Joint Appraisal report 2018

The italic text in this document serves as guidance; it can be deleted when preparing the Joint Appraisal (JA) report.

Gavi's support to a country's immunisation programme(s) is subject to an annual performance assessment. The Joint Appraisal (JA) is a key element of this performance review. It is an annual, country-led, multi-stakeholder review by the senior leadership of the MoH and its partners of the implementation progress and performance of Gavi's support to the country, and its contribution to improved immunisation outcomes.

Joint Appraisals require careful preparation. This includes:

- ***By 15 May: Submission of the vaccine renewal request*** *on the country portal (including provision of end of year stock reporting, targets, wastage rates, etc.)*
- ***4 weeks before the Joint Appraisal:***
  - ***Submission of required reporting documentation*** *on the country portal;*
  - ***Submission of HSS and CCEOP renewal request*** *(if new tranche needed), on the country portal including HSS budget for requested tranche;*
  - ***Gavi partners (WHO, UNICEF and others)*** *to report progress against their milestones and PEF functions on the partner portal.*

Reporting requirements

The following reporting is required for renewal purposes *and must be posted on the country portal 4 weeks before the JA:*

- ***Update of the grant performance framework (GPF)***
- ***Financial reports, annual financial statements and audit reports*** *(for all types of direct financial support received)*
- ***Reporting on any campaigns/SIA conducted*** *(if applicable)*
- *End of year stock reporting (which is to be submitted by 15 May together with the vaccine renewal request)*

Other required reporting information *to be posted on the country portal 4 weeks before the Joint Appraisal includes:*

- *Immunisation financing and expenditure information*
- *Data and survey requirements*
- *Annual progress update on the Effective Vaccine Management (EVM) improvement plan*
- *Updated CCE inventory (if receiving CCEOP support)*
- *HPV specific reporting (only if applicable)*
- *HSS end of grant evaluation (only if applicable)*
- *Post Introduction Evaluation (PIE) reports (only if applicable)*
- *Gavi transition and/or polio transition plans or asset mapping information (if applicable)*
- *Expanded Programme on Immunization (EPI) review / plan of action implementation report (if available)*

Note: Failure to submit the renewal requests as well as required reporting on the country portal four weeks ahead of the Joint Appraisal meeting (except for the vaccine renewal request, which is to be submitted by 15 May) may impact the decision by Gavi to renew its support, including a possible postponement, and/or decision not to renew or disburse support*.*

Country	
Full JA or JA update	☑ **full JA** ☐ JA update
Date and location of Joint Appraisal meeting	12-14 December 2018; Addis Ababa, Ethiopia
Participants / affiliation[1]	This Joint Appraisal report is the work of all relevant stakeholders from WHO, UNICEF, PATH, JSI/UI-FHS, CHAI, JHPIEGO, CDC, World Bank, and from different directorates of the Ministry of Health including EPI from MCHD, Partnership and Cooperation Directorate, Finance & Procurement Directorate, Policy, Planning, Monitoring and Evaluation Directorate and Pharmaceutical and Medical Equipment Directorate. Different agencies of the MoH like Ethiopia Pharmaceutical Supply Agency (EPSA, former PFSA), EPHI/PHEM and Ethiopian Food and Drug Administration (EFDA, former FMHACA) had provided significant input. The report has been enriched with inputs from the National Interagency Coordinating Committee (ICC), and NITAG and the JA Workshop with participation of in-country and global participants including GAVI, BMGF, USAID, WHO, UNICEF and CDC.
Reporting period	July 8, 2017 – July 7, 2018
Fiscal period[2]	July 8, 2017 – July 7, 2018. The Ethiopia's fiscal year is 2010 which covers the period from July 8, 2017 – July 7, 2018. It is two year later to the baseline for program performance evaluation
Comprehensive Multi Year Plan (cMYP) duration	2016-2020
Gavi transition / co-financing group	*NA*

1. RENEWAL AND EXTENSION REQUESTS

Renewal requests were submitted on the country portal

Vaccine (NVS) renewal request (by 15 May)	Yes ☑	No ☐	N/A ☐
HSS renewal request	Yes ☐	No ☐	N/A ☑
CCEOP renewal request	Yes ☐	No ☐	N/A ☑

Observations on vaccine request

*Briefly comment on **assumptions and observations concerning the vaccine renewal/extension request and vaccine allocation**, such as quantification data triangulations conducted, target coverage used as basis for requested doses; available stock, stock-outs, variations/trends in the stock held & consumption; significant changes (+/-5%) in number of doses required, etc.*

Population					
Birth cohort					
Vaccine	**Pentavalent**	**Pneumococcal**	**Rotavirus**	**IPV**	**…**
Population in the target age cohort	3,253,496	3,253,496	3,353,496	3,253,496	
Target population to be vaccinated (first dose)	3,253,496	3,253,496	3,353,496	3,253,496	
Target population to be vaccinated (last dose)	3,253,496	3,253,496	3,353,496	3,253,496	
Implied coverage rate	96%	96%	96%		

[1] If taking too much space, the list of participants may also be provided as an annex.
[2] If the country reporting period deviates from the fiscal period, please provide a short explanation.

Last available WUENIC coverage rate	73%	68%	80%	76%	
Last available admin coverage rate	96%	95%	94%	92%	
Wastage rate	5%	10%	5%	10%	
Buffer	2,491,493	2,602,797	1,712,048	876,637	
Stock reported (as of Oct 10/2018)	1,407,159	3,219,890	2,055,728	1,778,110	

Indicative interest to introduce new vaccines or request Health System Strengthening support from Gavi in the future[3]

	Programme	Expected application year	Expected introduction year
Indicative interest to introduce new vaccines or request HSS support from Gavi	Yellow Fever vaccine intro	2019	2020
	PCV 10 switch from 2 dose to 4 dose presentation	2019	2020

Additionally the country is planning to introduce/switch the following vaccine presentations and types

- Switch TT to Td
- Vaccine renewal application
- Universal hepatitis B birth dose introduction (Evidence under development)

2. RECENT CHANGES IN COUNTRY CONTEXT AND POTENTIAL RISKS FOR NEXT YEAR

*Comment on changes which occurred since the previous Joint Appraisal, if any, to **key contextual factors** that directly affect the performance of the immunisation programme and Gavi grants (such as natural disaster, political instability, conflict, displaced populations, inaccessible regions, etc., or macroeconomic trends, health worker industrial actions, disease outbreaks or severe and unexpected Adverse Events Following Immunisation, etc.).*

*For **fragile countries or countries facing humanitarian emergencies or hosting refugees**[4]: Please indicate if any flexibilities in grant management are being requested, and also mention in case the vaccine or HSS renewal requests were adjusted.*

*For countries transitioning from the **Global Polio Eradication Initiative**: Please briefly describe the impact on immunisation and primary health care services and specify whether the country has a polio transition plan in place. If such a transition plan exists, please briefly describe it. If no transition plan exists, please describe actions being taken to prepare for polio transition. Please also comment on whether Gavi investments are being used/expected to be used in the polio transition.*

The year 2018 was a time when optimal achievements were registered in the immunization program despite significant challenges to the program as well as to the health sector in general. Ethiopia has maintained polio free status following the African Regional Certification Commission (ARCC) approval, which was also validated by independent experts in 2017. The country had also achieved national Elimination of Maternal and Neonatal Tetanus (MNTE) in the previous years that have been maintained in 2018 as well. The country has made significant progress in reducing morbidity and mortality due to Measles virus. The 2017 AFRO RED guide has been adapted, printed and distribution started in 2018 to serve in line with the national context and its implementation at all levels will contribute to improving quality of equitable immunization services in the country. The FMOH has completed the preparation to increase immunization coverage in an equitable manner by aiming to reach every child with available and new vaccines through implementation of Periodic Intensification of Routine Immunization (PIRI) activities that combine routine immunization and campaign-style periodic strategic activities. For this purpose, MoH has selected Woredas with low Penta1 coverage (Penta 1 coverage < 80%), high Penta1 to Penta3 dropout rate (Penta1-Penta3 dropout rate of above 10%) and high number of unimmunized children that have been prioritized to be supported for two years (starting late 2018) targeting children 0-11 months and 12-23 months for measles second year of life immunization and measles second dose vaccination. Due

[3] Providing this information does not constitute any obligation for either the country or Gavi, it merely serves for information purposes.
[4] For further information refer to http://www.gavi.org/about/programme-policies/fragility-emergencies-and-refugees-policy/

emphasis has been given for introduction of two new vaccines (MCV2 and HPV) in the year where improvements in routine immunization performances as a whole are anticipated during the introduction and in subsequent period.

More than 70% of immunization service is provided at health post level. The health extension and health development army are key drivers for increasing coverage and equity in immunization and other health services. During the reporting period, following the in-depth review of health extension program, the FMoH with various stakeholders has developed optimization and revitalization strategy for health extension program including agrarian, pastoralist and urban health extension program. Key optimization and revitalization components include improving the health post infrastructure, upgrading HEWs to level four, increasing number of HEWs, task shifting and increasing the scope of services and improving service quality, improving management, coordination and governance including transfer, career development, gender mix as appropriate and implementing retention and motivation mechanisms. Implementation of HEP revitalization in agrarian, pastoralist and urban areas is believed to improve coverage and equity of essential health services and immunization coverage.

The Ministry of health has conducted the sector wide mid-term HSTP review in the report period where the health program as whole was reviewed and recommendations were given for improvement and fast track indicators at the end of the planned period (2019/2020) were identified. The national immunization program in collaboration with its key stakeholders and partners has conducted comprehensive external review of the EPI and VPD surveillance after 15 years using standard questionnaire in 2018.

However, the year 2018 was not without challenges. The polio budget ramp down which started to be implemented since mid-June 2016 has continued to affect the technical assistance given to the MoH at different levels with particular negative effect on the zonal and lower level health institutions. Ethiopia is one of the leading countries for the Polio Eradication End-game and started a polio legacy transition planning process in June 2016. The Ethiopian polio transition and mainstreaming plan has been developed in line with the existing FMoH Health Sector Transformation Plan (HSTP) agenda of equity and quality as it aims to ensure equal immunization service and disease surveillance in all the eligible population through acceptable strategies linked to community needs. In accordance with the transition, the Ethiopia Federal Ministry of Health (FMoH) will gradually take over full responsibilities to ensure sustainability of polio essential functions during and after the transition. The polio transition plan (2018 – 2022) was finalized and endorsed by the ICC on 11 April 2018. The FMoH has an intention to mobilize the funding gap of $11,930,101 to realize the polio transition process in the five years (2018-2022). As the whole GAVI funds transition to the HSS, the polio transition plan implementation will utilize GAVI funding from the HSS.

Though the country has been polio-free for the last four years, it remains vulnerable for polio virus importation and subsequent transmission. **VDPV2** first isolate was detected in Mogadishu from an Environmental Surveillance (ES) in Waberi district on 22nd October 2017, and it was followed up with subsequent isolates identified in Hodan and Hamarweyne districts and described as cVDPV2. Further isolation of VDPV2 in environmental samples collected on 21 March 2018 from Kamukunji Site 2, Eastleigh, Nairobi, Kenya warranted declaring the cVDPV2 situation as PHE by the three neighbouring countries of the Horn of Africa (Ethiopia, Kenya and Somalia) with mOPV response campaigns. Ethiopia responded with two rounds of mOPV campaigns in selected five high risk zones of Somali region with immediate threat for cVDPV2 circulation. The response vaccination (mOPV2 SIA) with complete vial retrieval and destruction as well as strengthening of cross-border surveillance and immunization had drawn attention. Ethiopia was also co-signatory to the IGAD health regional ministerial on regional polio eradication at Garissa Kenya on the 14th day of September 2018.

The FMOH has accomplished customization of its data software to the Ethiopian context and conducted user acceptability and field application tests; successfully achieved legacy data migration from the eHMIS to DHIS2. However, the data migration process has taken long duration where access to routine immunization data availability was delayed to inform the program for proper monitoring and timely actions.

GAVI CSO support which was granted in the previous years was terminated earlier in 2018 and the associated grass root level immunization support by the CSOs was withdrawn as a result of which demand at remote and hard to reach areas might have been negatively impacted.

The year 2018 has been a period of major political reform for the country which was associated with social unrest and security challenges in many parts of the country. This has resulted in displacement of populations internally and movement restrictions/bans that have negatively affected program performance. There have been changes in the higher level leadership at the MoH and RHBs to pose difficulty in executing planned activities in a timely manner.

According to the recent humanitarian and resilience plan mid-year review in the year 2018, between 7.5 to 8 million people were target for food assistance and about 9.4 million people were targeted for non-food

assistance including 7.46 million people required essential health interventions. The Government with partners have been working to ensure access to live saving health services for 2.6 million conflict and drought induced IDPs. Ethiopia is also hosting over 900,000 refugees; 421,867 from South Sudan, 253,887 from Somalia, 175,000 from Eritrea, and about 50,000 from Sudan, Kenya, DRC and Yemen which require additional resources and efforts to vaccinate.

Key issues led to humanitarian crisis include conflict induced internal displacement, increased refugees, continuing food insecurity mainly in lowland and pastoral areas due to drought, continued disease outbreaks including AWD, measles, scabies, upper respiratory tract infection and injuries. Interruptions of health services such as immunization due to conflict induced displacements predisposed the population to vaccine preventable outbreaks such as measles, pertussis, yellow fever, and diarrheal diseases. These can be potential risks for the coming year as well that require concerted efforts from Government and partners

Also provide a forward-looking perspective on what additionally may happen over the next year given current conditions, vulnerabilities, dependencies, trends and planned changes. This refers to potential events which, if they actually happened, would affect the ability to sustain gains or make further progress in the different areas described in this report. E.g. current uncertainties in demand may increase the risk of vaccine expiry next year, a current decline in coverage may increase the risk of outbreaks, or a currently planned election may require to anticipate potential social unrest and security challenges.

Drawing on existing country risk assessments, take the following aspects into account in identifying risks:

- *Upcoming changes in the immunisation programme (e.g. new initiatives and innovations) and the country context (whether political, economic, social, technological, legal or environmental) leading to new risks*
- *The possibility of new barriers to achieving critical objectives and milestones. Ask 'what-if' questions to focus on the exception, not on the norm.*
- *Dependencies on financial, human and material resources and third parties and whether these would continue to be available. Reliance on estimates or assumptions that may become no longer valid.*
- *Problems that have happened in the past or to others and the possibility that similar events (re)occur*

Please list a maximum of five most important risks (i.e. with a high likelihood to happen and / or a high potential impact if it did happen). Consider the need for proactive actions to prevent them from happening or to timely detect and effectively respond once they will happen. Also clarify whether these risk mitigation actions are being prioritized in the action plan (section 6 below).

- Effect of the polio budget ramp down and unfilled budget gap for the polio transition plan
- Continued cVDPV2 circulation and mOPV responses
- Possible continued internal displacement, increased refugees, and, continued disease outbreaks
- Possible continued change of leadership at subnational level may continue to affect basic health service delivery including immunization service

3. PERFORMANCE OF THE IMMUNISATION PROGRAMME

*This section is expected to capture primarily the **changes since the last Joint Appraisal** took place. It should provide a succinct analysis of the performance of the immunisation programme with a focus on the evolution / trends observed over the past two to three years and including an analysis of immunisation coverage and equity, as well as a review of key drivers of poor coverage. It*

Information in this section will substantially draw from the recommended analysis of coverage and equity and other relevant programme/service delivery aspects which can be found in the Joint Appraisal Analysis Guidance (http://www.gavi.org/support/process/apply/report-renew/). In addition, the annual desk review exercise is considered an important source of analytics that can be used for populating the Joint Appraisal report.

Countries are encouraged to present the information in tables, graphs and maps, and to reference the source of data.

3.1. Coverage and equity of immunisation

*Please provide an analysis of the situation related to coverage and equity of immunisation in the country, **focusing on new data & analysis, trends and changes, including outbreaks observed since the last Joint Appraisal** was conducted.*

*Provide a summary of the trends in **coverage and equity,** across geographical areas, economic status, populations and communities, including **urban slums, remote rural settings and conflict settings** (consider population groups under-served by health systems, such as slum dwellers, nomads, ethnic or religious minorities, refugees, internally displaced populations or other mobile and migrant groups). Relevant information includes: overview of districts/communities which have the lowest coverage rates, the highest number of under-vaccinated children, disease burden: number and incidence of vaccine preventable diseases (VPD) cases as reported in surveillance systems in regions/ districts, etc.*

Countries are strongly encouraged to include heat maps or similar to show immunisation coverage trends over time. Examples of such analysis are available in the Joint Appraisal Analysis Guidance (available via http://www.gavi.org/support/process/apply/report-renew/)

A. Immunization Coverage and Equity Analysis from administrative and survey data

Ethiopia has shown measurable progress on increasing vaccination coverage during the last nearly two decade period. The administrative report (DHIS2) for EFY 2010 (July 2017 to June 2018) showed the coverage of 95 and 90 percent for three doses of pentavalent and first dose of measles vaccines respectively.

However, there are large variations in coverage among Regions, Zones and Woredas and among the various data sources. During the reporting period, the administrative report has revealed that, Penta 3 coverage ranged from 100% in Addis Ababa and Harari to 71% in Somali region. Out of the 9 regional states and two city administrations, Addis Ababa, Amhara, Benishangul Gumz, Harari, Oromia and SNNPR achieved Penta3 coverage of >90% while, Tigray, Dire Dawa and Afar Regions achieved 80-90% coverage. Gambella and Somali reported below 80% coverage for the same antigen. There was not much difference in coverage between antigens given at the same vaccination schedule such as Penta3 and PCV3, (Table 1). As indicated in the below figure the trend of national routine immunization coverage for Penta 1, Penta 3 and Measles has been stagnated since 2015. (Fig1).

Ethiopia is certified free of polio by Africa Regional Certification Committee in June 2017. However, its remains at high risk of polio virus importation due to movements of people over porous international borders and pockets of low population groups with low immunity which require to remain vigilant and conducting synchronized SIAs.

Table 1. National immunization coverage by antigen and region ,Ethiopia (Source : DHIS2 2010 EFY(2017/2018)

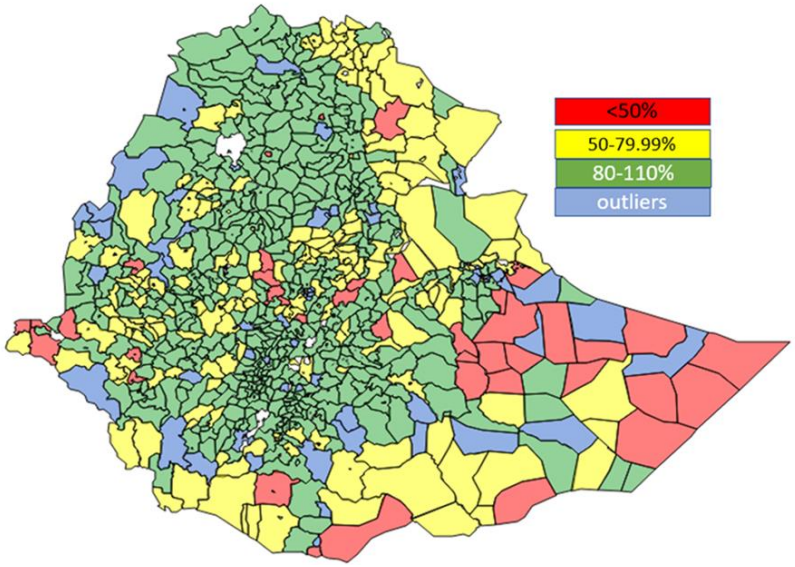
Regions	Surviving Infants	Penta 1	%	Penta 3	%	PCV3	%	Rota2	%	MCV 1	%
Addis Ababa	76,812	111,869	146	109,713	143	108,852	142	103,425	135	101,422	132
Afar	48,676	43,783	90	39,723	82	39,337	81	43,384	89	36,922	76
Amhara	658,943	639,762	97	620,494	94	620,291	94	593,358	90	598,675	91
Benishangul -Gumuz	32,679	35,014	107	33,327	102	33,312	102	32,526	100	31,720	97
Dire Dawa	14,105	13,002	92	12,173	86	12,063	86	10,427	74	11,178	79
Gambella	12,086	9,960	82	9,386	78	8,970	74	9,332	77	8,009	66
Harari	7,115	15,159	213	13,006	183	12,997	183	6,878	97	12,067	170
Oromiya	1,141,023	1,216,313	107	1,104,610	97	1,092,416	96	1,095,710	96	1,018,441	89
SNNPR	611,546	616,079	101	593,352	97	587,492	96	584,202	96	571,935	94
Somali	168,770	141,674	84	120,292	71	119,485	71	130,130	77	111,754	66
Tigray	166,654	156,598	94	148,502	89	148,471	89	142,471	85	139,945	84
National	**2,938,408**	**2,999,213**	**102**	**2,804,578**	**95**	**2,783,686**	**95**	**2,751,843**	**94**	**2,642,068**	**90**

The National Measles administrative coverage is 90% which is below the target of 95%[5]. Measles immunization coverage ranged from above 100% in Addis Ababa and Harari to 66 % in Somali and Gambella regions. Addis Ababa, Harari, Benishangul Gumz, and SNNP regions have performed above the target of 95 % while the rest have performed below the national average (90%). Regions with lowest coverage are Afar (76%) and Somali and Gambella region (66%) (Table 1 and Map 1) indicating fertile ground for fast accumulation of unprotected children owing to low herd immunity. , Ethiopia has not yet achieved the measles elimination milestones (reducing measles incidence to less than 5 cases per million population by 2015 and achieve 95% MCV1 coverage. Therefore, substantial efforts are required to improve routine

[5] FMoH, Ethiopia Distric Health Information System2 2010 EFY (July 8, 2017 to July 7, 2018)

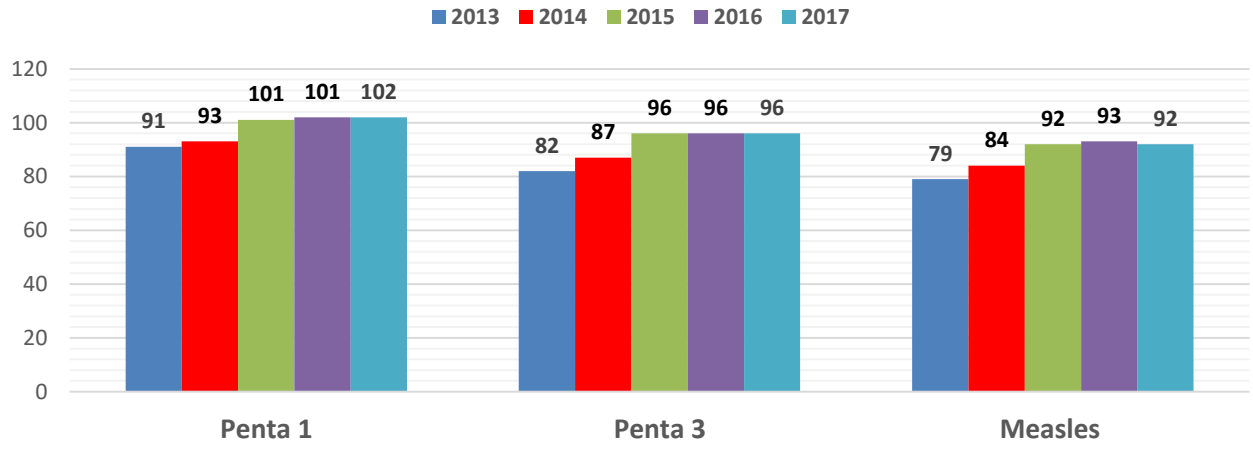
immunization coverage and to achieve measles pre-elimination target in Ethiopia.

