized skills and experts on immunization at both the national and regional levels to effectively deliver and support the EPI. This gap in expertise affects the quality and reach of immunization services. TCA provided opportunity to avail such experts who provide training and support to build the necessary expertise and maintain the quality of immunization services (example on demand, cold chain, new vaccines introductions, etc)

- Emerging Crises: Ethiopia is facing ongoing and new crises, such as conflicts, natural disasters, and disease outbreaks, which require additional TCA support to address these urgent health challenges and prevent further deterioration of public health.

- Contributing to enhance reaching the global commitments the country: Ethiopia has committed to reach global commitments such as BCU, IA2030, SDG and disease eradications/controls as part of global security. To meet such immediate needs, there is a need to have intensive support of the system. Having TAs from partners helped the ministry in planning, coordination, and rollout of such commitments

- Large Population and Geographic Scope: Ethiopia is a country with large and diverse population that necessitates additional resources to ensure that all areas, including remote and rural locations, receive adequate healthcare services. TCA helps scale up immunization efforts, supports micro-planning and outreach strategies, and ensures higher coverage quality services and herd immunity.

- Presence of TAs being used to leverage for other Initiatives: Support from TCA is being leveraged to support and enhance other development programs in Ethiopia. For example, although the country committed to implement vaccinate over 3 million zero-dose children as part of the BCU, there was additional TAs assigned for the BCU. The existing TAs of TCA and COVAX were leveraged to support in planning and execution of the BCU. Similarly, for reactive campaigns such as following measles outbreak, the TAs of partners contributed in controlling the outbreak, as the health system is experiencing limited human resources. the ministry uses the presence of support of the partners for integrating other activities

Therefore, presence of technical assistance from partners as part of TCA and COVAX is critical in meeting the immediate needs of the country, building the capacity of the health system towards better approach of programming and overall strengthening of the health system. Considering the diversity of the country and its population, in-adequacy of human resource within the health system and ongoing challenges of inflation and in-security, the county's need for TA looks to be more than the number deployed currently. All partners are closely working with the ministry to ensure the deployed TAs are optimally and strategically used so that the health system will be resilient with minimal support from TAs of partners. With all the above conditions, there is a need to continue provision of TA in Ethiopia while supporting the ministry at national and subnational level to avail adequate number and quality of human resource for immunization programming.

Trainings: The TAs supported to enhance communication and demand creation; updating, reviewing, and finalization of different proposals; plan and develop training manuals including IIP Training and COVID-19 vaccine integration guidelines; provision of different TOT and cascade trainings; and strengthening coordination platforms and technical working groups (TWGs) that contributed to the successful implementation of routine immunization activities in the country, reduction of zero-doses, HPV switch and MAC vaccination and new vaccine introductions/switches and overall strengthening of routine immunization.

Through the TAs, more than one-third of the woredas in the country (400 woredas) have received direct technical support through partners (30 woredas by WHO, 269 by UNICEF, 15 by CHAI, 10 by PATH and 76 by CCRDA/CORE Group) where the partners supported in areas including PIRI, outreaches, training/capacity building, mapping and identification of zero-doses, microplanning, and other supports to strengthen routine immunization. A total of 156 hospitals, 1747 health centers and 8398 health posts were supported to enable them to provide quality immunization services and improve coverage. Additionally, national, regional and zonal level TAs recruited by JSI, Acasus, CDC and other partners have also contributed to the coverage, quality and immunization system strengthening activities in the country.

Through the deployed TAs and financial support of partners, regions and woredas and health facilities received different capacity building trainings including on immunization in practice, refreshers training for HEWs, Data Quality Self-assessment (DQS), cold chain management, RED micro-planning facilitation, HCD and other immunization related sessions. These training efforts have built capacity of health workers and experts of immunization that significantly contributed to increase vaccine uptake, quality coverage.

Contribution of TAs on service delivery, demand, vaccine supply

TCA partners provided technical support on micro-planning at all levels for routine immunization, COVID-19 vaccination and other immunization initiatives (such as BCU, HPV MAC, nOPV, reactive measles campaign, etc). All the supported regions developed micro-plans for all these activities/initiatives.