Map 1. MCV1 coverage by Woreda 2010 EFY (source DHIS-2 2010 EFY /2017/18)



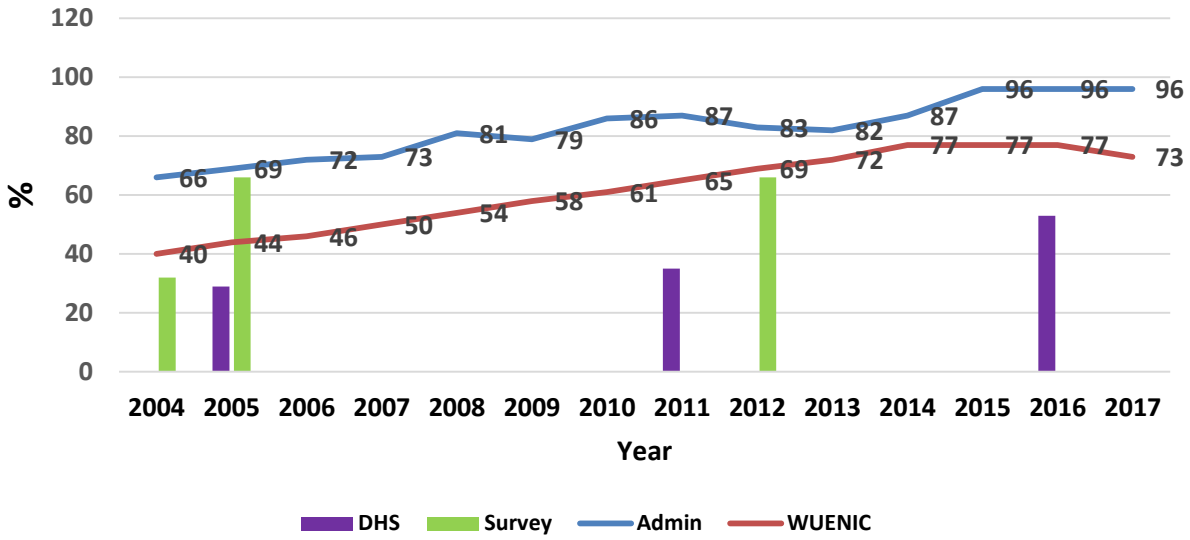
As indicated in the map the majority of outlier Woredas (those reported more than 110%) for MCV1 coverage are situated in peripheries of the country which is hard to reach and difficult whether and settlement often not easy to reach all eligible. Thus, the over reporting might be due to inaccurate denominator and/or other factors. Those Woredas performed under 50% coverage are situated in Ethiopia Somali, Oromia and Gambella regions, while majority of the Woredas that reported between 50 and 80 are situated in Afar and Oromia regions. In general, some woredas in Afar, Ethiopia Somali and Oromia regions performed below 80% compared with other regions.

Figure 1. RI performance:Trend of National immunization coverage 2013-2017 by antigen (source: JRF)



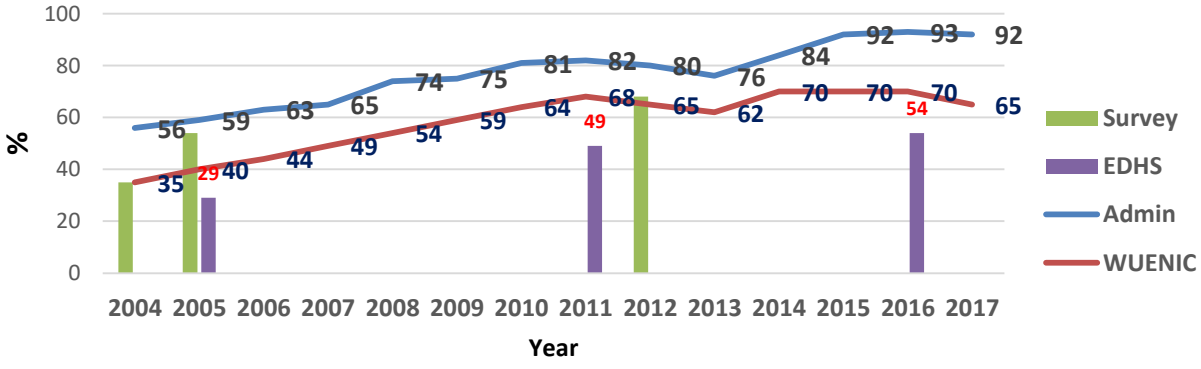
Data triangulation- The survey, administrative and WHO-UNICEF (WUENIC) estimates varies considerably. For Example, administrative reports and WUENIC estimate for Penta 3 converged in 2014 and then continued to diverge during the following years. The difference for penta 3 between WUENIC estimates and administrative reports was increased from 10% percent points in 2014 to 23% points in 2017 (fig2).

Figure. 2. Trend in immunization coverage for penta 3 using various sources 2004-2017,Ethiopia



Similarly, the administrative and WHO-UNICEF (WUENIC) estimate reports for measles coverage for 2017 was 92% and 65% respectively. The difference between administrative report and WUENIC on MCV1 reports has been increased from 14% Points in 2014 to 27% points in 2017 (Fig 3)

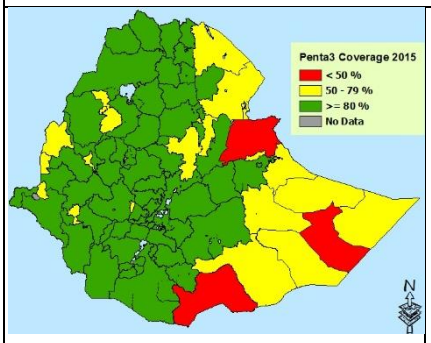
Figure 3. Trend in for MCV1 coverage by various sources 2004-2017, Ethiopia



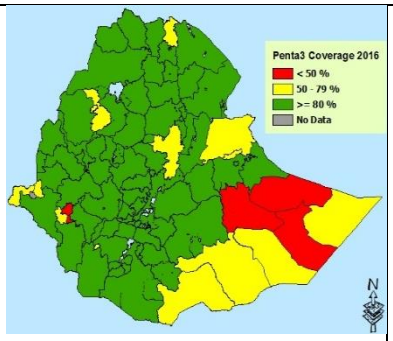
The 2018 comprehensive EPI and surveillance review also identified coverage discrepancies among different data sources (administrative, WHO-UNICEF Estimates of National Immunization Coverage Survey), as the major weakness in immunization programme. Therefore, Substantial efforts are required to improve routine and supplemental immunization activities (SIAs) data quality through verification of data, rigorous validation, monitoring immunization status of children and reported data at all levels.

The Proportion of Woredas that achieved Penta 3 coverage above 80% increased from 75% (624) in 2015 to 79% (671) in 2017. This may indicate improvement in performance in the 'low performing woredas'(Fig 4).

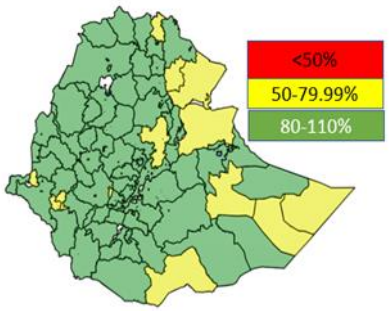
Map 2: Penta3 coverage by Zone, 2015, 2016 and 2017, Ethiopia



2015



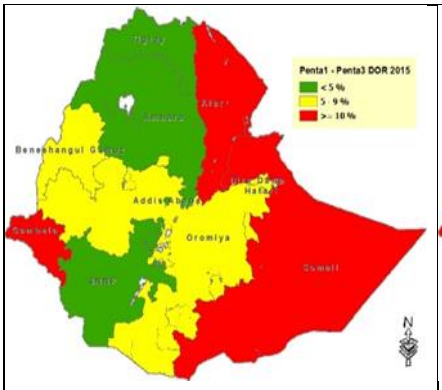
2016



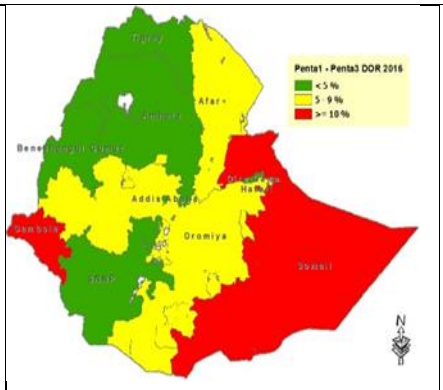
2017

Dropout rate- Based on administrative reports, the dropout rate slightly increased in Afar, Gambella, Harari, Oromia and Somali regions in the reporting year compared to the previous years. At national level the penta1-3 DOR increased from 5% in 2017 to 7% 2018 and the national Penta 1 to Measles dropout rate has slightly decreased from 12% in 2017 to 11% in 2018 (1% point reduction) and the highest dropout rate was observed in Somali (21%) and Gambella (20%) Harari (20%) and Afar (16%) Regions (Map 2, 3). The high dropout in Oromia, Ethiopia Somali, Harari and Gambelia may be attributed to service interruption due to security situation during the reporting period.

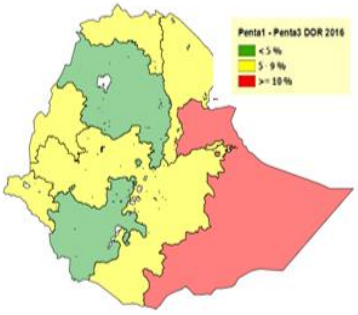
Map 3. Penta1-3 dropout rate by Region, Administrative reports 2015, 2016, and 2017, Ethiopia



2015



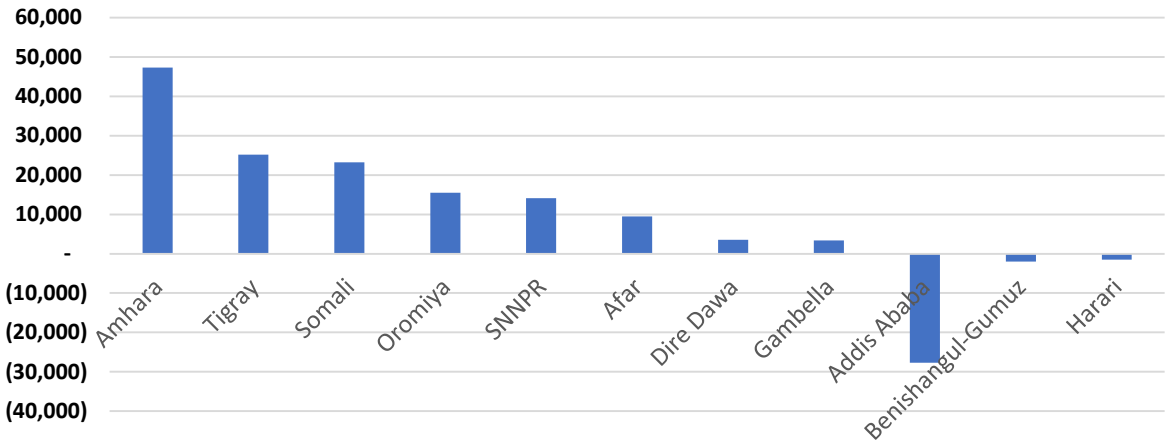
2016



2017

Based on administrative report, five regions, namely Amhara (33 %) Tigray (18%) Somali (16 %), Oromia (11%) and SNNPR (11%) Contribute to more than 88% of the unvaccinated children. While Addis Ababa, Beneshangul Gumuz and Harari reported that they have vaccinated more than their annual target (Fig 5). This could be perhaps due to imperfect estimation of denominator.

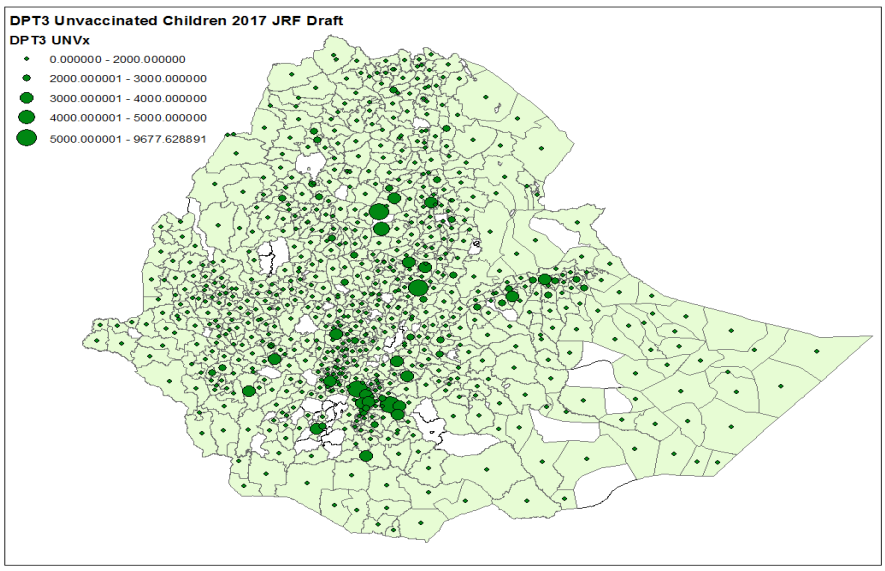
Figure 5. Geograpic distribution of Unimmunized chidren for Penta 3 2017/18 Ethiopia



In 2018 Ethiopia was faced with an unprecedented caseload of more than 2.6 million internally displaced persons (IDPs) affected by conflict and drought, mainly along the Oromia regional border with Somali, the Southern Nations, Nationalities and Peoples' Region (SNNPR) and Benishabgul Gumuz with children constituting more than half of the displaced population.

The map (5) below shows, the majority of unvaccinated children are concentrated in 3 agrarian (Oromia, Amhara, SNNPR) regions and along the border between Oromia and Somali region.

Fig 5. Distribution of unimmunized children 2017



In 2018, various actions were undertaken at various levels to address immunization inequities and improve coverage, by providing technical, financial and cold chain support to low performing areas. The revised REC/ RED guideline was printed and distributed to regions to guide EPI managers and service providers to reach and vaccinate unreached children in underserved communities and urban slums. The implementation of Periodic Intensified, Routine Immunization (PIRI) strategy has been initiated in 2nd quarter of 2018 in 140 low performing districts but not fully implemented due to computing priorities such as IDP response, preparation for HPV and MCV2 introduction and rainy season. TOT and cascade trainings were provided on HPV and MCV2 introduction.

B. Immunization Coverage and Equity Analysis from EDHS data

In 2018 vaccination coverage and inequality trend analysis has been conducted with the support of UNICEF using data from four consecutive Ethiopia Demographic and Health surveys (EDHS 2000-2016). The analysis was conducted for national and three most populous regions (Amhara, Oromia and SNNP). The EDHS data is representative, used similar

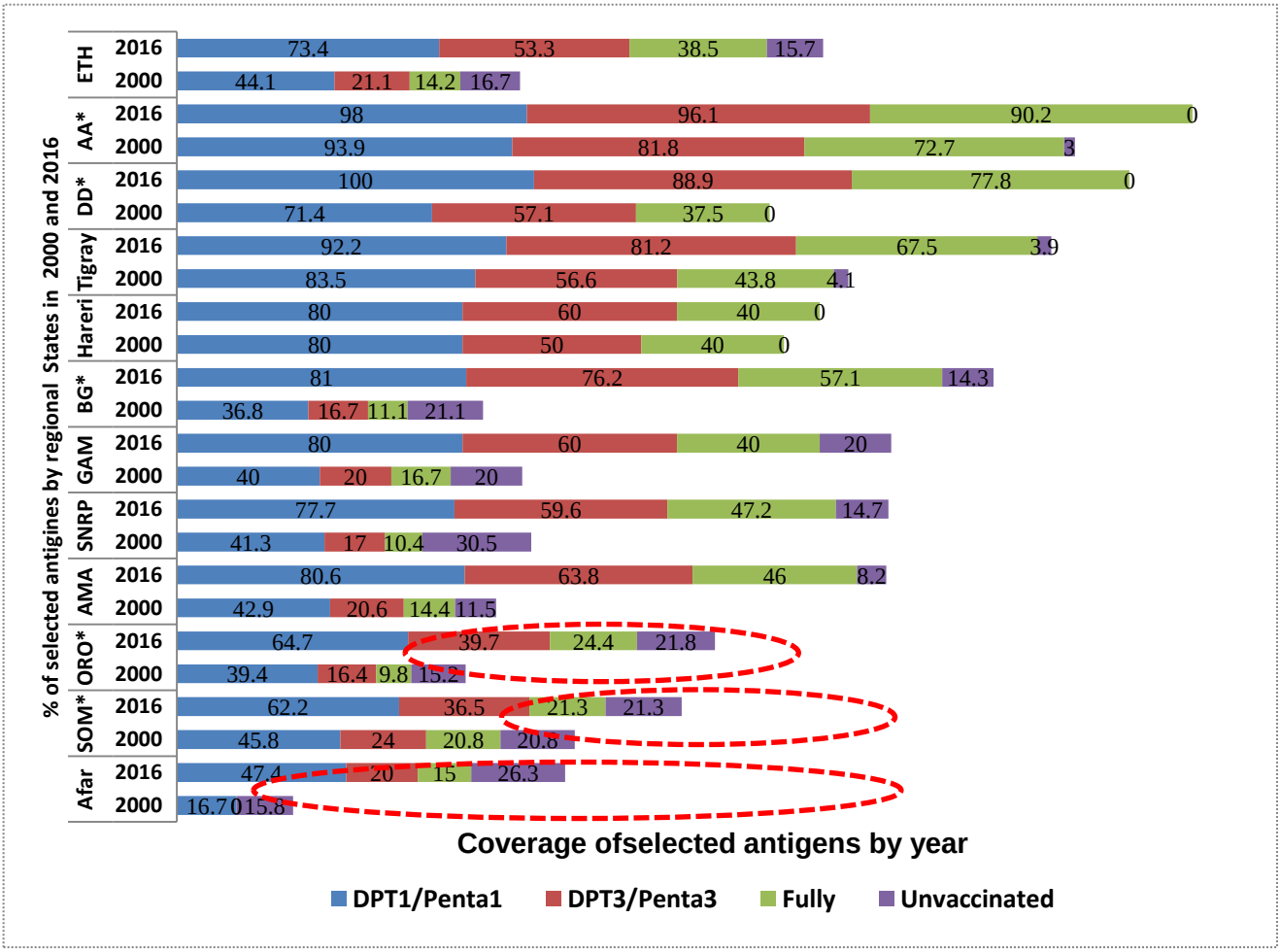
methods across the four rounds which enable to better understand inequalities between geographic regions and different population groups of the country and trends of coverage and inequalities along period.

Coverage trends

The trend analysis of DHS data showed that vaccination coverage increased at a moderate pace from 2000 to 2016 starting from very low coverage in 2000. The proportion of fully vaccinated children aged 12 to 23 months increased 2.8 folds during the period while number of health facilities and the number of health workers increased approximately five to seven folds during the same period. Similar with 2000, in 2016 one out of six children were not vaccinated at all. Improvements are not evenly distributed. There were marked differences among the regions with lowest vaccination coverage improvement in Afar, Ethiopia Somali and Oromia regions while coverage has increased substantially in the two city administrations Addis Ababa, Dere Dewa and Tigray region (Fig 6). According to survey results, it is highly unlikely that Ethiopia will achieve the GVAP coverage and equity targets by 2020.