WHO, UNICEF, PATH and CRDA/CORE Group provided technical support to develop micro plan through the deployed TAs. The micro-planning exercise was conducted in 314 woredas with 6686 participants that benefited 1,673 health facilities to develop micro plan. Based on the micro plan, partners supported health facilities to expand access to immunization service. For example, in UNICEF supported woredas, 33 new outreach sites were established to bring immunization services closer to ZD communities to improve access.

All TCA partners supported woredas and PHCUs to conduct head counting to identify zero-dose and under-vaccinated children prior to and during the BCU. During the head counting and RED/REC microplanning 3,872 hard to reach areas were identified in partners supported woredas. Additionally, using the data of head counting, woredas were supported to update their REC/RED micro plans for 2024/25.

To facilitate the head counting process, TAs deployed by JSI supported MoH financially to organize micro-plan digitalization workshop where ODK tool was identified as a tool to conduct head counting to identify zero-doses.

All TCA partners provided strong technical support during the development of the BCU operational guide, as well as supporting regions and zones in preparation for implementation of BCU at all levels. Supporting regions to prepare micro plan, orientation of RHBs and ZHDs on BCU, preparation of tools for recording and reporting were among the preparatory activities.

Partners leveraging GAVI TCA and COVAX TA supported BCU technically and logistically including assigning of vehicle for supervision, vaccine transportation and coordination.

JSI provided financial support when MoH organized a national-level RI catch-up dissemination workshop for a total of 38 participants (5 female and 33 male) from all RHBs and partners. Printing and distribution of the guideline and job aids in various languages (English, Somali and Afar) was part of the technical assistance.

Immunization partners (UNICEF, WHO, JSI, PATH and CCRDA/CORE Group) supported the RHBs and ZHD to cascade orientation on essential/routine catch-up vaccination guideline up to the level of health facility. The partners worked with woreda health office and health facilities and conducted routine catch-up vaccination sessions through PIRI, big catch up, integrated with outbreak response, and using the African vaccination plat form.

TCA partners provided pre-, intra- and post-campaign support for HPV switch and MAC at national and subnational levels. At national level, the TA of TCA partners provided technical support to the ministry in areas including development of operational guidelines, graphically designing the MAC immunization card, compiling micro plans from all the regions, ensuring the use of DHIS2 for reporting, and conducting TOT training to RHBs. Similarly, the regional and zonal level TAs supported in organizing cascade trainings to woredas and facilities, ensuring micro plan is developed by all facilities, coordination with EPSS hubs to avail vaccines based on the micro plans, supporting demand activities and monitoring the preparation using RAT. Contributed for the gain at national level to reach 7,033,156 of girls age 9-14 years

CHAI provided technical support to the MOH to continue partnership with private health facilities (PHFs) in providing quality immunization services. It conducted mapping of PHFs in 18 cities and towns in nine regions, the national level scale up consultative meeting with partners and baseline assessment rom 28 PHFs in 7 big cities (Adama, Dire Dawa, Jigjiga, Hawassa, Bahir Dar, Gondar, Mekle) within 7 regions. IIP training was also provided to 29 private health facilities immunization focal using the CPD approved training manual. Supportive supervision was also provided to all identified PHFs.

CHAI supported the establishment of outreach services integrated with other health services (FM, GM, Vit A supplementation, disability screening, cervical screening, etc.) for Urban slum area (Addis Ababa N/S/L/woreda 14) through HCD approach implementation.

US CDC provided tickler boxes to health centers to help health workers to easily identify defaulters. A reminder card is also provided to health facilities to record caregivers address and date of appointment. Immunization defaulter identification and tracking system algorism/Job aid is also developed and being used in supported regions.

Partners supported MoH in the documentation of Ethiopia’s experience including "Catching up to the challenge: Lessons learned from Ethiopia’s journey to reach missed children" and posted on the website of Gavi. JSI, WHO and other partners also supported the ministry to present the country’s experience in different global platforms (IA2030 global life course and integration and WHO's Immunization Partners Call).