Figure 6. Selected antigens vaccination coverage status by regional State in EDHS 2000 and 2016,

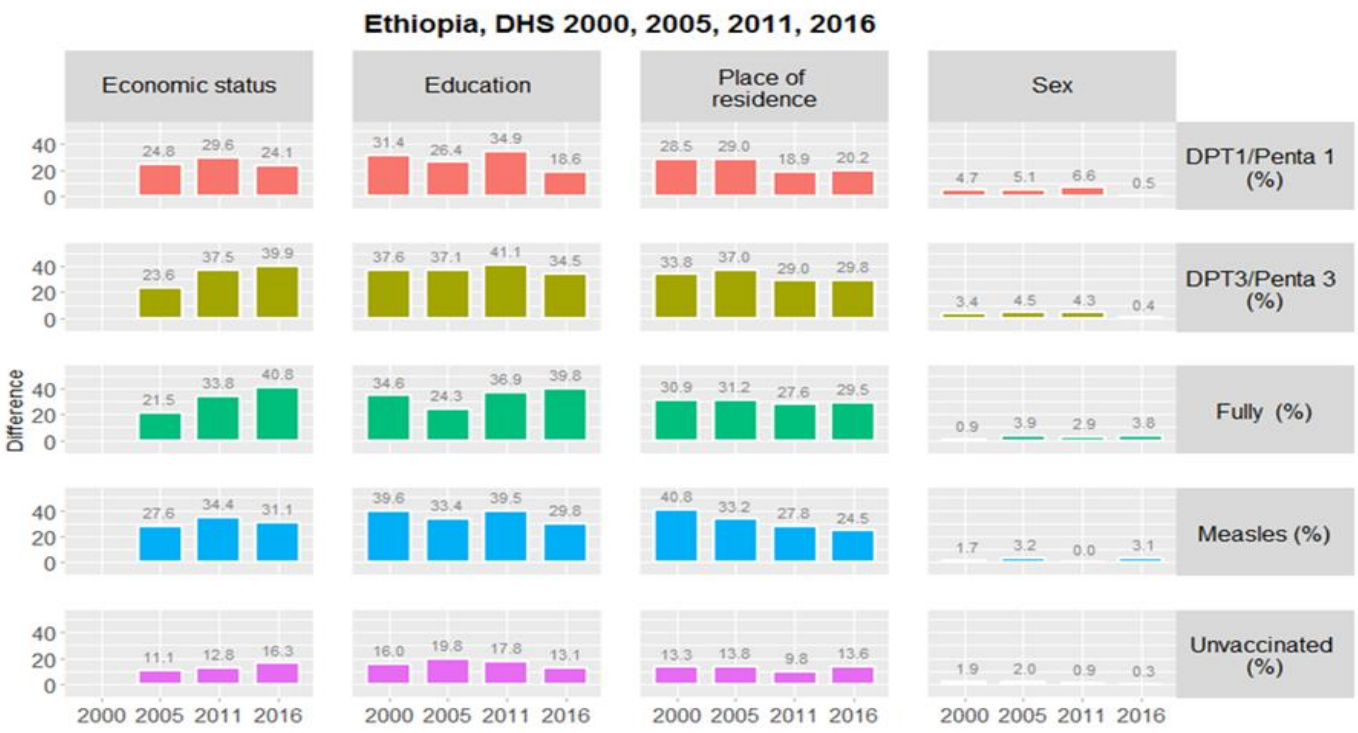
***N.B**.: AMA*-Amhara, ORO*- Oromia, SOM*-Somali, BG*- Ben-Gumuz, GAM*- Gambela, DD*- Dire Dawa, AA*- Addis Ababa*



Inequality by equity indicators

The absolute inequality analysis revealed that access to and utilization of immunization services favoured the rich, educated, and urban population groups at the national and sub-national level. The inequality gap between children from the poorest and wealthiest households increased between 2005 and 2016. While the inequalities associated with education and place of residence is narrowing slightly in Amhara and SNNP regions and inequality status by the sex of the child is negligible. children from the richest households, educated mothers and urban settings have better childhood vaccination uptake, are less likely to drop out from vaccinations and have a minimal risk for morbidity and mortality caused by vaccine-preventable diseases. (Fig 7)

Figure 7. Absolute differences (percentage points) in immunization coverage by vaccination indicator, year of survey and determinant of vaccination (wealth, education, residence and sex), EDHS 2000, 2005, 2011 and 2016

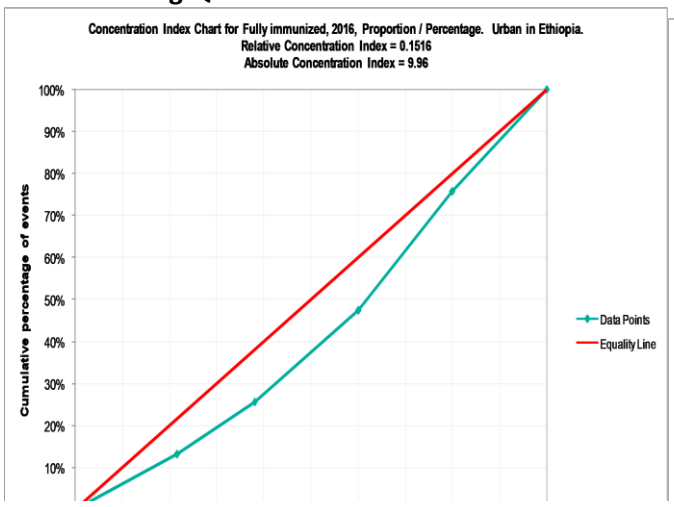


Immunization Inequalities in urban areas

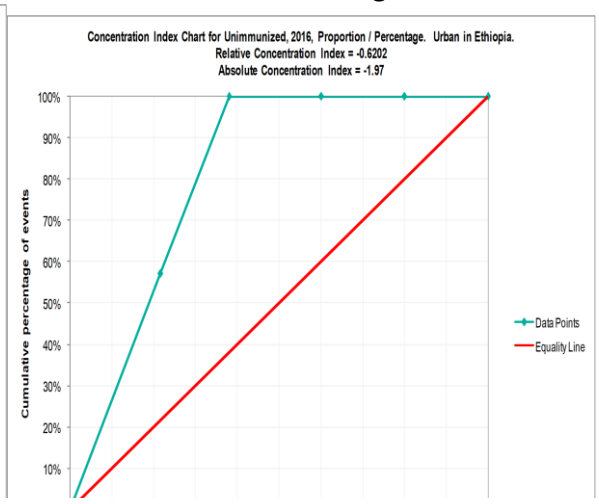
In urban areas, household economic status and mothers/caregivers' education status were found to be determinants for inequality. The disparity increased from the first dose to effective coverage (access to utilization) between children from the poorest and richest households and educated and uneducated mothers/caregivers. For example, 40 and 80 percent of children were fully vaccinated in the poorest and richest population groups, respectively in urban areas. Moreover, children in the highest household wealth quintile were unlikely to be unvaccinated (Fig 9)

Figure 9: Concentration index chart for fully vaccinated and unvaccinated in Urban (2016)

12% FV among Q1
24% FV among Q5



55% unvaccinated among Q1
None unvaccinated among Q5

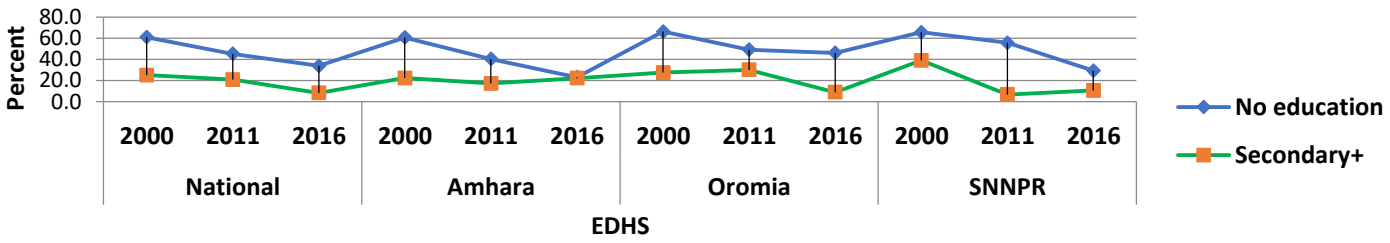


Dropout rate

Household wealth quintile and mothers'/caretakers' educational status were found to be determinants for not completing immunization. For instance, in 2016, children in the lowest household wealth quintile had 30, 19, 36 and 15 percentage points higher DOR than the richest population groups in Ethiopia, Amhara, Oromia and SNNPR, respectively. The dropout disparity trend between children from educated and uneducated mothers has been slightly narrowing, except in the

Oromia Region where the reduction of the dropout rate was negligible. The dropout rate showed a drastic decline in Amhara Region. Children had a lower dropout rate if their mothers had secondary or above education compared to those whose mothers had no education (Figure 10)

Figure 10. DoR trend by mothers' education from DPT/Penta1 to Penta3 EDHS 2000,2011 and 2016



In summary, Vaccination coverage has moderately increased during a decade and half period. However, the increase in coverage was not proportional with the increase in health facilities and human resources. Afar, Ethiopia Somali and Oromia regions made modest improvement during the report period. The inequality by household wealth quantile is increasing. Education and household wealth status remain key factors for dropout rate.

Major challenges in Immunization coverage and Equity

1. Analysis of routine Immunization data from administrative sources indicate only geographic variation. Population based survey data is required to understand current immunization status by other equity indicators. Validation with other sources such as SIA and surveillance data of incidence of vaccine preventable diseases and vaccine consumption is also proxy indicators of immunization status of children. Yet, complete and timely information is unavailable for the reporting period.
2. Variation from various sources of data such as administrative, WHO-UNICEF estimate of immunization coverage and survey remain large.
3. Transition from HMIS to DHIS2 took considerable time during the reporting period. Data quality particularly at the point of generation is also concern
4. Public grievance and conflicts has affected service delivery in many parts of the country. Massive IDPS due to internal ethnic conflicts following Political reform, leadership change at all level believed to impact negatively on overall health services including immunization. Thus, the administrative data for the reporting year might not indicate the true picture of the reporting period.
5. Delay in getting complete and timely data due to transition process from HMIS to DHIS2 was also a challenge during the reporting period.

Plan of action for next year (2019)

- Develop a road map focused on improving coverage, equity quality of immunization services and implement simple but effective solutions to problems on the ground.
- Build the capacity of EPI managers at subnational level to analyze immunization data using equity lens to cover large numbers of previously unreached or underserved communities
- Implement RED/REC and PIRI approach in low performing zones
- Institutionalize cost-effective and innovative modern technologies to measure progress
- Organize high level advocacy meeting on immunization with political leaders and parliamentarians
- Continue scaling up of cold chain equipment distribution, installation and build the capacity of HWs on vaccine management

3.2. Key drivers of sustainable coverage and equity

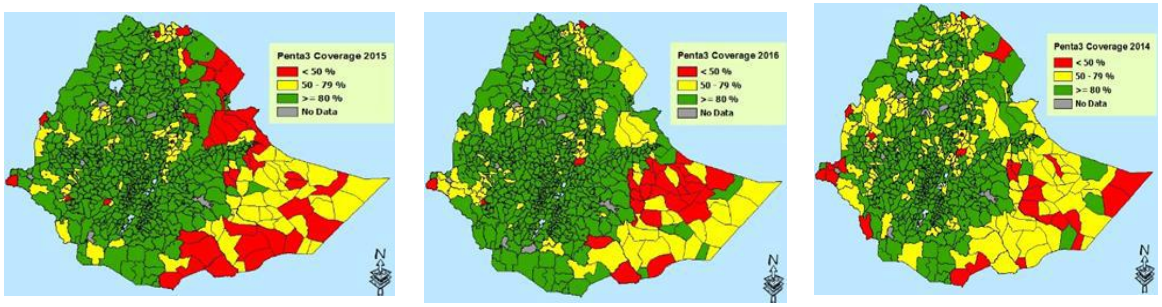
*Please highlight the key health system and programmatic drivers of the levels of coverage and equity highlighted in the section above, **focusing on the evolution and changes since the last Joint Appraisal**. For those districts/communities identified as lower performing, explain the evolution of key barriers to*

improving coverage.[6] *To the extent possible,* ***please list the barriers below by order of priorities with regards to coverage and equity bottlenecks:***

- ***Health Work Force****: availability, skill set and distribution of health work force.*
- ***Supply chain****: integration, key insights from latest EVMs and implementation of the EVM improvement plan, and progress on the five supply chain strategy fundamentals.*[7]
- ***Service delivery and demand generation****: key insights related to service quality improvement and community engagement strategies, integration and cost-effectiveness strategies, demand for immunisation services, immunisation schedules, etc.*
- ***Gender-related barriers faced by caregivers***[8]*: Please comment on what barriers caregivers currently face in bringing children to get vaccinated and interventions planned or implemented (through Gavi or other funds) to facilitate access to immunisation services by women for their children. (For example: flexibility of immunisation services to accommodate women's working schedules, health education for women on the importance of vaccination and social mobilisation targeting fathers, increasing the number of female health workers etc.)*
- ***Leadership, management and coordination****: leveraging the outcomes of the Programme Capacity Assessment and/or other assessment, please describe the key bottlenecks associated with management of the immunisation programme; this includes the performance of the national/ regional EPI teams/health teams managing immunisation (e.g. challenges related to structure, staffing and capabilities), use of data for analysis, management and supervision of immunisation services, and broader sectoral governance issues.*
- ***Other critical aspects****: any other aspect identified, for example based on the cMYP, EPI review, PIE, EVM or other country plans, or key findings from available independent evaluations reports*[9]*.*

In EFY 2010, it was planned to achieve 85% of Woredas to reach pent3 coverage of at least 80% and above. The annual performance report indicated about 79% (671 of Woredas) achieved penta3 coverage of 80% and above only 1% point's fall of the target for the year. Of those 31% Woredas who did not meet the target, about 98 (11%) performed below 60% (Map 6), most of those Woredas performed below 60% are remote and lowlands with dispersed settlement which compromise access and utilization of immunization services. The increase in the number of woredas performing 80 percent and above may indicate performance improvement and increased capacity in these woredas.

Map 6. Penta3 coverage by Woreda, administrative reports 2015-2017, Ethiopia



Health facilities (health posts and health centers) are the backbone of immunization service delivery. Thus,

[6] Relevant discussion questions on a number of the strategic areas here can be found in the programming guidance available on the Gavi website: http://www.gavi.org/support/process/apply/additional-guidance/
[7] More information can be found here: http://www.gavi.org/support/hss/immunisation-supply-chain/
[8] For additional programmatic guidance refer to http://www.gavi.org/support/process/apply/additional-guidance/#gender. Gender-related barriers are obstacles (for access and use of health services) that are related to social and cultural norms about men's and women's roles. Women often have limited access to health services and are unable to take their children to get vaccinated. Barriers include lack of education, lack of decision-making power, low socio-economic status, women unable to move freely outside their homes, inaccessibility of health facilities, negative interaction with health workers, lack of father's involvement in healthcare etc.
[9] If applicable, such as Full Country Evaluations (relevant for Bangladesh, Mozambique, Uganda and Zambia) and Technical Assistance evaluations (conducted for Gavi Partners' Engagement Framework tier 1 and tier 2 priority countries).

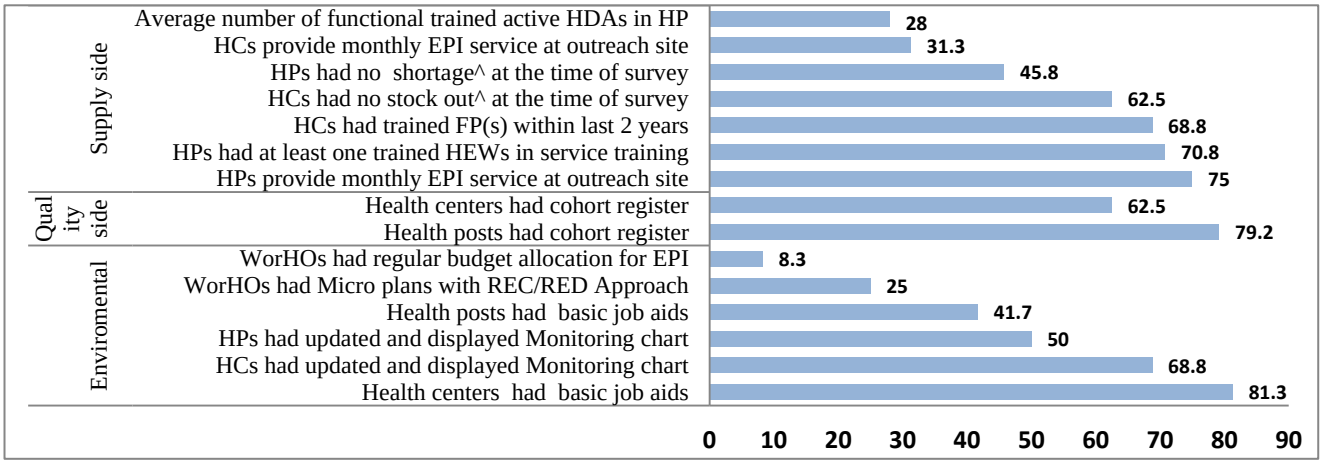
availability of adequate and committed staff at these levels is critical in the provision of immunization services.
The major barriers related to low immunization coverage in poor performing areas in Ethiopia are:

3.1. 1. Health Work Force

The findings from 2018 SARA and Immunization system bottleneck assessment conducted in selected Zones of three regions in December 2017 showed, the availability of human resource is optimal in most three key determinant indicators (supply, demand and enabling environment) (Fig 11). In relation to health human resource three bottlenecks were identified.
Inadequate availability of trained human resource at HP level. The assessment revealed that 70 % of health posts were staffed with at least one HEW who received EPI related in service training within two years prior to survey (Fig 19). Similarly, the 2018 Service Availability Readiness Assessment (SARA) report showed that 79% of health facilities have at least one health provider who trained on child immunization. Hence, integrated refresher training for health extensions workers was not provided on immunization
High staff turnover and maldistribution of health workers at HC level. Health centers in rural remote areas are under staffed and face frequent attrition while health centers in urban areas are over staffed. Lack of motivation and retention mechanism was mentioned as cause of staff turnover.
Lack of continuous training for replacement, inadequate commitment, **lack of accountability** and weak interpersonal communication, poor planning and computing priorities are key bottlenecks to provide quality immunization service

The midterm review of Health sector transformation plan report of 2018 showed that, discrepancy between available staff in health facilities and the demanding activity of immunization service and high attrition of staff are key human resource related challenges in immunization programme[10]. The 2018 comprehensive EPI review report also showed that, the current EPI structure is not fitting for the increased scope and growing complexity of the immunization program and competing priorities constrains the ability of the national EPI team to conduct subnational level supervision[i11].

Figure 11. Distribution of major bottlenecks by key determinant indicators (%)



3.2.2. Supply chain: The 2018 Service Availability and Readiness Assessment (SARA) result has showen that the availability of vaccines at health facilities ranges between 28%-30% ranges from 29% for OPV to 39% for Measles) and the mean availability of tracer items required to provide child immunization service were almost similar across the two SARA surveys (in 2018, 54% and 2016, 51%). Below is the summary of the finding from SARA 2018. (Figure 12)

[10] FMOH Health sector midterm report of ARM 2018
[11] 2017 comprehensive EPI and surveillance review report page 7.

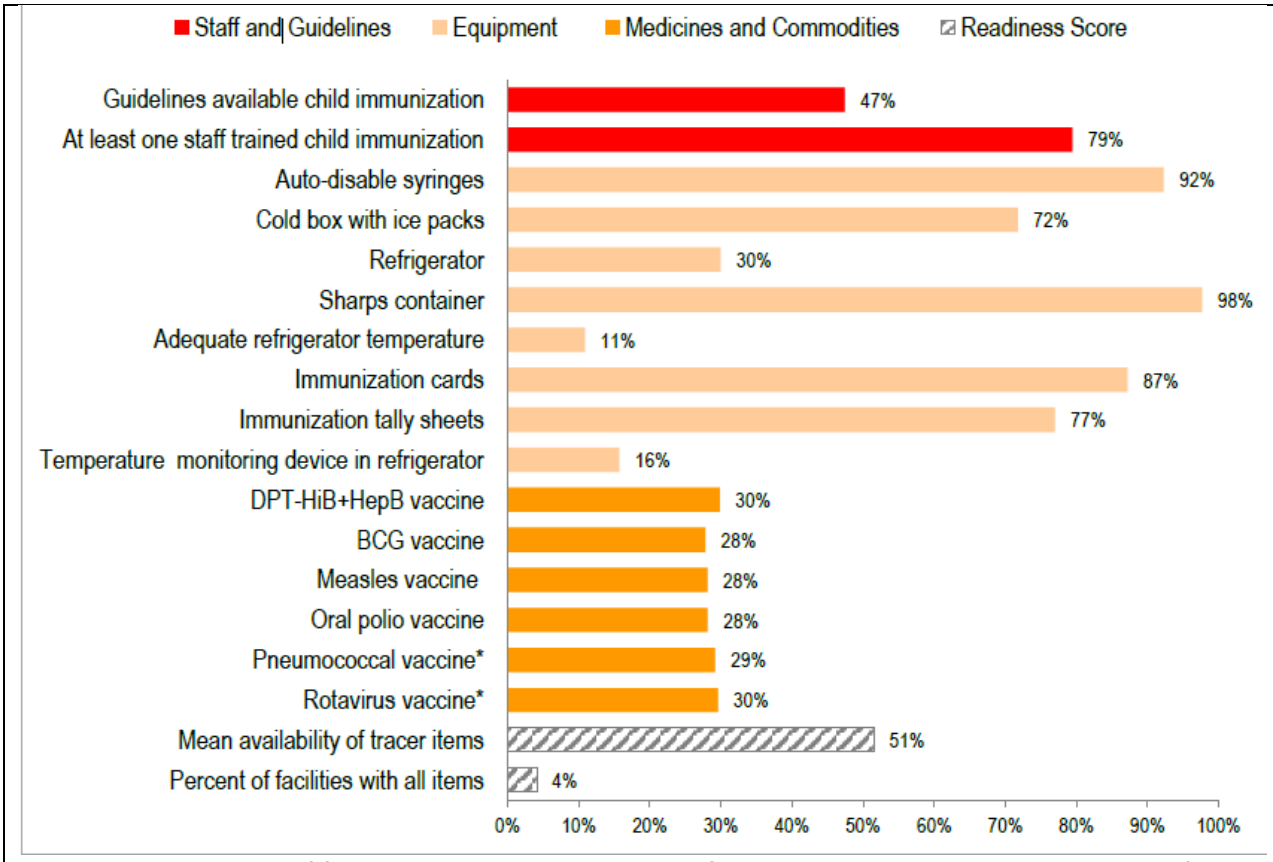


Figure 12: Percentage of facilities that have tracer items for child immunization services among facilities (SARA report 2018).

Availability of vaccine on the date of survey was below 30 percent for 6 vaccines types. Whereas the highest stock out in three months prior to the survey was observed for BCG (25%), while it ranges (13-18 percent) for the rest.

As a benchmark, the country is looking for improvements in the EVMA scores, with the most recent assessment completed in 2013 with an overall score of 67%. Now, resources are secured to conduct another round of EVMA by first quarter of 2019.

- Many improvements have been made since the last EVMA was completed in 2013. So far, a protocol for the assessment is approved and other preparatory activities (example health facilities sample and TA selection) are progressing. This will be followed by development of continuous improvement plan.

Using the five fundamentals of Gavi's immunization Supply Chain (iSC) Strategy as a framework for this appraisal, many activities have been completed in this reporting year to rectify some of the supply chain related challenges and bottlenecks, as well as on-going challenges identified as areas of improvement, including:

Continuous improvement

- The five-year iSC strategic plan (2018-2023) has been finalized and validated, encompassing an implementation plan for each year.
- There is an active logistics technical sub-working group (TWG) that meets regularly on a monthly basis and meets frequently as required. The major agenda items discussed on the TWG is logistics related issues such as new vaccine introduction, routine Immunization, national stock status, forecasting and effective vaccine management improvement activities.

Cold Chain Equipment

- Cold chain facility expansion and replacement is well progressing. The system added 6,000 SDDs at last mile service point in the report period most of which goes to health posts. This has increased the number of health facilities that provide static immunization service and reduced frequency of vaccine delivery to health posts.

- Operational Deployment Plan (ODP) for the initial phase of CCEOP is finalized and submitted to UNICEF supply division. This will be followed by procurement, delivery and installation of the equipment to the identified prioritized areas. The next phase ODP will be processed and submitted in the second quarter of 2019.
- The last CCE inventory is done during August 2013 and update in 2017 based on a desk review. The number of CCE in the country increased to 23,189 refrigerators/freezers at different level of health structure (health post, clinic, health center and hospital, Woreda, zone and region) in all regions of the country. The next national CCE inventory is planned to be conducted in the first quarter of 2019. FMOH has completed preparatory activities in collaboration with Ethiopian Public Health Institute (EPHI), Clinton Health Access Initiative (CHAI) and other EPI partners. There will be development of rehabilitation and expansion plan onwards.
- In addition, web based data base has also been developed to conduct national cold chain inventory, resources are mobilized and the process is started in collaboration with Ethiopian Public Health Institute (EPHI).
- There is maintenance strategy or plan by FMOH and training guidelines for all level
- At EPSA center and few hubs there are functional remote temperature monitoring devices (RTMDs) and installation for others is ongoing. At Districts & health facilities fridge tags are in use.
- There are 28 senior cold chain technicians/biomedical engineers (six are from EPSA) under continuous on job training on cold room installation and maintenance. In addition, there is a continuous training for users and mid-level technicians for preventive cold chain maintenance.
- On the top of this, FMOH is establishing regional maintenance workshops in 13 locations throughout the country.
- EPSA outsourced the maintenance of cooling unit for refrigerated trucks which has decrease down town and breakdowns in need of corrective maintenance.
- There is a plan to pilot backup solar system for cold rooms at remote areas within EPSA.
- In order to boost the storage capacity of central EPSA, installation of CRs of 300m3 gross capacity is underway at the premise of Addis Ababa hub number 2 (located at Jakros). Relocation from regional health bureaus to four PSA hubs is also expected to be completed in the coming one year.

Data for management

- EPSA has implemented IMPACT teams (a team that focuses on supply chain performance improvement through data use, innovation and empowerment) – at each of its hubs, with EPI supply chain and program data and use as part of the team's mandate.
- Vaccine Request Form (VRF) was up dated, printed and is being distributed by EPSA to Woredas and health facilities.
- Immunization Supply Chain (iSC) indicators like vaccine stock availability and district level visibility are monitored on quarterly basis and reported nationally. We currently don't have any data visibility at facility level.
- One of the priorities in 2019 will be triangulation of data from various sources including DHIS 2 coverage report, LMIS reports (procured and distributed quantities), DHS and other survey reports. The data triangulation will be done at national level and will be cascaded to sub national levels and service delivery points. The results of data triangulation will be used as an input in forecasting and supply planning of vaccines and injection supplies.

Leadership

- HR is one part of the iSC strategy 2018 to 2023. The most pressing HR capacity gaps are in relation to the maintenance of Walk in Cold Rooms (WICRs) and refrigerated trucks.
- There exists a formal TOR for the TWG and national priorities and improvement plans are discussed in this platform.

System Design and Vaccine Transition from FMOH to EPSA

- Vaccine and cold chain management transition to woreda delivery is nearly finalized – EPSA hubs are delivering vaccines directly to 91% of woredas by October 2018 and this phase of transition is expected to be completed in the coming few months.
- Several EPSA hubs (e.g. Mekelle, Dire Dawa, and Bahir Dar) are piloting direct delivery to health

facilities, while Adama hub is piloting integrated monthly delivery (vaccines with other medicines). Based on experiences obtained from those hubs PSA plans to directly distribute to 330 health facilities in the coming 3 months. In another 9 months, direct delivery will be scaled-up to additional 470 health facilities to reach a total of 800 health facilities by the end of 2019.

- Optimization is being done based on EPSA's preferred distribution model but there are still significant amount of work to be done in order to truly optimize distribution to hard-to-reach areas.

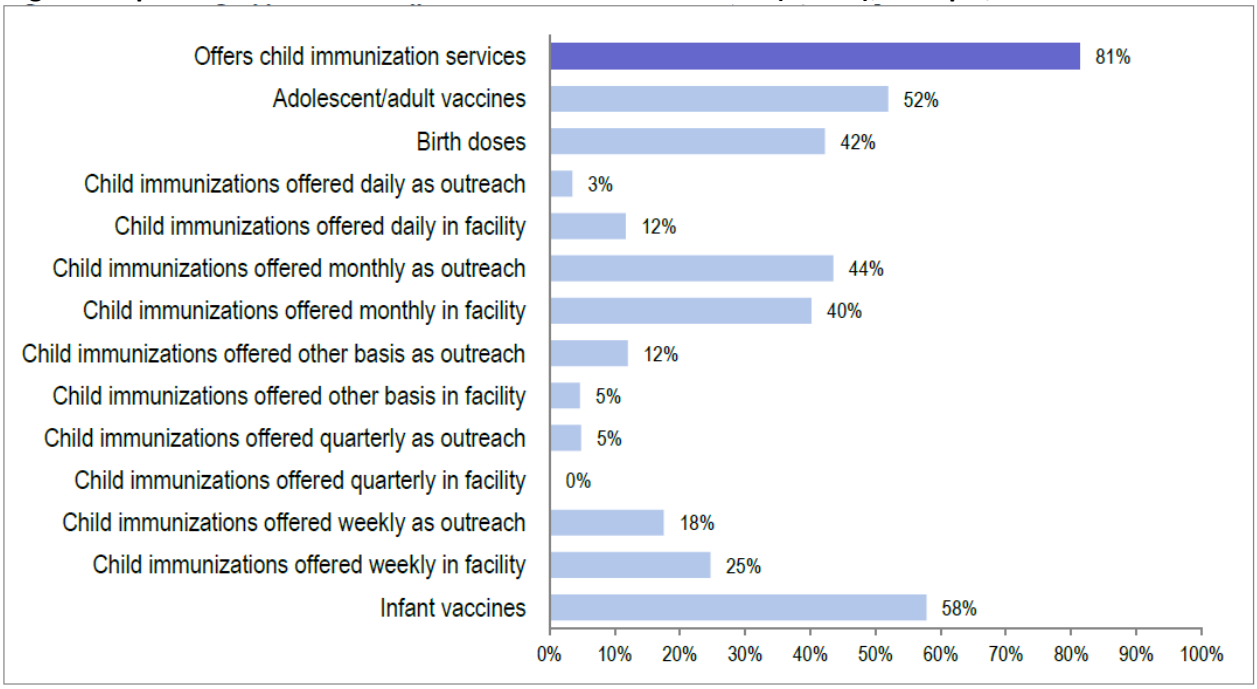
3.2.3. Service delivery and demand generation

Service delivery: Improving the provision of equitable immunization service delivery is a top priority agenda for Ethiopia. The primary objective of immunization strategic plan is to achieve at least 90% national coverage and 80% coverage in every district with all vaccines by 2020. It is also planned to reduce the incidence of vaccine-preventable diseases through integrated interventions that would strengthen the overall health system. The frequency and the quality of EPI service delivery strategies affect notably the immunization coverage as well as the cost effectiveness of the program. In Ethiopia immunization services are provided through static and outreach strategies. Mobile strategy, although applied in few parts of Somali and Afar region where there are close to 49 mobile teams that cover very hard to reach areas providing immunization services together with other essential health packages. The current immunization system does not capture number of outreach and static sites in the country, yet results of supervisory visits have shown that many outreach sites are running in the country.

In 2018, there are 17,086 health posts and *3962 health centers.* But, there is no data on what proportion of these health facilities are providing vaccination service through different approaches. Despite considerable progress has been made in the past, gaps persist in immunization service delivery which has resulted disparities in coverage, high number of unimmunized children and high dropout rate which was illustrated by recurrent measles outbreak.

According to policy instruction from the FMOH, immunization services should be available every day but majority of health facilities tended to provide immunization services monthly basis. The 2018 SARA showed that, 12% of facilities offered immunization services in daily basis at the facility and Child immunization as an outreach service was not commonly offered and only 3% of facilities providing this type of service. The EPI services ideally should not be interrupted, because each interruption may lead to defaulters and mothers/caretakers may lose the trust with the health service providers and the system.

Fig 13. Proportion of facilities that offer immunization services (N=764), Ethiopia, SARA 2018



Demand generation

In Ethiopia, the demand generation component leans on the Health Extension Program which includes mainly the Health Extension Workers and the Women Development Army (WDA) as key actors. Health Extension Workers, apart from performing preventive and selected curative tasks, are conducting promotive activities. Community health volunteers organized as WDA are one of the important platforms used to engage the community in the planning, implementation, monitoring and evaluation of health interventions at the community level and beyond. Poor community mobilization, inadequate defaulter tracing mechanism, decreasing number of functional WHDAs, lack of training, inadequate supervision and motivation mechanism are key factors affecting the demand generation interventions (2017 BNA report). Weak WDA structure and their poor participation in health activities in many Regions were one of the major challenge and point of discussion during 2010 EFY Health Sector Annual review meeting (ARM report 2017).

As this reflects an overall community engagement issue, the strategy has to be reviewed and tailored accordingly, by finding bottlenecks to the WDAs' performance, putting in place specific solutions and exploring other existing community platforms.

Furthermore, the Health Extension Program is facing several challenges affecting the demand generation for EPI. Among those challenges are the inadequate attention by the political leadership at all levels, a poor inter-sectoral collaboration, a weak structure to coordinate the HEP especially at PHCU and woreda levels, the ignorance of the HEWs' administrative issues by local and regional administrations such as annual leave, transfers, salary scale resulting into a high dissatisfaction of the HEWs, a high turnover, an increasing workload and engagement in non-health activities, an inadequate budget for the program and a poor HP Infrastructure and lack of supplies/logistics making the health center/health posts unattractive for the users. There is also a demographic and epidemiologic change with increasing emergency situations related to drought, insecurity that put the system overstretched.

To rectify some of the demand generation related challenges and bottlenecks, some performed activities in the report year include:

- The 2017 African vaccination week which was celebrated at national level in the presence of MoH higher officials, partners, NITAG Chair, media agencies and other stakeholders. The newly transformed vaccination card (Maternal & Child Health Card) was launched during this event. Regional health bureaus also celebrated the 2017 African vaccination Week on strong advocacy and demand creation with immunization stakeholders.
- A strong Advocacy was conducted during the 2018 World Polio Day celebration on 24 October 2018. This Advocacy was conducted on the 2010 EFY Health Sector annual review Meeting in the presence of Minister, State Ministers, all regional health bureaus heads, partners representatives and local & international donors.
- HPV introduction behavioral formative assessment was conducted in four regions. Based on the assessment findings, a National Social Mobilization and Communication Plan **supporting** the HPV introduction was designed and implemented. A crisis communication preparedness and response plan is also developed in order to anticipate and handle effectively any rumours and misconceptions around the new vaccine. Furthermore, an HPV communication tools package was designed (training manual, HEWs job aids, advocacy guide, IEC materials). Furthermore, as part of the crisis communication plan, a digital communication strategy is available including key messages dissemination through social medias (Facebook and SMS), social listening and digital monitoring for tracking rumours and misconceptions. High level Advocacy and sensitization was done on HPV & MCV2 introduction on the health sector annual review meeting with brochures dissemination.
- A Communication Plan and communication tools package for MCV2 introduction was developed and implemented (advocacy guideline, social mobilization messages, community platforms training modules, HEW IPC and Social Mobilization training modules, street and market show guidelines, IEC materials). The ground work done for the introduction of the two new vaccines (HPV and MCV2) contribute to RI demand.
- Four Regional Communication Technical Assistants were deployed in the agrarian regions where most of unimmunized children were found (Oromia, Amhara, SNNP and Tigray, AA). Thanks to their support, 3 regional social mobilization committees were revitalized and are supporting EPI/MNCH communication activities coordination, strategic planning including social mapping, and monitoring with a special focus on HPV and MCV2 Introduction.
- A key barrier analysis study on immunization and MNCH service use in the DRS of Afar, Gambella,

Beninshangul Gumuz (BG) and Somali has started and planned to end in the second quarter of 2019. This will inform a more context specific communication strategy support on routine immunization in underserved areas.

Major challenges in demand generation

- The communication activities for EPI, apart from technical assistance, lack resources. As a result, demand generation and community engagement activities at woreda level are absent or limited, especially in remote facilities or hard-to-reach areas
- IPC at health center is still suboptimal: health education is not systematically conducted at HF level during immunization sessions; there is a language barrier for IPC and a lack of skills on IPC among health workers
- Activities monitoring remains a challenge as there is no demand generation related indicators in the national health information system

Plan of action for next year (2019)

a) Developing specific and tailored community engagement strategies for and with high-risk communities

The human centered-strategy requires working directly with users — the people who use the service or operate the solution — to develop new ideas that are viable and appropriate in their context by using local capacities and resources. The development and implementation of these specific strategies will need developing partnerships with clan leaders, religious leaders, CSOs and humanitarian organizations that have access to mobile population and people living in fragile settings in order to provide health services as well as conducting demand generation interventions. For pastoralists communities, the EPI program will draw from the positive experience in engaging with local communities in Somali region for Polio. Therefore, interventions will mainly include creating a network of informants and influencers, engagement with clan leaders and religious networks, mapping of water points and livestock markets and forming a partnership with animal health program.

b) Contributing to the improvement of quality of services through social accountability mechanisms

It aims at putting in place a community feedback mechanism on the quality of the services. For this purpose, the social accountability approach “Community Score Card” will be used. This will help in reducing low quality of services related to poor IPC by the HEWs, vaccine and other drug stock outs and health service interruption. Based on the community’s feedback, using community dialogues as a platform, a local action plan will be developed together with the community and the health facility for quality health services improvement.

c) Shaping social norms and reinforcing awareness by engaging with gate keepers and key influential

Those are religious leaders and elders, clan leaders, Edirs, leader mothers, women’s groups/WDAs/agricultural development associations and men’s associations, HEWs, teachers and other community platforms (command post members, steering committees, Kebele leaders). The interventions consist especially in strengthening the capacity of the gate keepers and community platforms in promoting and advocating for immunization and other MNCH services. Community leaders and networks will be also engaged in monitoring the vaccination status of individual children to motivate and remind households in taking the vaccine and other MNCH services such as the antenatal and postnatal visits. The community leaders will help as well in building trust in immunization services, especially related to the HPV vaccine and the fear of vaccines’ side effects. Furthermore, gate keepers and positive models will participate into radio debates in order to spread more quickly the newly adopted norms.

d) Contributing to the decrease of the DOR by:

- Reinforcing IPC skills of HEWs through monitoring the effectiveness of the already existing and disseminated IPC manual and table flipchart
- Introducing a mobile phone reminders system in the areas where there is mobile network coverage is acceptable

e) Reinforcing the monitoring of demand generation activities

- Improving monitoring of communication activities by putting in place a reporting mechanism among community platforms.

Leadership, management and coordination: The capacity of health managers at Woreda, and primary health care level to stratify, target, plan, allocating resources and systematically monitor and report progress is limited. In low performing areas, apart from frequent changes of program managers, capacity to identify key barriers, and prioritize underserved children on routine immunization for coverage improvement is weak. In order to coordinate the program with all stakeholders and developmental partners the staff turnover in both sides become challenge.

3.3. Data

*Provide a succinct review of key issues related to the timely availability, quality and use of immunisation data **focusing on the evolution and changes since the last Joint Appraisal**. This section should at least cover insights on immunisation coverage data (target populations, number of children vaccinated) and available triangulation with vaccine supply chain data, vaccine preventable disease (VPD) surveillance data, and adverse events following immunisation (AEFI) data. Please take the following aspects into account:*

- *Status of the **health and immunisation information system** (e.g. DHIS2, parallel systems, surveillance system), and updates on eventual national HMIS strengthening plan.*
- ***Denominator**-related information, e.g. any difference between national denominator, UN estimates, and programmatic targets, and planned census,*
- *Key challenges pertaining to **data availability, quality and use**, referring to results from most recent annual desk review, any recent assessments and implementation of immunisation data improvement plan. For example, are you aware of key limitations / weaknesses related to the quality of the data and data analyses you have used to inform this Joint Appraisal.*
- ***Compliance** with Gavi's data quality and survey requirements (the requirements are listed in the JA Annex; and are described in detail here http://www.gavi.org/support/process/apply/additional-guidance/#data). If you are not compliant, explain why.*
- *Main **efforts / innovations / good practices** focused on evidence-based data improvement interventions and level of scale up.*

a. Data management

The Federal Democratic Republic of Ethiopia, Ministry of Health (FMOH) has been working continuously to improve data and information quality in the health sector. Information revolution is one of the major priorities of the Government as stipulated in the Health Sector Transformation Plan (HSTP).
Major strategic shift has been made in the recent years and in 2010 EFY (2017/18), the FMOH has also made a concerted effort to facilitate the cultural transformation for health data use with development and rolling out of appropriate HIS technologies. Guidelines developed to improve information use, quality and performance. The approach uses human centered design to understand what motivates health workers. The guideline is to be tested focusing more on the performance improvement team at various levels.

A number of activities were implemented to transition from the two electronic HMIS to a standardized and customized District Health Information Software (DHIS2). In 2010 EFY (July to Dec./2017 and Jan. to June/2018), the FMOH has accomplished customization of the software to the Ethiopian context and conducted user acceptability and field application tests; successfully achieved legacy data migration from the eHMIS to DHIS2; provided Master Training of Trainers to the RHBs and cascaded the training up to health facility level; and deployed online and offline version of DHIS2 to 83% of Zonal Health Departments, Woreda Health Offices, hospitals and health centers.
Furthermore, the national Health indicators were revised including immunization program that include the new vaccines HPV and MCV2 as new indicators. Also, the data collection tools for HC and health posts were revised, printed and distributed to health facilities. Moreover, DHIS 2 is adopted as a national platform for HMIS reporting and deployed in all districts and >90% of health facilities. To improve the immunization and other child health related data keeping at household level immunization card revised to child passport and 3 million copies distributed to the regions.

The national HealthNet coverage has also reached at 34%. In order to withstand the current challenges with the IT infrastructure especially internet connectivity, the FMoH decided to deploy the offline version of the software at health facilities and administrative units as a short-term solution.
Data reporting through the DHIS2 was started in January 2018 in few regions followed by progressive implementation in the other regions and in July 2018 DHIS2 is being implemented in all regions.
Some of the challenges with the data system include:

2. Mismatch between old eHMIS and DHIS 2 makes migration of legacy data difficult,
3. Plan setting (denominator, baseline and target) data is not captured as expected which makes indicator calculation difficult.

Data Quality Review

The second National Health Data Quality Review (DQR) was conducted In 2018. The first National DQS was conducted in 2018. s done on 2016. The assessment was a cross-sectional study using the World Health Organization's Data Quality Review tool after customization to the local context. The sample size for the DQR was determined by a combination of census of hospitals and random samples of health centers and private clinics. A total of 629 health facilities, 365 Woreda/districts, 63 zones, nine regions and two city administrative council health bureaus were included in the survey.