TAs of partners together with MoH, RHBs and ZHDs conducted supportive supervision in 125 woredas, 180 primary healthcare units (PHCUs) and 100 health posts monitored immunization sessions, vaccine stock availability, data quality and provided technical guidance to programme managers and service provider.

Supportive supervision helped to identify and addressed Service delivery-related barriers, including gender-related barriers affecting access and utilization of services in agrarian, conflict affected, pastoralist region and in drought affected areas**.**

Key barriers identified during the supportive supervision in regions included:

1. Disruptions of services due to conflict in Amhara and Oromia regions.
2. Headcount were not done completely due to insecurity less commitment from some of the woreda offices
3. Shortages and non-functioning refrigerators in all targeted regions.
4. Shortage of Penta vaccine impacted momentum of big catch-up.

To address these challenges:

- TCA partners supported last mile delivery of vaccines and access negotiation to conflict affected areas.
- Consultants supported primary health care managers negotiated with state and non-state actors to ensure vaccine delivery in conflict-affected areas.
- Supported maintenance of 343 refrigerators and 135 SDDs were installed.
- Routine Penta vaccines were redistributed to affected regions.

WHO supported in the development google sheet, power BI dashboard for real time data capturing and monitoring. Readiness assessment vaccination tool developed by WHO used during HPV/COVID campaign and this significantly helped to determine the level of readiness for implementation of activities. All the tools were very helpful to facilitate data capturing, analysis and use for action and decision in a timely manner.

UNICEF deployed 58 consultants, (one national cold chain and vaccine management consultant at MOH funded by TCA and Two vaccine management consultants) for BCU at EPSS to support the regions, zones, and woredas. These consultants supported vaccine management, cold chain, and logistics/last-mile delivery, including one for HFSE and one for DRIVE initiatives, by leveraging other funding sources such as GAVI CDs. Partners supported the Cold Chain Equipment Rehabilitation Plan (CCERP) development during the CCEOP2.0 application and Discussions on disposing and decommissioning of obsolete cold chain equipment, Cold Chain Equipment Inventory (CCEI) /Medical Equipment Management Information System (MEMIS) update and cold chain storage gap/volumetric analysis

UNICEF, CHAI and other partners supported the Ethiopian Pharmaceuticals Supply Service (EPSS) in expanding its last-mile delivery of immunization supplies financially and technically. As a result, the performance of last-mile delivery (where EPSS hubs deliver immunization supplies directly to health centers) reached 2,026 (60% of all Health centers in the country) at the end-of-year. This depicts an improvement from the reported 45.7 per cent in March 2024.

TCA and COVAX partners also contributed during introduction of new vaccines including

- TCA partners supported MoH during rotavirus vaccine switch from Rotarix to Rotasiil and introduction of IPV2, the partners developed training materials, supported training, facilitated Rota vaccine switch, provided supportive supervision, and monitoring the performance.

- Partners is providing technical assistance to Ethiopia's NITAG in identification and prioritization of new vaccines to be introduced in Ethiopia for the period of 2026-2030. TCA partners participated and providing technical support on the first round of new vaccine prioritization workshop. Currently, E-NITAG is collecting and compiling data to reach a decision of which vaccines to be introduced in the country strategically aligned with the NIS.

- TCA partners supported the analysis of malaria disease burden for malaria vaccine introduction prioritization.

- TCA partners provided technical support in application document preparation for new vaccine introduction including Malaria, Yellow fever, and Hepatitis B birth dose vaccine.

TCA partners have significantly contributed to improve the uptake of the RI, COVID-19, and HPV vaccines through targeted and tailored demand promotion and communication strategies across multiple regions in Ethiopia. These efforts have included social mobilization and community engagement, advocacy workshops with various stakeholders, involvement of community and religious leaders, and implementation of behaviourally informed interventions. Addressing vaccine hesitancy and increasing vaccine uptakes.

Partner's contributions to facilitate integration of COVID-19 vaccination into RI included;

- TCA partners successfully assisted the MoH in designing and finalizing the COVID-19 vaccine integration guidelines.
- All TCA partners participated in the COVID-19 vaccine integration guideline orientation training with financial support of JSI. A total of 103 participants (91 male and 12 female) from all regions and partners joined in the orientation session. By integrating COVID-19 vaccine into RI the access to vaccine improved
- Regional and zonal TAs of TCA partners provided technical support to organize and conduct cascade orientation training on the COVID-19 integration guideline up to health facility level. Additionally, the TAs are engaged in providing supportive supervision and onsite sensitization for health care workers. The COVID-19 vaccine integration is being implemented in all regions, so far over 1,074,00 doses of vaccines were administered.
- TCA partners supported the planning and preparation for the HPV and COVID-19 integrated campaign in April 2023 through active involvement of national and all regional officers.
- TCA partners supported the integrated COVID-19 vaccination campaign with HPV vaccination in Tigray region.

Enabling factors

- Presence of favourable health policy, strategies including catch up and another guideline.
- Strong collaboration and partnership
- Leadership commitment
- Evidence based planning, implementation, and informed decision.
- Availability of different community platform
- Stakeholders and community engagement
- Resource mobilization by partners
- Different Research and surveys conducted in the country.
- The presence of different coordination platform (NITAG, ICC, JCC, task force, and TWGs)
- Availability of digital infrastructure and strategies

Challenges

- No clear information on millstones allocation
- Old census related denominator issues
- Head count was resource intensive.
- Limited capacity to identify ZD and use of ZD data.
- Insecurity in the TCA implementing areas. Service interruption.
- Conflict, climate change, humanitarian disaster, frequent and protracted disease outbreak
- Poor admin data quality collected from google sheet.
- Facilities damaged in conflict affected areas interrupted services.
- Limited support for YF and meningitis introduction

The way forward

- Mobilize additional resource and looking for opportunities to use another fund for addressing ZD.
- Give more emphasis to identification of ZD and under immunized through house- to house registration and use the head count as a bases for vaccine forecast and other operational engagement.
- Allocation of budget comparable to cost inflation.
- Use of intensification of digitalization to improve data quality.
- Capacity building to improve data quality and use for action.
- Mobilizing resources for rehabilitation of damaged facilities in conflict affected areas.
- Prioritize vaccines to be introduced in the coming years.
- As cMYP come to an end need to provide support for NIS development

Project specific update

Multi-sectoral initiatives to reach ZD children in urban, remote rural, conflict affected and pastoralist settings.

With financial support from GAVI and Children Investment Fund Foundation (GAVI-CIFF) , UNICEF supported the implementation of a multi-sectoral approach initiative to reach ZD children and communities in 51 priority woredas within five regions (24 conflict affected woredas in East Gojam and Awi zone of Amhara and 6 rural remote woredas in Sidama regions, four woredas affected by conflict and drought in pastoralist communities of Afar regions, nine woredas affected by drought and recurrent measles outbreak in pastoralist communities of Somali region and eight woredas in remote rural communities Oromia region).

In 30 woredas of Amhara and Sidama regions, a total of 19,700 ZD and 15,763 under vaccinated children aged 12-59 months were identified and 97% of the ZDs received penta1 vaccination.

This to objective of this initiative is to address the immunization and nutrition needs of the most disadvantaged and underserved populations in Ethiopia and promote demand for immunization and nutrition services through a multi-sectoral approach using existing community structures and community-based high-impact, low-cost child survival interventions (Immunization PLUS and kebele health and Nutrition service delivery platforms) as entry points.