System Assessment (SA)

Summary of proportion of facility level service assessment indicators, DQR SA, Ethiopia 2018

Figure 15: Comparison of system assessment indicators by health unit

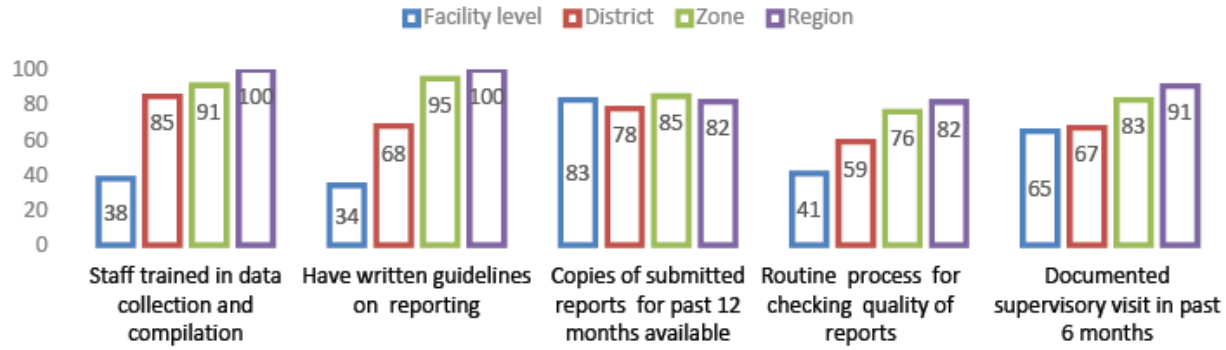
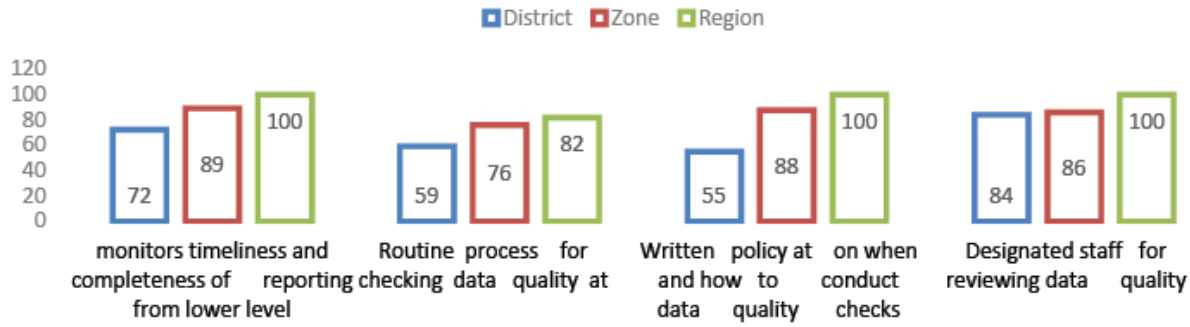
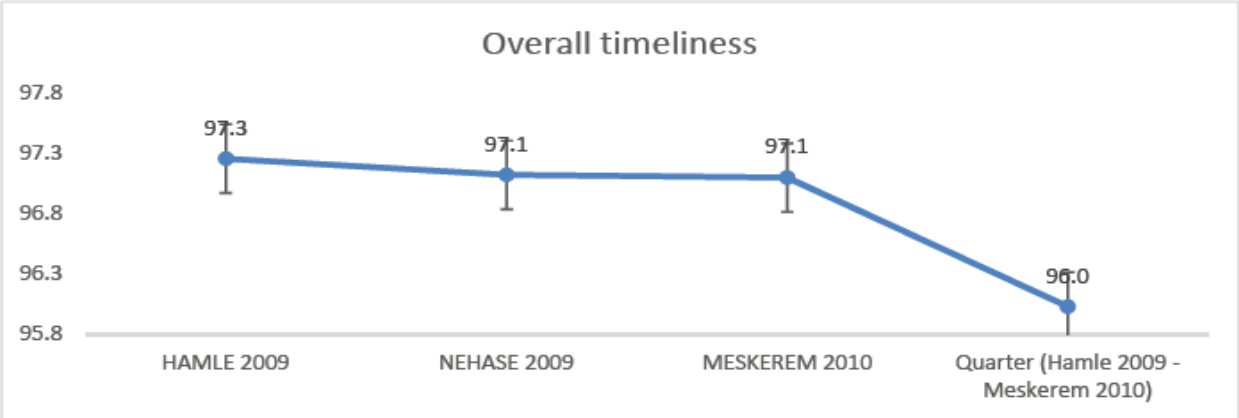


Figure 16: Comparison of system assessment indicators data quality indicators by health unit



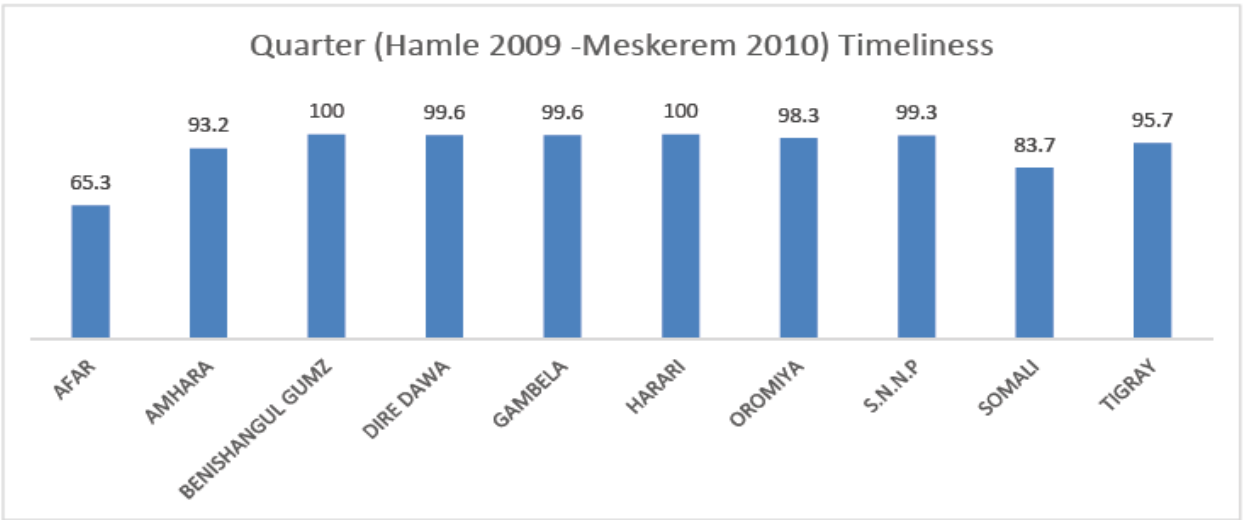
Timeliness
Timeliness for all indicators were more than 95 percent. Figure 17 shows Woreda level report timeliness by indicator and aggregate report for the three months (July-September 2018).

Figure 17. Percentage of facility that report to a Woreda in a timely manner



Timeliness of report by Woreda at Region level: Timelines for the quarter were higher for all Woredas except for Woredas in Afar region (65 percent).

Fig 18: Percentage of facilities that report in a timely manner at Woreda level by region, July-Sept 2018



Data verification (DV)

The data verification also showed that health facilities had discrepancies in their reported and source document. The verification factor for most of the indicators at health facility level show that the figures in the source documents were lower than the figures reported to the next administrative level. The higher the administrative level the better the Data verification factor (Table 3).

Major findings of the DQR for Penta 3 include:

- Seventy five percent (75%) of facilities had all source documents and reports available for Penta 3.
- The completeness of Penta 3 data among facilities that offered EPI service and reported through HMIS was 96%
- Completeness of Penta3 data was universal in SNNP, Harari, Amhara, and Addis Ababa facilities compared with 61 percent of facilities in Somali
- The overall VF for the Penta3 data was 1.0296 indicating a close match to next level

Table 3: Summary of Penta 3 data verification factors by level and category

Level	Proportion of verification category			
	>10% over reporting	Matched+ up to 10 % under and over reporting	>10% under reporting	Verification factor
Facility	14	74	12	0.958
Woreda	8	89	3	0.951
Zone	0	100	0	1.000
Region	9	91	0	0.999

4. Data triangulation

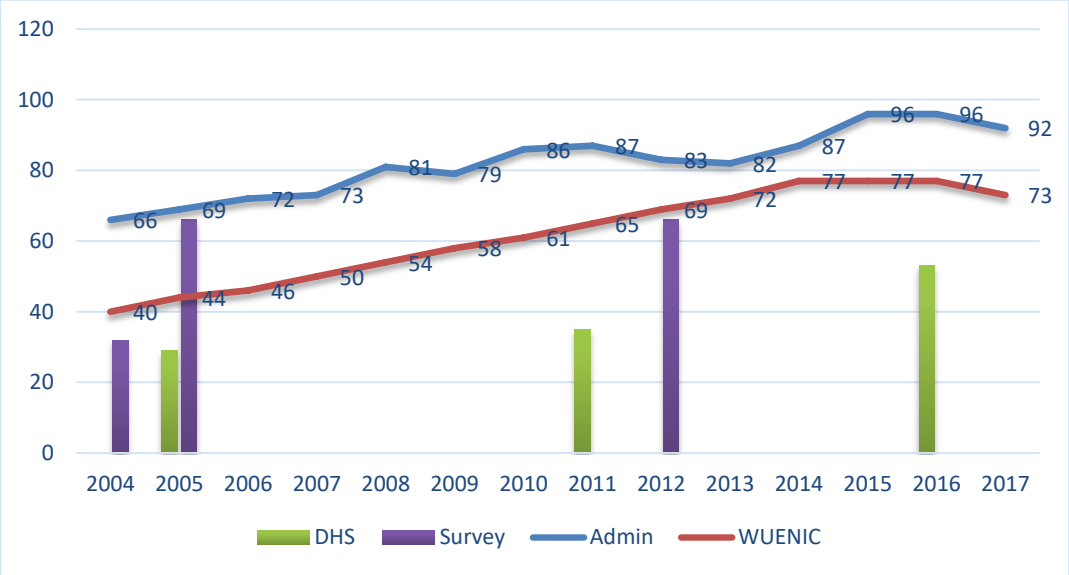
Regular data triangulation, data analysis and feedback provision were done at national and sub-national levels though not regular and as expected as one go down in the system. The Ministry initiated a system of data triangulation using the Ethiopian Health Data Analysis Platform (EHDAP) which is an integration platform being developed for integrating and analyzing health data collected by different authorities using different platforms. It brings together fragmented data systems into one for evidence-based decision making, helping perform advanced analysis on integrated datasets.

However, there is a need to strengthen regular data triangulation among relevant stakeholders through reviewing of HMIS, vaccine issued and VPD surveillance data.

5. External Consistency

Discrepancies are observed between HMIS admin reports and WUENIC estimates. The 2017 coverage estimate showed the DPT3 coverage 73%, declines from 77% in 2016.. The variations between the two sources of data is huge across the time series.

Fig 19. Trend in immunization coverage for penta 3 using various sources (2004-2017)



Efforts /innovations/ good practices

1. Electronic Community Health information system (eCHIS) Family folder and RMNCH module which includes immunization were developed and training was provided and ready for piloting in four selected woredas to scale it up in 8,500 HPs in the fiscal year.
2. Incentive mechanism was designed to motivate health facilities and professionals demonstrated improvement data quality and information use
3. Innovation lab establishment at national and five regions is underway to bring innovative solutions to support IR interventions

Challenges

1. Delay in transition to DHIS 2
2. Data quality issue including denominator issue

Planned activity

1. Establish culture of information use:
   a. implementation of incentive mechanisms,
   b. cascading EDHAP at regional and lower levels
   c. Beneficiaries to be informed about DHIS-2, such as the advantage, the outputs and its operations
   d. Enhancing culture of information (generating, reporting, sharing, accountability, using and inferring)
   e. Capacity building (training, connectivity, Access and securities
2. Set plans for regular data sharing schedules (Partners)Implementation of data quality improvement plan
   a. Data quality improvement (Road Map and implementation plan
   b. Engage the recently recruited data quality improvement plan officer
3. Explore to understand the root causes for data discrepancy
   a. Conduct systemic data quality survey
   b. Identify Zones/woredas/HFs with variations and conduct in-depth interview and analysis
4. Conduct EPI specific DQR and community data verifications
5. Conduct DQR at regions to reach best Immunization coverage estimates at Regions and beyond
6. Data triangulation with other surveys and other programs data
   a. Surveillance Data (AFP, Measles, MNT)
   b. Outbreaks data (Measles, pertussis)
   c. Other surveys done at local level
   d. Supply data (request, utilization and stock level)
7. Establish multi department /agency and partner forum
8. Develop ToR for implementation of regular multi-agency
9. Electronic Community Health information system (eCHIS) Family folder and RMNCH module which includes immunization were developed and training was provided and ready for piloting in four selected woredas to scale it up in 8,500 HPs in the fiscal year.

3.3. Immunisation financing

Please provide a brief overview of the main issues affecting the planning, budgeting, allocation, disbursement and execution of funds for immunisation. Please take the following aspects into account:

- ***Availability of national health financing framework*** *and* ***medium-term*** *and* ***annual immunisation operational plans and budgets****, whether they are integrated into the wider national health plan/budget, and their relationship and consistency with microplanning processes.*
- ***Allocation of sufficient resources in national health budgets for the immunisation programme/services****, including for Gavi and non-Gavi vaccines, (integrated) operational and service delivery costs. Discuss the extent to which the national health strategy incorporates these costs and any steps being taken to increase domestic resources for immunisation. If any co-financing defaults occurred in the last three years, describe any mitigation measures that have been implemented to avoid future defaults.*
- ***Timely disbursement and execution of resources:*** *the extent to which funds for immunisation-related activities (including vaccines and non-vaccine costs) are made available and executed in a timely fashion at all levels (e.g., national, province, district).*
- ***Adequate reporting*** *on immunisation financing and timely availability of reliable financing information to improve decision making.*

Health care financing

Federal ministry of health has been implementing health care financing (HCF) strategies for the past more than two decades and currently on the final step of revising HCF strategies to meet the health financing need of the country health care services and to address the gaps created due to declining trend of the donor landscape. One of the revised HCF strategies is to mobilize adequate resources, through traditional and innovative approaches, from domestic and external sources for sustaining and increasing

funds for health care services.

National Heath budget for immunization

FMoH is exercising a resource mapping every year to identify all resources available for every health program by different donor and implementing partners based on the HSTP strategic initiative and objective in all budget sources. The mapped resources from development and implementing partners has been aligned with respective directorates of FMOH and implementing partners to avoid duplication of effort and efficient utilization of resource on yearly bases at the beginning of each fiscal year as part of operational planning of the ministry.

Disbursement and Execution of resource

By the FMOH context The responsibility of collecting income from development partners rests on Grant management unit. As per the agreed schedule of payments, GMU must send claims to development partners and follow up until income is received in to FMOH bank account.

Initial Income Collection from DPs

- *GMU is responsible to complete the fund transfer request form (FTRF) with all the required information such as grant identification number, project title, activities, budgeted amount..., etc.*
- *The fund request must be based on the approved work plan and budget.*
- *Some DPs have their own format and time line for fund transfer request; hence, the grant management team must first check the agreement.*
- *The fund transfer request form must be approved by the designated official before submission to **DPs***
- *Copy of the fund transfer request form should be provided to concerned finance staff. This will allow finance staff to identify each income as it is deposited in to FMOH bank account and update the financial system in a timely manner.*
- *Finance must also provide detail of deposited income to GMU so that the income tracking sheet is updated.*
- *Whenever, there is discrepancy between what is requested and actually received, it must be communicated to DPs and get explanation, such issue must not remain unexplained*

Cash disbursement and execution activities

Transferring fund to implementers may be either on advance basis or reimbursement basis or based on micro plan of Woredas or regions. Most commonly due to shortage of unallocated resources, funds are transfer to implementers on advance basis. The agreed mode of transfer will be stated on MOUs signed between FMOH and implementers. The fund disbursement mandate to Zone and Woredas are Regional Health Burros depending on the micro plan of zone and lower level (Woredas).

The responsibility for facilitating transfer of fund to implementers with the exception of effecting payment rests with Grant Management Unit (GMU). Needless to say, the finance officer must ensure the accuracy of the bank detail. As per planned activities, a fund transfer schedule must be maintained by GMU to facilitate timely transfer of funds to implementers. If the implementers not utilize the fund timely FMOH may not transfer additional fund for the same activity. E.g. FMOH fund transfer for first round immunization if RHB does not utilize the fund transfer FMoH does not transfer additional money for the second round. all the upper action used for both Vaccines and non-vaccine

Adequate reporting

Reporting constitutes a key activity for all projects. It enables different stakeholders and recipients to monitor implementation of activities of the project. In addition, it gives essential documentation on the project, its achievements, constraints, and strategies adopted.

Once FMOH accepts a fund from DPs, it is obligated to prepare and submit reports letting DPs know how the fund is being spent and what sort of impact the project has had. Most commonly, there will be a joint agreement as to what grant reporting format should contain, yet most DPs would like to see information on financial utilization, project outcome; and whether FMOH delivered as outlined in the proposal.

GMU must check the agreement with regards to report preparation, submission, formats, and provide direction to staff in charge of report preparation. It has to be noted that setting up an efficient system at

the beginning is key to producing quality report. Also, the importance of timely reporting cannot be over stressed as late reporting reduces development partners' confidence in FMOH.GMU is responsible for checking reliably and timeliness of donor reports. all the upper action used for both Vaccines and non-vaccine

Key challenges that affecting planning, budgeting, allocation, disbursement and execution of funds for both vaccines and non-vaccines funds are:

- Low liquidation and utilization among recipients that affected the next disbursement.
- Long out standings from FMoH up to down to the Woreda level.
- Current situation of the country affects liquidation the supportive supervision plan.
- Financial data management system at different level doesn't be compatible
- Running two parallel Financial management systems (IFMIS and Peachtree) in MoH,
- Gaps in activity based budget controlling system at various levels.
- Staff turnover

4. PERFORMANCE OF GAVI SUPPORT

4.1 Performance of vaccine support

*Provide a succinct analysis of the performance of Gavi vaccine grants, focusing on **recently (i.e. in the last two years) introduced vaccines,** or planned to be introduced vaccines, and **campaigns**, supplementary immunisation activities (SIAs), demonstration programmes, MACs etc., as well as switches in vaccine presentations. This section should capture the following:*

- ***Achievements against agreed targets**, as specified in the grant performance framework (GPF), and other grant-related activity plans. If applicable, reasons why targets as specified in the GPF have not been achieved, identifying areas of underperformance, bottlenecks and risks.*
- ***Overall implementation progress** of Gavi vaccine support.*
- ***Campaigns:** Provide information on the periodicity of campaigns and key results of the post-campaign survey, including the coverage achieved. If achieved coverage was low, provide reasons. How was the operational cost support spent? Explain how the campaign contributed to strengthening routine immunisation e.g. by identifying zero-dose children and lessons learned.*
- *Update of the **situation analysis for measles and rubella** (using the latest immunisation coverage and surveillance data for measles, rubella and congenital rubella syndrome from national and sub-national levels[12]) and update of the country's **measles and rubella 5 year plan** (e.g. future dates of MR intro, MCV2 intro, follow-up campaigns, etc.).*

  Describe key actions related to Gavi vaccine support in the coming year** (e.g. decision-making on vaccine introduction, future application, planning and implementation of introduction/ campaigns) **and associated needs for technical assistance[13].

[12] Please refer to the JA analysis guidance document for additional information on the expected analyses for measles and rubella.

[13] Note: When specifying Technical Assistance (TA) needs, do not include elements of resource requirements. These will be discussed in the context of the Targeted Country Assistance (TCA) planning. The TCA planning will be informed by the needs indicated in the JA. TA needs should however describe - to the extend known to date - the type of TA required (staff, consultants, training, etc.), the provider of TA (core/expanded partner) the quantity/duration required, modality (embedded; sub-national; coaching; etc.), and any timeframes/deadlines. JA teams are reminded to both look back (TA which was not completed/successful in the past) and forward (planned vaccine introductions, campaigns, major upcoming HSS activities, etc.) when specifying TA priorities for the coming year. The TA menu of support is available as reference guide.

4.1. Achievements against agreed targets

The Government of Ethiopia appreciates the GAVI's support for NVS, NVI, SIAs and HSS. In the year 2017, Gavi approved USD 71,000,000 for NVS and is in process to support HSS and CCEOP worth of close to USD 100 million and 20,875,664, respectively. The NVS covers cost of pentavalent, PCV, Rota and IPV vaccines where the Government co-finances 0.20 USD per dose. According to the 2017 Gavi Grant Performance framework, the agreed country targets for Penta 3, PCV3 and Rota 2 were: 93%, 94% and 94%, respectively (Table 3). The country achieved the targets set for all these antigens. The dropout rate for Penta1-Penta 3 is also achieved for the year as agreed. But IPV coverage and Rota 1-(RV1) Rota 2 (RV2)were in short of the targets. In 2018, the HMIS indicators are being revised to include the indicators on HPV, MCV2 and OPV3 as well.

Table 3. Performance of Gavi NVS, 2017

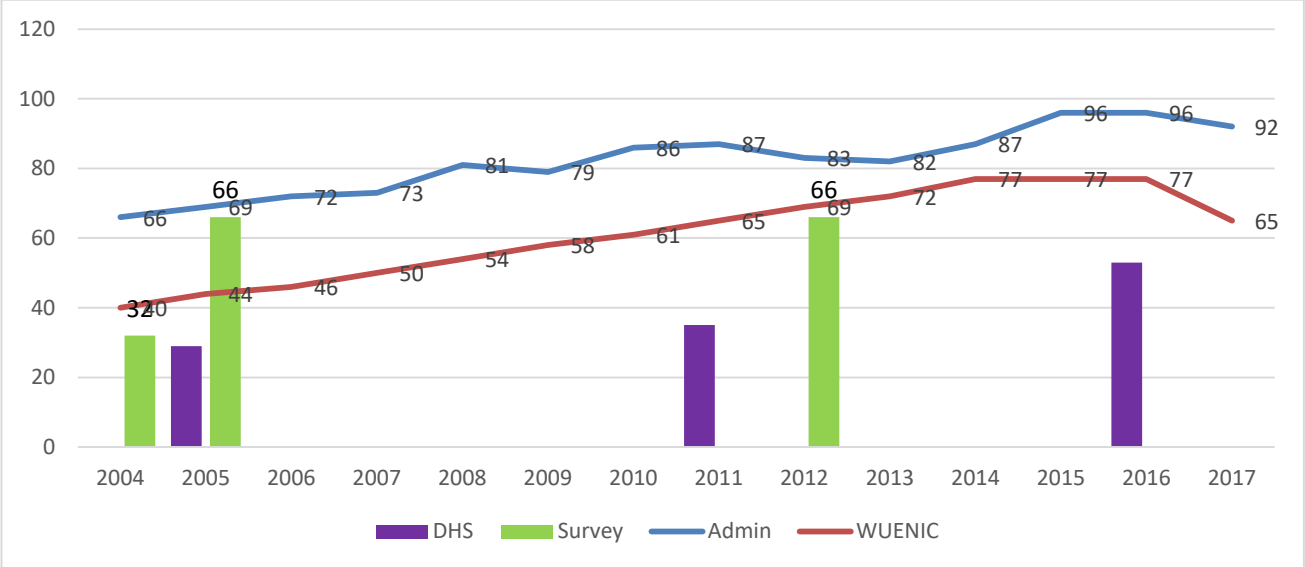
	Penta 3	*PCV3*	*Rota 2*	*DPT1-DPT3 DOR*	*RV1-RV2 DOR*	*IPV*
Country Target	93%	94%	94%	3.1%	2.1%	94%
JRF/Admin	96%	95.4%	94.4%	4.94%	7%	No data
Status	*Achieved*	*Achieved*	*Achieved*	*Not achieved*	*Not achieved*	*N/A*

Measles Containing Vaccine (MCV1) Immunization coverage trends in Ethiopia

MCV1 as part of the six traditional antigens was introduced in 1980 when the Expanded Program on Immunization (EPI) that was launched in Ethiopia. The first dose of measles containing vaccine (MCV1) is offered at age between 9 to 11 months. The country finalized preparations to introduce second dose of MCV at 15 months of age in January 2019..

Since 2007, MCV1 coverage was steadily improving until 2015 but started plateauing in the last three years. Administrative coverage data is routinely validated using survey methodologies such as EPI household coverage surveys (conducted in 2005 and 2012) and the Ethiopian Demographic and Health Survey (EDHS), conducted approximately every 5 years. The last EDHS was conducted in 2016 and the results revealed a national measles coverage of 54%, significantly lower than the reported administrative coverage (93% in 2016). The discrepancies between the administrative coverage and the survey data has mainly been attributed to data quality issues related to inaccurate population estimates, challenges with reaching the correct target population (Figure 20).

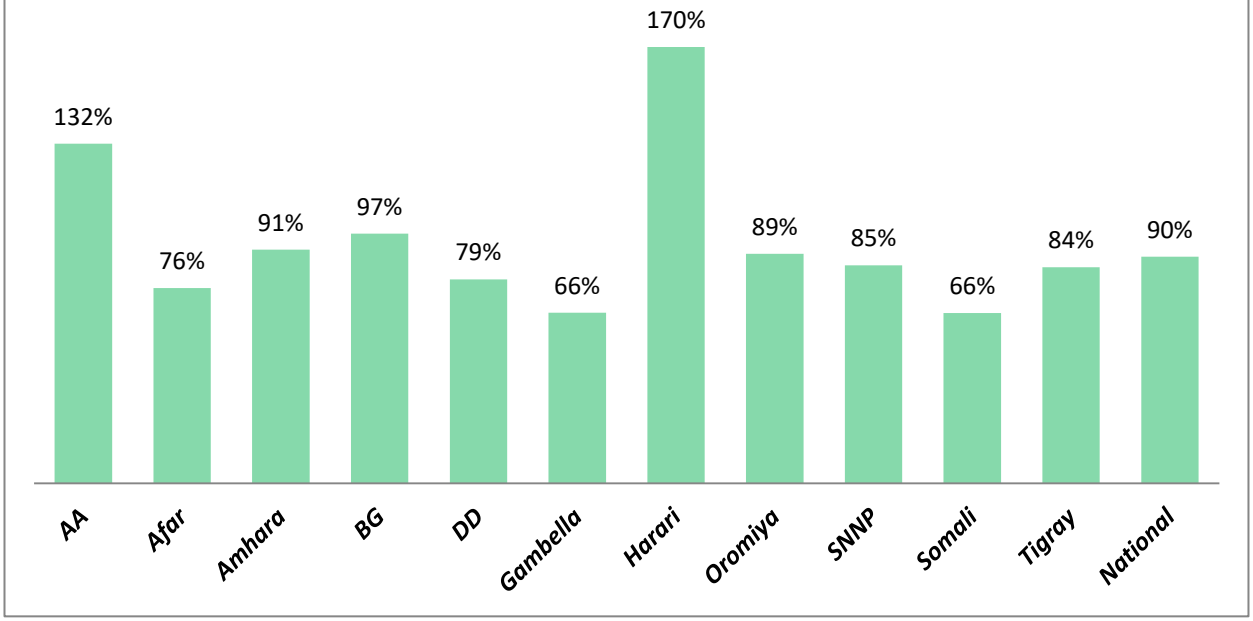
Figure 20. Comparison of MCV1 coverage by various data sources, Ethiopia



MCV1 performances In 2010 EFY (DHIS 2) (July to December 2017 and January to June 2918)

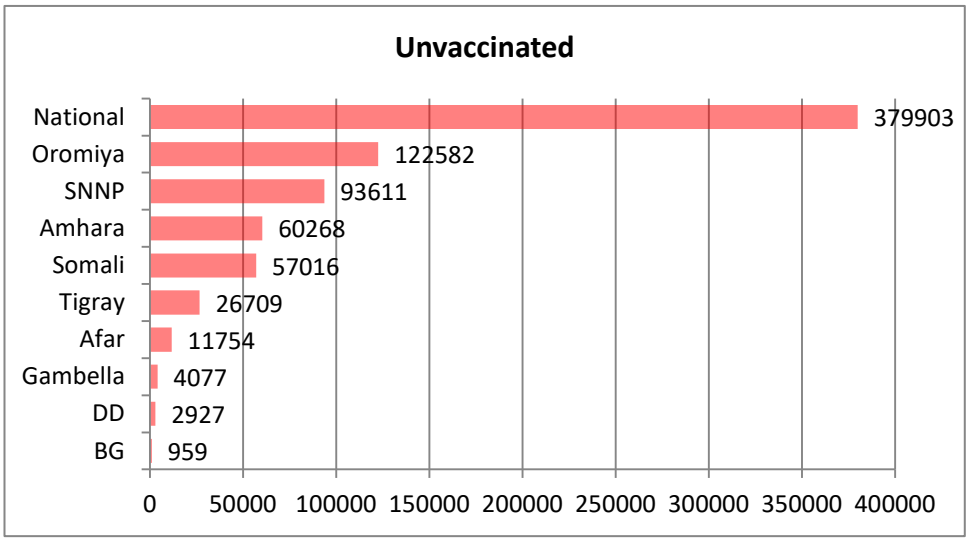
The national MCV1 coverage for 2010 EFY (2017/2018) was 90%. Four regions; Afar, Dire-Dawa, Gambella and Somali reported between 60 to 79%; Five regions achieved between 80 to 99% while Addis Ababa and Harari reported more than 100%. (Fig. 22 and Map 7)

Fig. 22 MCV1 performance in 2010 EC 2017/2018, (DHIS2)

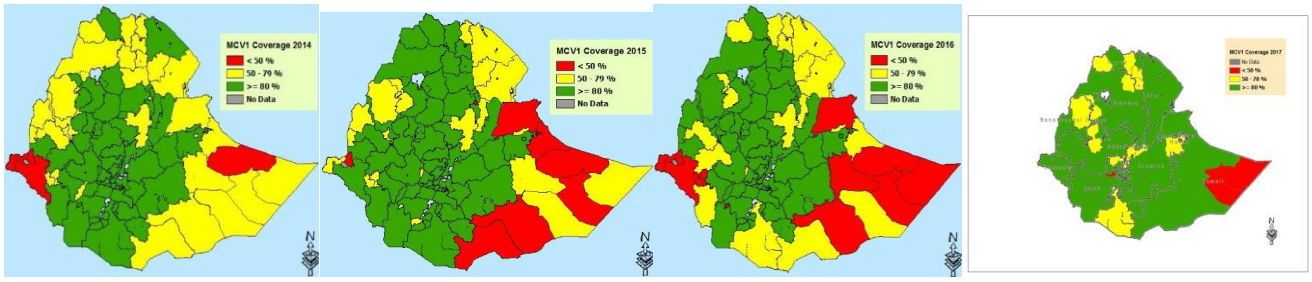


About 12% (379,903) eligible children have not received MCV1 in 2010 EFY (2017/2018). The four big regions (Oromiya, Amhara, SNNP and Tigray) contributed to 80% (303,170) of unvaccinated children in the Fiscal year. Oromiya 122,582, SNNP 93,611, Amhara 60,268 and Somali 57,016 followed by Tigray 26,709 were regions with high burden of unvaccinated children for MCV1 in the fiscal year. However Addis Ababa, 25,000 and Harari, 5,000 more children were vaccinated against measles in the fiscal year (Fig. 23).

Fig 23. MCV1 Unvaccinated infants by Regions in EFY 2010 (July 2017 to June of 2018



Map 7. MCV1 Coverage (Administrative data) by zone, 2014-2017, Ethiopia



2014 **2015** **2016** **2017**

Measles SIAs performance

Ethiopia started implementing various measles prevention and control measures in 1999 with the aim of reducing mortality and morbidity. Several rounds of catch and follow-ups campaigns were conducted both at national and sub national levels between 1999 and 2017. (Table 5)

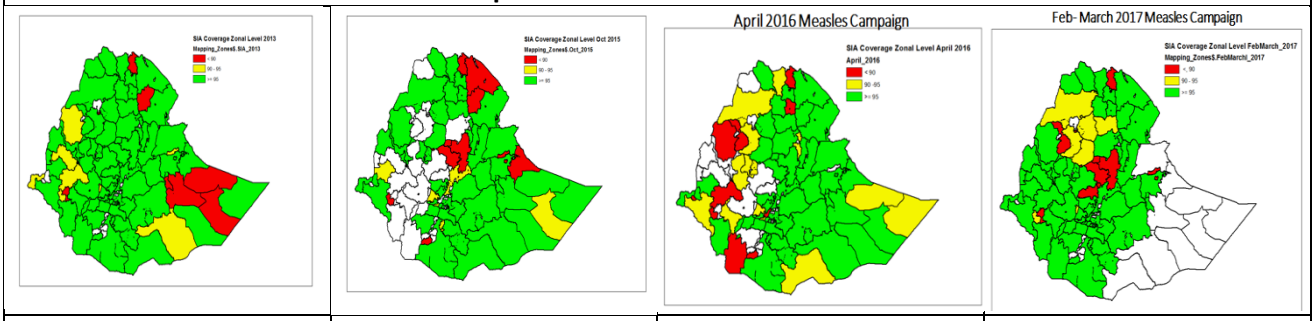
In 2016 and 2017, Gavi supported Measles SIAs to vaccinate over 46 million children age between 6 to 179 months. The campaign was conducted in phase manner as a response to the drought situation and to achieve measles elimination. Totals of 12,225,000 USD off which 4,567,000 USD was for vaccine and injection devices support and the remains 7,650,000 USD was for operations. The campaign was implemented in two phases in April 2016 and March 2017. The post SIA survey result showed the national coverage of 97%. The revised Gavi policy to support measles SIAs in six priority countries benefited Ethiopia to advance its agenda of measles elimination and the country already achieved marked progress in reducing morbidity and mortality due to measles and other vaccine preventable diseases.

Table 5. Measles SIAs performance by geographic area and implementation period

Year	*Scopes/Geo. Areas*	*Target Population*		*Coverage*		*Remarks*
		9-59	*9-179*	*Admin*	*RCS/PSCS*	
2010-2011	Conducted in all except Tigray, Gambella and B/G	8500000		106	88	9-47 months, best practice
2011	146 Woredas		7034264	96	96.4	All Somali and selected Zones in SNNP and Oromia and Amhara
2013	National	11873928		98	91	
2015	365 hot spot Woredas					Emergency response
2016	All except Addis		24981447	97	94	62 Zones
2017	SIA		23785363	97	93	

Efforts made to improve the quality of SIAs included: (a) establishing a coordination team/command post at national and sub-national levels; (b) bottom up microplanning, (c) assessing of status preparedness using the WHO Readiness Assessment Tool (RAT) in selected districts, (d) timely disbursement of funds (e) advocacy and intense mobilization and engagement to aware the communities have helped to reach more children. Moreover deployment of technical assistants to help with microplanning, training, implementation, monitoring and supervision; conducting independent monitoring pre and post implementation; Rapid Convenience Monitoring (RCM) with more focus on high risk areas were instrumental to increase the coverage in the SIAs conducted in 2016 and 2017. As a result of the high quality and high coverage measles SIAs, the incidence of Measles declined significantly in 2017.

Map 8. Measles SIA Performance

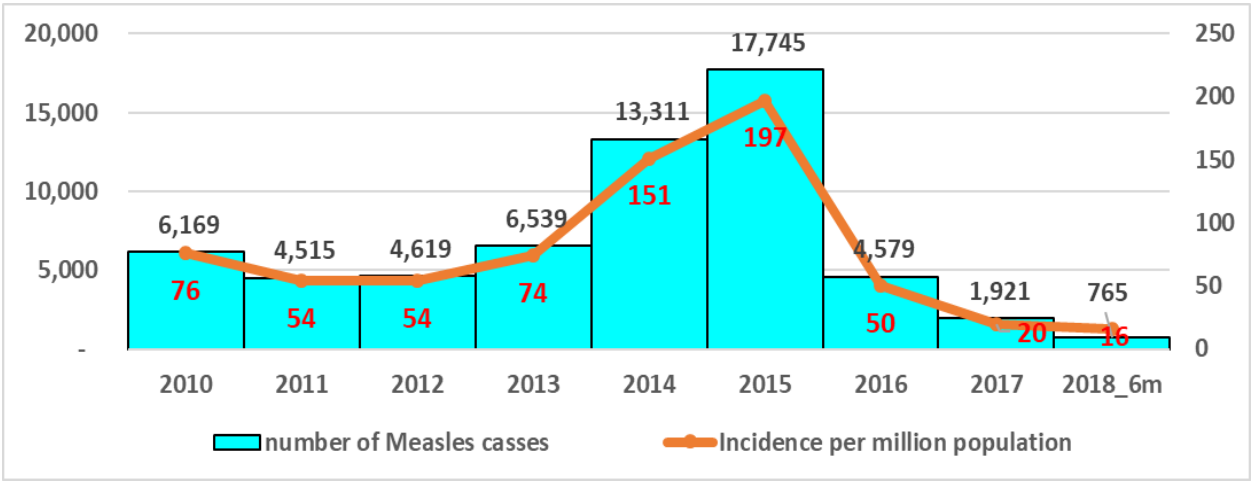


2013	2015	2016	2017

Measles epidemiology in Ethiopia

Since 2016, the national incidence of measles cases has significantly reduced, likely due to improved outbreak preparedness and response efforts and nationwide wide-age group measles SIAs conducted between 2016 and 2017. Despite the reduced incidence, a high number of outbreaks and high sub-national incidence rates continue to be reported (Table 6).

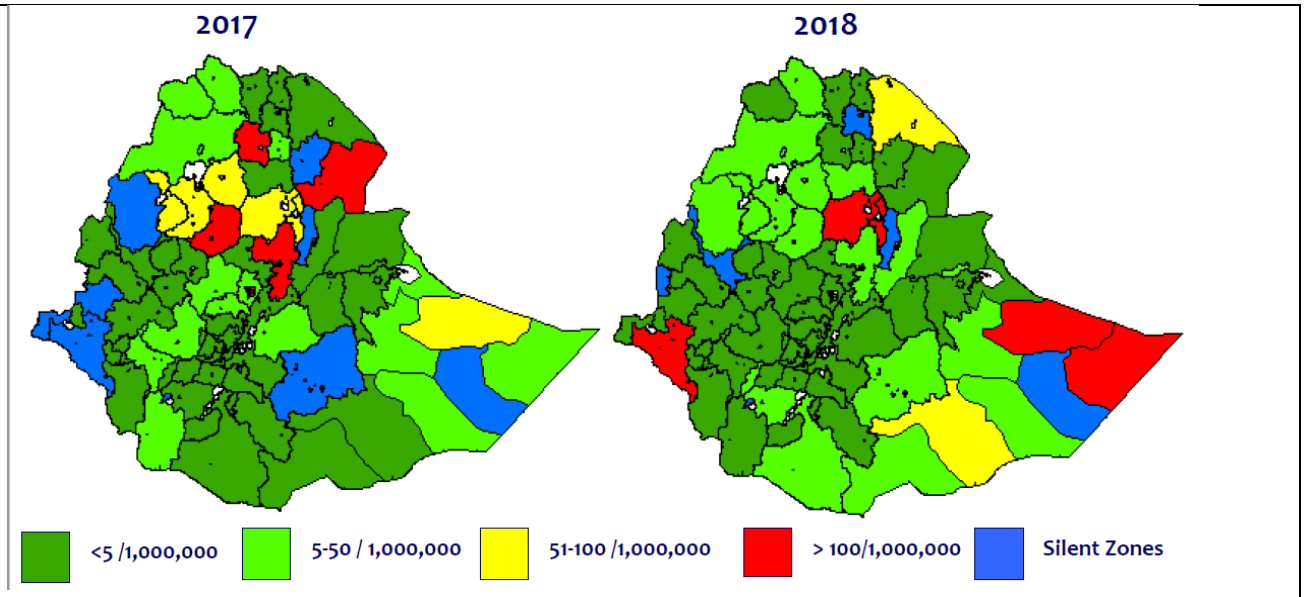
Figure 25. Confirmed measles cases and incidence, 2010-2018



NB: 2018 incidence is annualized

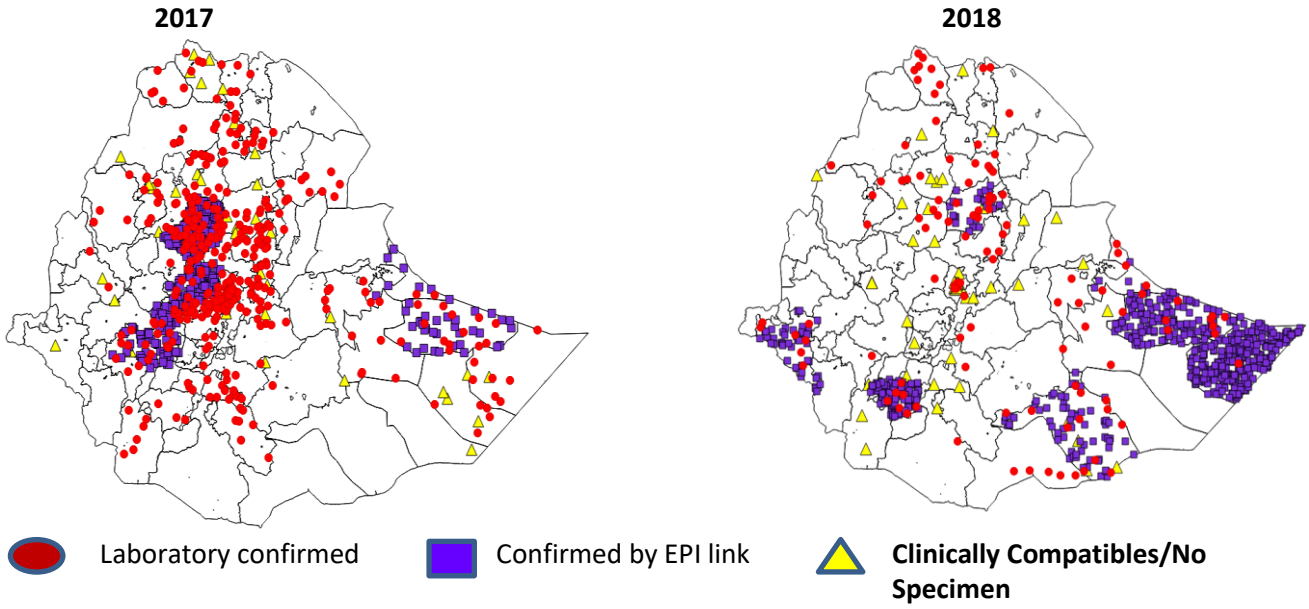
In 2017, a total of 4,226 suspected measles cases were reported, of which 533 (12.6%) were lab-confirmed, 1,284 (30.4%) were epi-linked and 104 (2.5%) were clinically compatible. As of November 2018, a total of (3793) suspected measles cases were reported; 266 (7%) lab-confirmed, 1926 (50.7%) epi-linked and 69 (2%) were clinically compatible.

Map 9. Measles incidence by Zones, Ethiopia, 2017-2018*



Map 10 below compares distribution of confirmed measles cases for 2017 and 2018, through July. In 2017, there was more geographic spread of lab-confirmed cases, with outbreaks concentrated in the central part of the country, while in 2018 the majority of confirmed cases appear to be clustered in the eastern part of the country.

Map 10. Map of distribution of confirmed measles cases, 2017—2018*



*as of November 2018

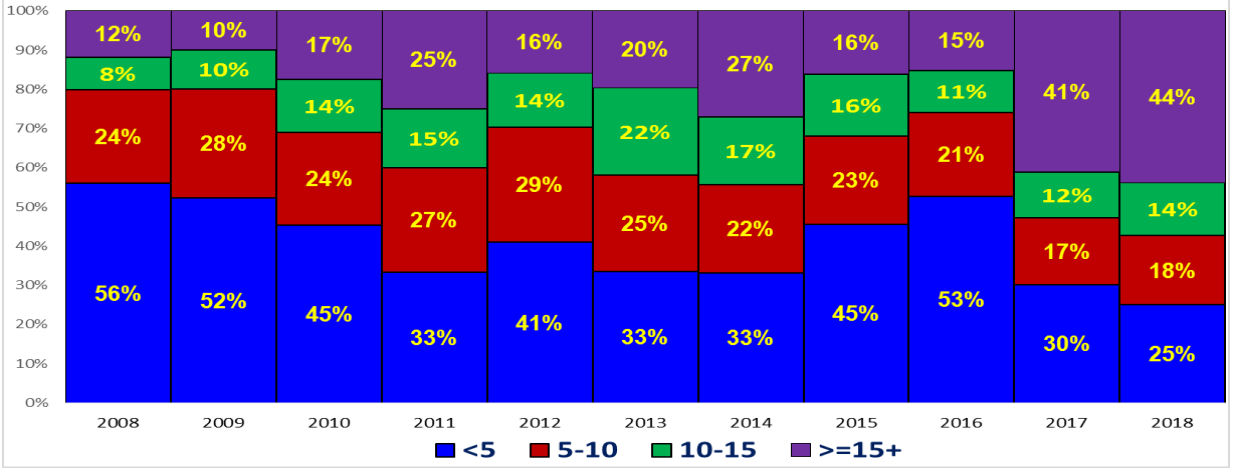
About one-third to 50% of confirmed cases are under the age of five years (Figure 7). More than 40% of confirmed cases had never received measles vaccination neither through the routine program, nor via SIAs, while 48% of them have unknown vaccination status. Among confirmed cases reporting unknown vaccination status, more than 90% were reported from areas with low routine immunization coverage (e.g. Ethiopian Somali and Gambella regions) suggesting their true status as zero dose **(Figure 26 and 27)**

Age distribution of confirmed Measles Cases

Figure ____ shows trends for Age distribution of confirmed Measles cases for the last eleven years (2008 to 2018 September). Confirmed cases in children age less than five years of age still shares ranges from 56% (2008) to 25% in 2018.The proportion of cases in children was also very high in 2015 and 2016 during the outbreak.