·With financial support from Global Alliance for Vaccine Initiative and Children Investment Fund Foundation (GAVI-CIFF) , UNICEF supported the implementation of A multi-sectoral approach initiative to reach ZD children and communities in 51 priority woredas In five regions (24 conflict affected woredas in East Gojam and Awi zone of Amhara and 6 rural remote woredas in Sidama regions 4 CIFF/Nutrition woredas affected by conflict and drought in pastoralist communities of Afar regions 9 CIFF/Nutrition woredas affected by drought and recurrent measles outbreak in Pastoralist communities of Somali region and 8 CIFF/Nutrition woredas in remote rural communities Oromia region .

The activities are related to delivering a package of immunization, nutrition, child protection (birth registration), and social protection services through community-based and facility-based platforms in targeted geographic areas with the hardest-to-reach ZD children and communities. UNICEF deployed one consultant to support Afar RHB and zones in identification, mapping, targeting to reach ZD and under vaccinated in pastoralist population setting through multisectoral approach.

During the reporting period, one of the major barriers affecting Service uptake in Afar region were the low awareness of communities on vaccination compared with pastoralists lifestyle. To address the barrier, a regional advocacy meeting was held to discuss a major catch-up vaccination campaign that occurred in two separate sessions. The first session had 76 attendees (21 females), including representatives from the district health office, zonal administration, various partners, regional sectors, and the president's office. The second session was attended by 85 participants (13 females).

The meeting focused on the overall objectives of the extensive service integration vaccination campaign, the status of zero-dose and under-immunized children, and the critical role of stakeholders in a multi-sectoral approach to the vaccination efforts. This advocacy meeting was disseminated across 40 woredas, with a total of 314 stakeholders participating.

Digitization of Immunization data

To enhance digitalization of immunization record, the Wellness Pass DHIS2 EPI tracker initiative, collaboration between GAVI, Mastercard, the Ministry of Health, and JSI, is designed to provide a client-owned digital health tool that tracks and improves data for routine immunization including COVID-19, as well as service delivery. Launched in November 2022, it has been implemented across nine regions and two city administrations, covering 197 woredas and 687 health facilities. This initiative supports immunization efforts by introducing EIR (electronic immunization register), recording client data to the EPI DHIS2 tracker, empowering communities to access and manage their own health information.

To date, the Wellness Pass initiative has distributed over 1.5 million e-cards to various regions and health facilities. Additionally, 687 mobile phones and data SIM cards have been provided, and 2,522 healthcare workers have been trained on the DHIS2 tracker and Wellness Pass solution. Quarterly supportive supervision and review meetings have been held at both regional and national levels following the successful rollout, with over 600 healthcare professionals and managers sensitized. As of now, the DHIS2 tracker has registered **636,871 clients**, including 305,723 for COVID-19 vaccinations and 331,148 for routine immunizations. Of these, 26,922 clients received wellness pass e-cards for COVID-19 vaccinations, and 276,079 received e-cards for routine immunizations, total of **303,001 e-cards** issued. The DHIS2 tracker and Wellness Pass solution have significantly improved data quality and immunization coverage.

Overall, the Gavi TCA activities helped to enhance the immunization service delivery through providing technical support and resources to various thematic areas that include demand promotion, strengthening the supply chain system, service delivery, capacity building, service integration, partnership, data utilization and monitoring and evaluation.

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

This report highlights implementation of the EPI program in Ethiopia over past year, including the strengths and challenges of major program areas, barriers to immunization service delivery, and other priorities across the GAVI investment areas, based on the Gavi report template. The report incorporates efforts made to enhance equitable access to vaccines and reach all target groups, including approaches or strategies to address ZD and UV children in different geographies and sub-population groups throughout the country. It underlines the progress in ZD reduction, and the factors that facilitated ZD children vaccination, including the accelerated plan to address ZD and UV children following the global BCU initiatives, and the intra-action review with RHBs and partners to improve the implementation of catch-up vaccination. The report also shows partners contributions in various aspects to support these achievements.

In summary, the MoH and partners thoroughly discussed and identified the future priorities for strengthening the routine immunization program restoration and rehabilitation, introduction of prioritized new vaccines, and sustaining of immunization program to address ZD and UV children. These future priorities incorporated the five key shifts of Gavi 6.0 strategies to achieve equity and sustainability in the immunization program. These include differentiated approach that tailors investments, consolidated funding that integrated activities, catalysing innovation, strengthen partnership to reduce fragmentation and enhancing monitoring and measuring using digital technology. The following key points emerged from the discussion, as well as, the follow-up actions are summarized in Table 23 below.

- Strengthening routine immunization to reach RI cohorts using different approaches
- Identifying and vaccinating ZD and under immunized children
- Strengthening recently introduced vaccine program and introduce new vaccines
- Conducting quality national wide Measles SIA
- Employ varies demand creation and promotion activities
- Strengthening last mile delivery and stock management
- Strengthening sub-national level leadership and governance to support the immunization programs
- Strengthening financial management, consolidated funding and domestic finance allocation
- Integration of immunization with other MCAHSs for the efficient use of resources and sustainability
- Develop National immunization strategy2026-2030
- Continue advocating gender sensitive approaches to address gender barriers
- Strengthening VPD surveillance and outbreaks responses
- Strengthening vaccine safety and monitoring including AEFI management and reporting
- Enhance human resource capacity through in person and virtual trainings, mentor, supervisions, on job trainings
- Incubate and scale-up innovation such as digital health solutions

- Strengthening partnerships and collaborations such as private health facility engagement, humanitarian partners and technical support from immunization partners

Table 23: Follow-up Actions, Timelines and Responsible body to improve the Ethiopia immunization program as identified during the Joint Appraisal Meeting 22-24 January, 2025

Follow-Up Action	Timeline	Responsible Person/Partner
Strengthen Primary Health Care (PHC) to improve RI	On-going	MoH, RHBs, GAVI
Enhance data systems and surveillance for better immunization strategies	2025	MoH, RHBs, EPHI, GAVI, Partners, Local CSOs
Targeted intervention: strengthen the support to prioritized areas with high ZD and UV children, including enhancing partnership and working closely with local CSOs to address the ZD agenda	Immediate and on-going	MoH, RHBs, GAVI, Partners, Local CSOs
Strengthen support to humanitarian areas, particularly conflict-affected regions	Immediate and on-going	MoH, RHBs, Humanitarian Organizations, Gavi
Introduce important new vaccines based on priorities and improve the immunization supply chain, including LMD	2025	MoH, RHBs, EPSS, GAVI, Partners
Consolidated funding for immunization, and ensure timely disbursement, absorption and liquidation of funds to enhance performance	2025	MoH, RHBs, Ministry of Finance (MoF), Gavi, Partners
Develop National Immunization Strategy (NIS)(2026-2030)	By end of 2025	MoH, GAVI, Partners, Consulting Firms
Improve vaccine safety and detection and reporting of adverse events following immunization (AEFI)	On-going	MoH, RHBs, EFDA, WHO, GAVI
Enhance urban immunization through community engagement and capacity building	2025	MoH, RHBs, UNICEF, Partners, Private Health facilities, Local Authorities
Reignite the RI and catch up vaccination through sustain high-level advocacy, social mobilization efforts and frequent follow up	On-going	MoH, RHBs, GAVI, Advocacy Groups
Enhance multi-sectoral collaboration and partnership, including private sectors to improve immunization services	On-going	MoH, RHBs, Other relevant sectors, Gavi, Partners, PHFs
Integrate immunization services, including COVID-19 and HPV vaccination with other health services to improve outcomes	On-going	MoH, RHBs, Gavi, Partners
Close follow-up, monitoring and measuring of the immunization program and provide support to lower levels to enhance performance	On-going	MoH, RHBs and Partners
Scaling Innovations: Expand digital health solutions and integrate technology into immunization programs.	On-going	MoH, RHBs, Gavi, Partners
Strengthen partnerships to enable a primary healthcare approach and reduce fragmentation	On-going	MoH, RHBs, Gavi, Partners
Share good practices and expand and replicate good lessons; promote cross-regional, cross-partner, cross countries learning and use of evidence for action	On-going	MoH, RHBs, Gavi, Partners