Figure 1. Age Distribution of Confirmed Measles Cases, Ethiopia, 2008 - 2018

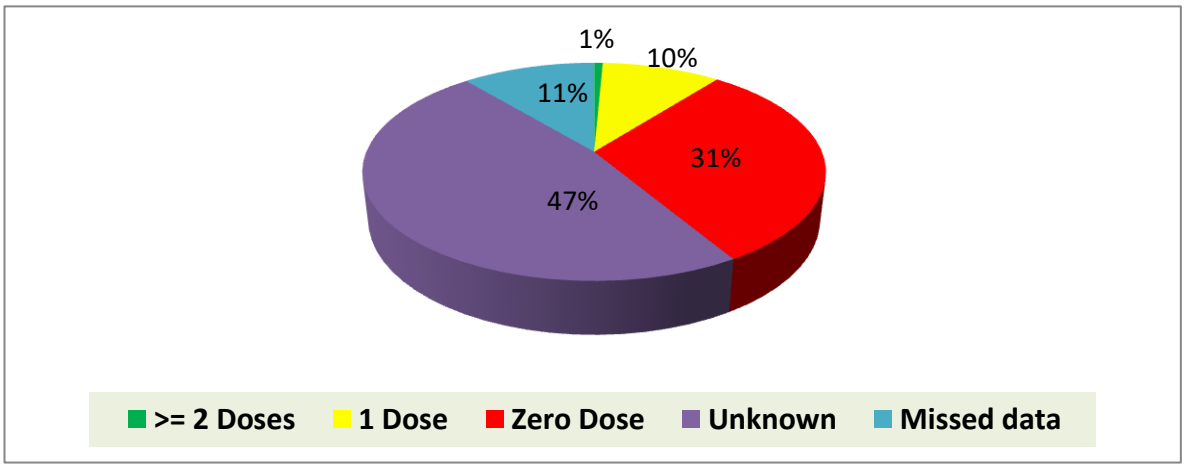
n =	3482	2653	6196	4515	4619	6539	13311	17745	4579	1921	1013



Vaccination status of Confirmed Measles Cases

By end of September 2018, 984 of confirmed Measles case are equal or older than 9 months of age. It was only one percent recorded to receive more than one dose of MCV and another 10% at least received one dose of MCV. Thirty-one percent of the measles cases were reported to be '0 dose', meaning never received while 41% of the confirmed cases were reported unknown and 11% of the cases data were missed. This showed the presence significant gaps in routine immunization and or surveillance or both.

Figure 27. Vaccination status of confirmed cases (≥ 9 months of age), 2018.



Burden of "Zero Dose" of confirmed cases are high in Somali, 234 (47%), Amhara 59 (49%), and Gambella 43 (65.2%). Unknown vaccination status come from Somali (246), SNNP, 53 and Amhara(38) in the nine months of 2018

Measles outbreaks in 2018

Fifty two lab-confirmed measles outbreaks were reported through the case-based surveillance system as of

November 2018. Somali Region reported 16 outbreaks followed by Amhara 9 and Oromia and Gambella regions 4 outbreaks each and Tigray Region two episodes of outbreak in the last 11 months of 2018(as of November 2018).

Rubella Epidemiology in Ethiopia

Laboratory-based rubella surveillance is integrated into the existing measles case-based surveillance system. Suspected measles cases that test negative for measles are subsequently tested for rubella virus. Since 2004, a significant number of lab-confirmed rubella cases have been detected with the highest number of cases detected in 2012 and 2013 (Figure 24). Rubella outbreaks are not routinely investigated limiting the epidemiological information available for these apparent outbreaks. In 2017 and 2018 the highest number of rubella cases was detected among children less than 10 years of age (Figure 28), consistent with the pre-vaccine epidemiology for rubella. As part of the Measles Strategic Plan and cMYP, the country will consider introduction of Rubella Containing Vaccine (RCV) by 2021, depending on availability of data to support vaccine introduction.

Figure 28. Number of Lab-confirmed Rubella Cases, 2004-2018

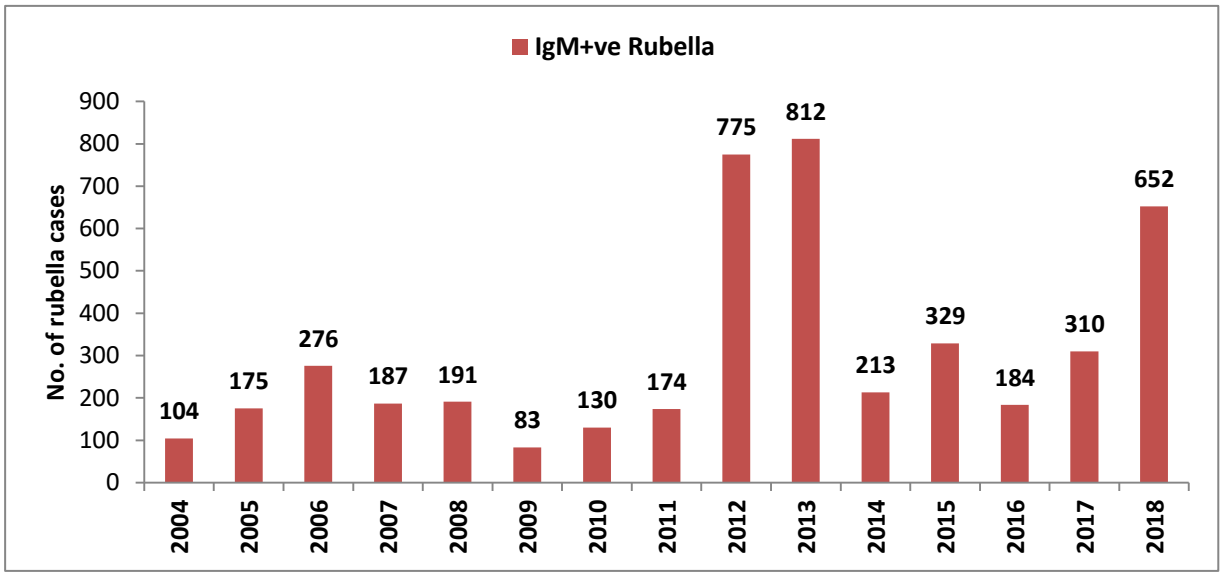
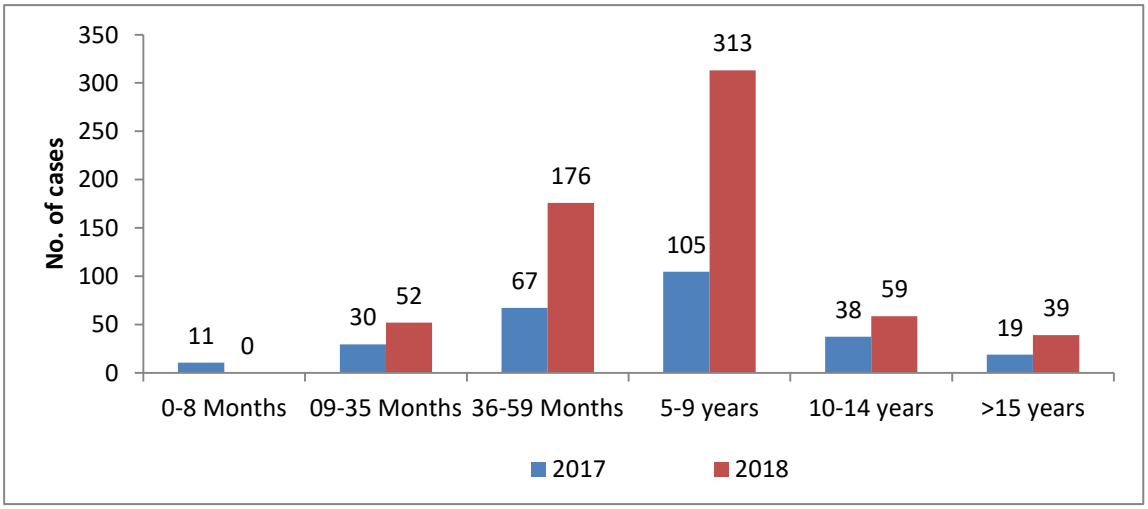


Figure 29. Laboratory Confirmed Rubella Cases by Age Group, 2017—2018



Measles surveillance performance

Except for 2016, when the non-measles febrile rash rate did not meet the target, the majority of surveillance performance indicators have been achieved over the last five years. The establishment of the sub-national laboratories has helped facilitate systematic and rapid confirmation of suspected measles cases and has reduced the overall logistical challenges related to sample transportation. However, the target for the proportion of Woredas that should be reporting at least one suspected case with a blood specimen submitted is still low (Table 8).

Table 8. Measles case-based surveillance performance indicators, 2009-2018.

Indicators	Target	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Annualized rate of investigation of suspected measles cases (/100,000)	>=2	3.7	3.8	7.3	5.1	6.2	6	4.8	3.6	3.1	2.5
Non-Measles Febrile Rash Rate	>=2	2.5	2.6	2	3.8	3.9	2.1	2.3	1.9	2.4	3.2
Proportion of Woredas with >= 1 case per 100,000 with a blood specimen (%)	>=80	90	83	96	99	100	80	76	63	69	63
Proportion of reported measles cases with blood specimen (%)	>=80	100	100	100	96	99	91	42	100	100	100
Proportion of measles IgM+ (%)	<10	22	14	29	26	35	53	49	40	18	9.6

Challenges

1. Sub-national immunity gaps
2. Persistently missed children in hard to reach and pastoralist regions
3. Sub-national in measles surveillance gaps
4. Shortage of skilled human, vaccine and financial resources for outbreak investigation and documentation at sub-national levels
5. Stock out of laboratory reagents for the measles laboratories as an important gap in measles and rubella surveillance
6. Inadequate program funding and continued dependence of the measles surveillance on AFP surveillance system for funding for staff, for vehicles used in active surveillance visits. The fact that measles surveillance funding, laboratory and technical supports rely on polio is weakness for the program.

Planned activities for 2019:

1. Implement second dose of HPV vaccine for age 14 years girls and for additional two age cohorts in the subsequent year
2. Introduce Measles Second Dose (MCV2) in January 2019
3. Introduce Second Year of Life (SYL) platform for measles and other antigens Complete GAVI application for Yellow fever vaccine introduction to routine schedule by January 2019
4. Generate evidence and obtain policy direction for universal hepatitis B birth dose vaccine introduction
5. Complete GAVI application for Measles follow-up campaign and yellow fever introduction in January 2019
6. Switches
   6.1. Penta2 dose to Penta 4 dose
   6.2. TT to Td
7. Strengthen measles case management using IMNCI approach.
8. Strengthen CRS sentinel surveillance and generate information for decision making.
9. Mobilize funding gap for the global polio eradication transition plan to sustain key functions
10. With the global polio fund ramp down to support technically, VPD surveillance needs special focus to get support for timely identification and early warning of potential disease outbreaks.
11. Intensification of RED approach. Implement revised RED guide after orientation/training

12. Intensify routine immunization activities periodically to boost immunization and to reach unreached children in equitable manner (PIRI) through implementation of PIRI in the selected priority Woredas and Kebeles
13. Conduct EVMA
14. Special support for displaced/Emergency immunization and service delivery rehabilitation

4.2. Performance of Gavi HSS support (if country is receiving Gavi HSS support)

Provide a succinct analysis of the performance of Gavi's HSS support for the reporting period.

- ***Progress of the HSS grant implementation*** *against objectives and budget, and significant deviations from plans (e.g. implementation delays, low expenditure rates, etc.),* ***using the below table****.*
- ***Achievements against agreed targets*** *as specified in the grant performance framework (GPF), and key outcomes. E.g. how does the number of additional children vaccinated and under-immunised children in districts supported by the HSS grant compare to other non-supported districts. Which indicators in the GPF were impacted by the activities conducted?*
- *How is Gavi support* ***contributing to address the key drivers of low immunisation*** *outcomes:*
  - *contributing to advancing the overall performance of the immunisation programme/service delivery structure supporting immunisation and health sector strategies;*
  - *targeting districts and/or population groups with lower coverage (including in urban slums, remote rural settings and conflict settings);*
  - *addressing key barriers to coverage & equity identified in section 3 above.*
- *Comment whether the* ***selection of activities is still relevant****, realistic and well prioritised in light of the situation analysis conducted, as well as financial absorption and implementation rates.*
- *Provide information on* ***plans to address implementation bottlenecks****, including planned budget reallocations (please attach the revised budget).*
- *If applicable, briefly describe the usage and results achieved with the* ***performance based funding*** *(PBF) the country received. What grant performance framework (GPF) metrics will be used to track progress?*
- *Briefly describe how Gavi HSS support is aligned, coordinated and* ***contributing to the country's health sector strategies*** *and plans. Mention synergies with other development partners' support.*
- *(If pertinent, mention other relevant initiatives not supported by Gavi that address the key drivers of low coverage and equity.)*

Gavi HSS is managed by SDG pooled fund. The SDG Performance Fund is a pooled funding mechanism managed by the FMOH using the Government of Ethiopia procedures. In the framework of the Ethiopia IHP compact, it provides complementary resources, consistent with the 'one plan, one budget and one report" concept, to secure additional finance to the Health Sector Transformation Plan. It is one of the GoE"s preferred modalities for scaling up Development Partners assistance in support of HSTP and governed by the Joint Financing Arrangement signed by the 11 contributing Development partners.

The Joint Financing Arrangement (JFA) refers to the arrangement that sets out the jointly agreed terms and procedures for SDG Fund management, including planning, financial management, governance framework and decision-making, reporting, review and evaluation, audit and supply chain management.

Objective 1	
Objective of the HSS grant (as per the HSS proposals or PSR)	
Priority geographies / population groups or constraints to C&E addressed by the objective	
% activities conducted / budget utilisation	
Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed /	

financial absorption	
Major activities planned for upcoming period (mention significant changes / budget reallocations and associated **needs for technical assistance**[11]	
Objective 2:	
Objective of the HSS grant (as per the HSS proposals or PSR)	
Priority geographies / population groups or constraints to C&E addressed by the objective	
% activities conducted / budget utilisation	
Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption	
Major activities planned for upcoming period (mention significant changes / budget reallocations and associated **needs for technical assistance**[11]	
Objective 3:	
Objective of the HSS grant (as per the HSS proposals or PSR)	
Priority geographies / population groups or constraints to C&E addressed by the objective	
% activities conducted / budget utilisation	
Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption	
Major activities planned for upcoming period (mention significant changes / budget reallocations and associated **needs for technical assistance**[14]	

[14] Note: When specifying Technical Assistance (TA) needs, do not include elements of resource requirements. These will be discussed in the context of the Targeted Country Assistance (TCA) planning. The TCA planning will be informed by the needs indicated in the JA. TA needs should however describe - to the extend known to date - the type of TA required (staff, consultants, training, etc.), the provider of TA (core/expanded partner) the quantity/duration required, modality (embedded; sub-national; coaching; etc.), and any timeframes/deadlines. JA teams are reminded to both look back (TA which was not completed/successful in the past) and forward (planned vaccine introductions, campaigns, major upcoming HSS activities, etc.) when specifying TA priorities for the coming year. The TA menu of support is available as reference guide.

4.3. Performance of Gavi HSS support (if country is receiving Gavi HSS support)

Provide a succinct analysis of the performance of Gavi's HSS support for the reporting period.

- ***Progress of the HSS grant implementation*** *against objectives and budget, and significant deviations from plans (e.g. implementation delays, low expenditure rates, etc.),* ***using the below table****.*
- ***Achievements against agreed targets*** *as specified in the grant performance framework (GPF), and key outcomes. E.g. how does the number of additional children vaccinated and under-immunised children in districts supported by the HSS grant compare to other non-supported districts. Which indicators in the GPF were impacted by the activities conducted?*
- *How is Gavi support* ***contributing to address the key drivers of low immunisation*** *outcomes:*
  - *contributing to advancing the overall performance of the immunisation programme/service delivery structure supporting immunisation and health sector strategies;*
  - *targeting districts and/or population groups with lower coverage (including in urban slums, remote rural settings and conflict settings);*
  - *addressing key barriers to coverage & equity identified in section 3 above.*
- *Comment whether the* ***selection of activities is still relevant****, realistic and well prioritised in light of the situation analysis conducted, as well as financial absorption and implementation rates.*
- *Provide information on* ***plans to address implementation bottlenecks****, including planned budget reallocations (please attach the revised budget).*
- *If applicable, briefly describe the usage and results achieved with the* ***performance based funding*** *(PBF) the country received. What grant performance framework (GPF) metrics will be used to track progress?*
- *Briefly describe how Gavi HSS support is aligned, coordinated and* ***contributing to the country's health sector strategies*** *and plans. Mention synergies with other development partners' support.*
- *(If pertinent, mention other relevant initiatives not supported by Gavi that address the key drivers of low coverage and equity.)*

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The Joint Financing Arrangement (JFA) refers to the arrangement that sets out the jointly agreed terms and procedures for SDG Fund management, including planning, financial management, governance framework and decision-making, reporting, review and evaluation, audit and supply chain management.

Objective 1	
Objective of the HSS grant (as per the HSS proposals or PSR)	
Priority geographies / population groups or constraints to C&E addressed by the objective	
% activities conducted / budget utilisation	
Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption	
Major activities planned for upcoming period (mention significant changes / budget reallocations and associated **needs for technical assistance**[11]	
Objective 2:	

Objective of the HSS grant (as per the HSS proposals or PSR)	
Priority geographies / population groups or constraints to C&E addressed by the objective	
% activities conducted / budget utilisation	
Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption	
Major activities planned for upcoming period (mention significant changes / budget reallocations and associated **needs for technical assistance**[11]	
Objective 3:	
Objective of the HSS grant (as per the HSS proposals or PSR)	
Priority geographies / population groups or constraints to C&E addressed by the objective	
% activities conducted / budget utilisation	
Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption	
Major activities planned for upcoming period (mention significant changes / budget reallocations and associated **needs for technical assistance**[15]	

4.4. Performance of Gavi CCEOP support (if country is receiving Gavi CCEOP support)

If your country is receiving CCEOP support from Gavi, provide a brief update on the following:

- ***Performance** of CCEOP indicators – achievement against agreed targets as specific in the grant performance framework (GPF);*
- ***Implementation status** (number of equipment installed / waiting installation, user feedback on preventive maintenance training, refrigerator performance, etc.), including any challenges / lessons learned;*

[15] Note: When specifying Technical Assistance (TA) needs, do not include elements of resource requirements. These will be discussed in the context of the Targeted Country Assistance (TCA) planning. The TCA planning will be informed by the needs indicated in the JA. TA needs should however describe - to the extend known to date - the type of TA required (staff, consultants, training, etc.), the provider of TA (core/expanded partner) the quantity/duration required, modality (embedded; sub-national; coaching; etc.), and any timeframes/deadlines. JA teams are reminded to both look back (TA which was not completed/successful in the past) and forward (planned vaccine introductions, campaigns, major upcoming HSS activities, etc.) when specifying TA priorities for the coming year. The TA menu of support is available as reference guide.

- **Contribution** of CCEOP to immunisation performance;
- ***Future needs for technical assistance*** *in implementing CCEOP support.*[11]

Note: an updated CCE inventory must be submitted together with the CCEOP renewal request.

GAVI agreed to support the procurement of cold chain equipment for four consecutive years since 2018. It also confirm that the attached (annex 1) schedule constitutes a financial commitment by GAVI to UNICEF a) to initiate procurement planning for and b) once approval has been received for the costed operational plan and all requested funds have been received from GAVI and the Government of Ethiopia to purchase designed cold chain equipment and associated services using funds provided by GAVI. Based on this opportunity the country has done operational deployment plan in four regions, namely Somalia, Afar, Benshanguel Gumez and Gambella.
In addition to this, procurement of 1146 refrigerators with fridge tag and spare parts request has been initiated through UNICEF (annex 2)
Future technical assistance: the country needs technical support in the following area: technical area 1:cold chain equipment management

- Support and/or coordinate part or whole CCEOP process as per GAVI application guidance.
- Cold chain inventory and maintenance plan
- Support the country for CCEOP equipment deployment and implementation process

Technical area 2: Temperature monitoring and control

- Conduct a temperature mapping study in the vaccine cold rooms using WHO tools (protocol, training, data analysis) and build national capacity to conduct future studies
- Coordinate a temperature monitoring study in the vaccine distribution routes using WHO protocol and UNICEF guide and build national capacity to conduct future studies
- Support the development and deployment of guidance, training materials and SOPs to ensure adoption and sustain use of the system by health workers and managers.

Technical area 3. Other immunization supply chain catalytic activities and studies

- Conduct studies/research and generate evidence to document best practice in improving immunization supply chain system.

CCEI update: National cold chain equipment inventory will be conducted starting from January 2019 by EPHI in collaboration with partners. Accomplished activities: developed data collection tool, memorandum of understanding, and allocate required budget.

4.5. Financial management performance

Provide a succinct review of the performance in terms of financial management of Gavi's cash grants (for all cash grants, such as HSS, PBF funding, vaccine introduction grants, campaign operational cost grants, switch grants, transition grants, etc.). This should take the following aspects into account:

- *Financial **absorption** and utilisation rates on all Gavi cash support listed separately*[16]*;*
- ***Compliance** with financial reporting and audit requirements noting each grant (listing the compliance with each cash support grant separately, as above);*
- *Issues arising from review engagements (e.g. Gavi cash programme audits, or Gavi programme capacity assessments, annual external audits, internal audits, etc.) and the implementation status of any recommendations;*
- *Financial management **systems**[17].*

[16] If in your country Gavi funds are managed by partners (i.e. UNICEF and WHO), fund utilisation by these agencies should also be reviewed.
[17] In case any modifications have been made or are planned to the financial management arrangements please indicate them in this section.

From July8/2017-july7/2018, FMOH Received Gavi support $ 2.9 million for HPV roll out; $ 2.6 million, for MCV2 and $ 15.3million for Health system strengthening by SDG pull fund. The following table shows the total disbursement and cash utilization performance on the reporting period.

Grant Name	Amount disbursed in USD	Amount disbursed in USD	Cash balance in USD	Advance USD	Expense USD	Utilization rate	Unutilized rate
ETH-Measles MCV2	2016 old	7,634,788.00	4,128,682.19	700,973.75	6,879,331.25	67%	33%
	2018 new	2,672, 252.00					
ETH-HPV rollout	2018	2,968,318.00	2,237,615.15	775,662.50		25%	75%
Health system strengthen	2016-2020	15,350,000.00	**To be reported separately**				
Grand total		28,625,358.00	6,366,297.34	1,476,636.25	6,879,331.25		

As per the above cash utilization performance table from the total fund received from Gavi by this reporting period which is 2.6 million for measles and $ 2.9 million for HPV . out of $2.6 million current disbursement and $7.8 million unutilized cash of last year Measles' budget ,67% of the cash utilized within the reporting period. From the remaining 33% balance as of Aug /2018, 20% disbursed to RHB for the program .The report Includes on 2018/19 fiscal year report .The HPV role out grant was not implemented in the reporting period because of current situation of the country and other emergency cases. Hence the entire fund was transferred to the region in the current physical year. The cold chain procurement is on going process by UNICEF.

The brought forward amount from 2016/2017 fiscal year unutilized budget of MEN A,OPC,CSO, HPV,IPV , FMOH request the prior approval and additional support from Gavi reprogram to PIRI . the below table shows the details:-

Grant name		BBFOF JULY8/2017		Utilization/ commitment		Balance as of july7/2018		Unutilized %	Remark
		In local currency	USD	-		in local currency	USD		
CSO	Reprogram to PIRI	219,605.00	9,495	_	_	219,605.00	9,495		All the unutilized budget transfer to Regions for PIRI program which is reports on the subsequent period
HPV		19,045.00	823	_	_	19,045.00	823		
MENA		6,295,250.00	272,181	_	_	6,295,250.00	272,181		
VIG-IPV		1,591,442.00	68,808	_	_	1,591,442.00	68,808		
VIG-ROTA		9,088,697.00	392,958	_	_	9,088,697.00	392,958		
VIG PVC		8,180,180.00	353,678	_	_	8,180,180.00	353,678		
CSOB		4,001,221.00	172,997	_	_	4,001,221.00	172,997		
Grand total		**29,395,440.00**	**1,270,940**			**29,395,440.00**	**1,270,940**		

As per the above Table after getting the reprogramming approval from Gavi FMOH disbursed all the amount for RHBs As of Aug/2018 for PIRI program.

For ETB 1.2 million regional advances MOH wrote a latter for all RHBs to liquidate the unsettled balance, although 50% the balance settled on the reporting period.

4.6. Transition planning (if applicable, e.g. country is in accelerated transition phase)

If your country is transitioning out of Gavi support, specify whether the country has a transition plan in place. If no transition plan exists, please describe plans to develop one and other actions to prepare for transition.

- *If a transition plan is in place, please provide a brief overview on the following:*
  - *Implementation progress of planned activities;*
  - *Implementation bottlenecks and corrective actions;*
  - *Adherence to deadlines: are activities on time or delayed and, if delayed, the revised expected timeline for completion;*
  - *Transition grant: specify and explain any significant changes proposed to activities funded by Gavi through the transition grant (e.g., dropping an activity, adding a new activity or changing the content/budget of an activity);*
  - *If any changes are requested, please submit a consolidated revised version of the transition plan.*

Not Applicable

4.7. Technical Assistance (TA)

- *Describe the strategic approach to Technical Assistance (TA) delivery to improving coverage and equity in reaching the under-immunised and unimmunised children. (i.e. embedded support, subnational support, support from expanded partners etc.)*
- *On the basis of the reporting against PEF functions and milestones, summarise the progress of partners in delivering technical assistance.*
- *Highlight progress and challenges in implementing the TA plan.*
- *Specify any amendments/ changes to the TA currently planned for the remaining of the year.*

PATH

Strategic approach to Technical Assistance (TA) delivery to improving coverage and equity

PATH is contributing in strengthening the capacity of the MOH/EPI in the planning, implementation, and evaluation of strategic advocacy, communications, demand generation and data quality improvement activities. PATH is also supporting the two pastoralist regions, Afar and Somali, regional health bureaus (RHBs)on demand generation and data-quality improvements to address gaps in coverage and equity in these regions. In addition to the support to the two RHBs, PATH has selected four Woredas in Afar (Chifra, Ewa, Ada'ar and Telalak) and two Woredas in Somali (Kebribeyah and Harshin) in consultation with the respective RHBs for direct support to improve coverage and equity and to address the immunization data quality problems with the assumption that these Woredas will be learning and best practice center for the rest of the Woredas in the regions.

To understand the current status of EPI in the two regions in general and specifically in the selected Woredas, baseline assessment was done. The data related to coverage, accessibility of immunization services, data quality and other general information like manpower, functionality of health facilities, skill of health extension workers, partner mapping and plan for capacity building was collected from the RHBs, Woreda health offices, health centers and health posts, analyzed and presented in a workshop organized in Afar, Semera and Somali, Jijiga. On the workshop, officials and EPI officers from RHB, Woreda health office head and EPI focal person, health center head and EPI focal person and representatives from each health posts and partners working on EPI/related were participated. During the workshop, in addition to the baseline findings, the project objectives, strategies, activities and role of partners discussed thoroughly.

Major activities accomplished with the TA support:

- ✓ Bassline assessment report finalized and submitted to GAVI
- ✓ Orientation was provided in Afar for 82 and Somali for 40 Social Mobilization Committee members from four Woredas on immunization demand generation through communication and community mobilization at community level
- ✓ The new health passport translated to Afar language and under printing process
- ✓ Revitalized the Communication TWG at Afar regional health bureau
- ✓ The national and regional PATH staffs have been participating on regular national and

regional level immunization communication TWG to assist in the planning, implementation and monitoring of national and regional communication plans and activities

- ✓ The national and regional PATH staffs have been participating on regular national and regional level M&E TWG to assist in the planning, implementation and monitoring of national and regional data and program quality improvement plans and activities
- ✓ Integrated refresher training for 132 HEWs and focal persons from 4 Woredas of Afar and 2 Woredas of Somali is planned for Dec 2018
- ✓ Support the implementation of PIRI in 4 Woredas of Afar and 2 Woredas of Somali is planned for December 2018
- ✓ Provide capacity building training on DQS/DQR (TOT) for regional and woreda level data managers is planned for December 2018

PATH is also a key partner for FMoH in all the processes to introduce the new HPV vaccine. The engagements started with the demo projects in the two Woredas two years back. PATH has been providing technical support in the below area with financial support for some activities:

- ✓ HPV Planning Activity: PATH played a key role in facilitating the bottom up microplanning
- ✓ HPV Supply and Logistics: PATH has drafted detailed vaccine and dry supply distribution plan with the data obtained from the MoE and submitted for Logistics TWG for discussion and finalization
- ✓ HPV Communication Activities: PATH took part in the organization and facilitation of the national level advocacy workshop and printed 20, 000 posters and 600,000 brochures in Amharic language
- ✓ Monitoring and Evaluation/training: PATH together with other key partners finalized HPV training materials, both the facilitators guide and health workers training manual and printed by covering all the printing costs
- ✓ Facilitated the national level HPV ToT and regional level HPV cascade trainings

Progress in delivering technical assistance (against PEF functions and milestones)

In general, the implementation of the technical assistances is going smoothly as per the plan with few delays because of different reasons.

Challenges in implementing the TA plan

- ✓ Delay in fund release from Gavi
- ✓ Security issue specially in Somali region
- ✓ Competing priorities from government side

Amendments/ changes to the TA currently planned for the remaining of the year

- ✓ Printing of the new RED guide line
- ✓ Immunization-tailored public-private partnership (PPP) consultative workshop for participants from private hospitals in Addis Ababa and Dire Dawa

WHO

Program planning and management

EPI /Surveillance comprehensive review conducted from April 15-30 May of 2018

23 teams composed of international; government and partner reviewer have been deployed to assess the overall immunization and surveillance system of the country in all 11 regions including Addis Ababa. Two zones and 2 Woredas from each zone randomly selected for assessment and from each Woreda two health facilities selected based on the EPI/Surveillance performance.

The assessment has been conducted for one week and fully achieved the intended objectives in identifying weakness, gaps in the overall EPI/Surveillance system and forwarded recommendations. The findings were communicated to all partners in one day workshop organized in Addis and the finding from the review indorsed by ICC.

Vaccine implementation

IIP training has been conducted in 3 regions and trained a total of 437 health workers to improve the knowledge and skills of the health workers to provide quality immunization service to the needy communities

Revised RED guideline document preparation technically supported and incorporated all comments from partners as well as from AFRO.11,000 revised RED implementation guide printing completed with financial support from GAVI .The revised RED guide will be distributed during familiarization workshop planned to be conducted in 4 big regions (Amhara, Oromia, SNNPR and Tigray). 6 zones 72 Woredas for 178 health workers

In addition to RED guide 25,000 EPI monitoring chart printed and started to be distributed to monitor immunization performance progress in all EPI service providing facilities.

New vaccine support

Two national technical assistant recruited and deployed to provide support for New vaccine (HPV and MCV2) introduction at the national and sub national level. HPV introduction tentatively planned for 4th week of November guided by the readiness level of the country at the national and sub national level

HPV introduction readiness information collected from 100 Woredas using ODK on a regular base and the finding of the analysis communicated to HPV technical working group so that to improve the level of readiness by providing focused support.

HPV stakeholder's sensitization workshop supported technically and financially for two days. The workshop conducted in Adama able to create awareness among the participants who came from different Government line bureaus (Education, women and children, sport and youth, religious organizations, refugee affairs, regional health bureaus).

FMOH state minister representative attended the two days' workshop. The two days' workshop has given good insight for the participants on the HPV and cervical cancer prevention. The workshop forwarded recommendation and action points moreover shown their commitment to support the introduction of HPV vaccine in the country using their structures. Education bureau has committed to provide opportunities at different level supporting the HPV introduction. Key HPV prevention massage disseminated through plasma TV, education TV channel and mini media clubs are serving to convey key HPV prevention massages.

MCV2 training manual and facilitators guide development supported technically through the NVI technical working group. The training manual and the guide have been printed and ready for distribution through PFSA.

Micro-planning templet developed and used at regional level for registration of school and out of school girls. 11 regions including Addis Ababa utilized the micro-plan for resource mapping, helped as an input for triangulation of data and targeting of eligible girls for HPV vaccination.

Data quality and management

Regions have been supported technically and financially to strengthen overall immunization monitoring system and to check for data quality using self-assessment technics of their own health facilities. In line with this data quality self- assessment trainings conducted in 5 regions and a total of 233 health workers trained.

EVM improvement plan

The last national EVM was conducted in 2013 following which national EVM improvement plan was developed and shared in 2017. The country has planned to do EVMA in 2018 using GAVI TCA after fulfilling the prerequisites which includes developing improvement plan and assessing the status of implementation of the recommendations made in 2013. The Ministry of Health has given WHO CO to take the full responsibility to realize the EVMA in 2018.To this effect, implementation status of the recommendation of the EVMA was assessed by MOH and relevant partners using the indicators set which include: 1.Pre- shipment and Arrival Procedures, 2.Vaccine and diluent Storage temperature, 3.Cold storage, dry storage and transport capacity, 4.Buildings, cold chain equipment and transport systems, 5.Maintenance of buildings, cold chain equipment and vehicles systems, 6. Stock management systems, 7. Distribution systems.

The implementation status of the recommendations at national level was shared with AFRO for feedback. The feedback was to do the implementation status at lower levels (Regional, zonal, Woreda

and at health facility levels) and most importantly to do EVM self-assessment which the country carried out and is at the stage of processing the draft report.

UNICEF

During the reporting period UNICEF provided technical assistance at national, sub-national and implementation level. At national level, UNICEF provided technical assistance through its six staffand through hiring short term consultants. The technical assistance at national level include development of strategic documents, capacity building training, coordination, development and alignment of plans, monitoring and evaluation of planned activities, support vaccine and supply forecasting, facilitate shipment, tracking, new vaccine introduction, active engagement with technical working groups, program review, coverage and equity analysis, bottleneck assessment and developing evidence based planning and implementation guide. At sub national and implementation level UNICEF provided capacity building trainings, supportive supervision, Joint programme monitoring and review and on-site trainings for woreda EPI focal persons and service providers

Coordination and program management – UNICEF involved and significantly contributed to coordination forums including TWG, ICC, JCCC, and other periodic coordination forums. UNICEF contributed on planning, implementation, monitoring and review of EFY 2010 EPI activities. UNICEF staff involved and provided support on development of guidelines, training manuals including, documents for new vaccine introduction, HPV and MCV2 training materials, implementation manual, health workers training manuals, proposals and other strategic documents .

Immunization supply and logistics- UNICEF provided support on, vaccine and dry supplies, forecasting, procurement, shipment, custom clearing, and vaccine and related supplies transition from MoH to EPSA which shorten the level of distribution from five levels to three which might have an impact on efficiency and effectiveness. UNICEF in coordination with EPI partners provided capacity building on cold chain maintenance, implementation of effective vaccine management plan, supply chain management. UNICEF Supported distribution and installation of 6000 SDDs for remote health facilities to increase access to vaccination service and reduce missed opportunity. UNICEF is supported development of operational deployment plan for GAVI Cold chain optimization platform (CCEOP) implementation and development of immunization supply management and logistic strategic plan.

Coverage and Equity- At national level UNICEF conducted vaccination coverage and inequality analysis and trends to inform EPI program and policy. UNICEF contributed on the development of PIRI guideline to reach unreached. At sub-national level UNICEF field staff and technical assistants imbedded in three big regions provided technical support on planning, implementation and monitoring of EPI activities through customized REC approaches. UNICEF undertook immunization bottleneck and causality assessment to identify key barriers and causalities limiting immunization coverage and equity. The findings will help to inform program planning at national and sub national level. UNICEF deployed 14 TAs in 14 Zones with large number of un immunized children to provide technical support and skill transfer on program planning, monitoring implementation and evaluation.

Data - UNICEF supported designed and printing of home based registration (HBR) with simple guide for health workers. The introduction of new HBR will improve card retention to improve vaccination tracking and monitoring. UNICEF also provided technical support on timely submission of JRF reports.

Demand Generation- UNICEF provided technical assistance on development, rollout and implementation, and monitoring of demand generation activities at national and sub-national level through hiring of five competent consultants and through its staff. Technical support provided mainly on preparation for introduction of new vaccines mainly HPV and MCV2 and on strengthening routine immunization.

high turnover of staff and frequent change of leadership has affected service delivery. Continues capacity building social mobilization and crises communication is important to improve immunization program in general.

Centers for Disease Control and Prevention (CDC):

CDC is providing technical assistance to Ethiopia to re-establish CRS surveillance in Ethiopia. This is being carried out in collaboration with the WHO Country Office and the Ethiopian Public Health Institute (EPHI), Public Health Emergency Management (PHEM) Directorate. CRS Surveillance is important to identify disease burden, to monitor the impact of vaccine introduction, and to monitor progress towards rubella elimination. Previous efforts to establish CRS surveillance in Ethiopia were unable to identify cases. A revised surveillance protocol has been drafted and is currently being circulated to key partners before further circulation and finalization. A technical support visit by a CDC Subject Matter Expert on CRS surveillance took place in Q4 of 2018 to progress the plans for finalization, and implementation of the protocol. Discussions regarding implementation of the surveillance protocol were carried out with physicians, and surveillance focal persons at Black Lion Hospital, and further site visits are planned for December 2018 with a view to identification of the specific sentinel sites for CRS surveillance. The teams have consulted with PHEM leadership and technical staff about the feasibility of surveillance functioning within the broader PHEM surveillance platform for improved sustainability and clear reporting structures. Once the revised draft of the protocol is finalized and sentinel sites have been identified towards the end of 2018, implementation of the revitalized CRS surveillance protocol will begin.

JHPIEGO

Strategic approach to Technical Assistance (TA) delivery to improving coverage and equity

Jhpiego is contributing in strengthening the capacity of health workers through development of standardized training curriculum and through selected communication activities From the inception of the HPV roll out, through regular participation of the technical working group, the Jhpiego team has been engaged in planning, coordinating and facilitating of the HPV vaccine roll out including the MCV2 vaccine introduction.

Major activities accomplished include:

- ✓ Developed HPV and MCV2 training curriculum to train health work force
- ✓ Develop training materials to orient school teachers
- ✓ Monitoring checklist to ensure quality trainings is developed and shared with FMoH, RHBs and partners for use at national level
- ✓ Help develop a video production with influential Ethiopians to help educate school aged children about the benefits of the HPV vaccine and to dispel misconceptions around the vaccine.
- ✓ The national Jhpiego staff have been participating on regular national level M&E and immunization communication working groups to assist in the planning, implementation and monitoring of national and regional data and program quality improvement plan and communication activities.
- ✓ Inputs provided to enrich both MCV2 and HPV messages, financial support provided to air discussions on HPV vaccine introduction through local TV
- ✓ Due to budgetary constraints, selected activities were reprogrammed and Jhpiego along with other partners have been tasked with printing HPV registers.
- ✓ Jhpiego actively engaged in JA report writing workshop and has provided financial and technical support to accomplish a national level report compilation

Progress in delivering technical assistance (against PEF functions and milestones)

Jhpiego was tasked in developing competency based training package to build capacity of health workers to deliver high quality immunization services for target population for HPV and MCV2. Through participating in regular TWG's and getting feedback from FMoH and partner organizations, the training packages for both trainings were developed and endorsed by FMoH.

For MCV2, the training package was field tested in one of the zones and feedback of the field test to be provided to FMoH for further enrichment. Furthermore, communication with respective regional health bureaus was made through Jhpiego regional offices to get tentative Woreda level training schedules which helped Jhpiego to plan a monitoring visit to ensure quality of trainings for vaccinators.

Supervisory skills training for EPI focal persons were also planned in coordination with regional health

bureaus to build capacity of EPI managers at district level which further contribute to high quality EPI service delivery to target population. This activity will be completed in the coming months in coordination with Regional health bureaus and zonal health offices.

Challenges in implementing the TA plan

- Weak link with implementing partners.
- Frequent changes in activities due to reprogramming which delayed some of the key deliverables.

Amendments/ changes to the TA currently planned for the remaining of the year

Programmatic Area	Initial Activity planned	Reprogrammed Activity
Vaccine-specific support	Conduct needs assessments at Regional Health Bureaus and Health Facilities in 4 regions.	1. Support duplication of HPV register 2. Support report writing workshop 3. Support to air HPV introduction discussions through local TV
Vaccine-specific support	Compile results of training needs assessment	
Vaccine-specific support	Design training packages for MCV2 and HPV vaccines	
Vaccine-specific support	Use the designed tools and other existing learning resources to finalize training packages at national workshop	
Vaccine-specific support	Conduct workshop with FMOH NITAG and expanded partners to review training package	
Vaccine-specific support	Conduct pilot testing of HPV training courses	
Vaccine-specific support	Develop and/or adapt educational training videos	
Vaccine-specific support	Conduct pilot testing of MCV2 training courses	
Vaccine-specific support	Conduct on site mentorship during HPV and MCV2 vaccine training course events	
Vaccine-specific support	To help program leaders at different level ensure quality of HPV and MCV2 vaccine programs, supervisory skills training will be provided for 5 days for 100 participants.	

The World Bank

Progress update on work plan for the GAVI support /grant/ pilot project on linkage between birth registration and immunization.

Strategic Approach to TA: Improve the registration coverage of birth events that occur out of health facility and enhance a well-functioning civil registration and vital statistics system through integrating

community health structures/immunization program with the civil status offices.

Specific objective/Strategic Approach to TA:

i) Assess the effect of utilizing existing community health structures and immunization processes to improve birth registration

ii) Examine the processes of notification and registration of births through the use of health extension workers, Women Development Army, and Civil Status Officer.

Major Activities Accomplished

During the reporting period, the following activities were undertaken from January – November 2018:

1) Baseline assessment conducted
2) ToT training on the community birth notification was provided to Regional VERA and Health Bureau
3) Hands on training provided to Health Extension Worker (HEW), Civil Status Officers (CSO), community leaders,
4) Pilot project is being implemented, HEWs and WDAs notify births & deaths occurring at home and at the community level to the CSO
5) Four joint field monitoring & supportive supervision missions were conducted in the three pilot regions and feedback provided to regional and federal VERA
6) HEWs and WDAs start notifying births & deaths occurring at home and at the community level to the CSO
7) Project interventions such as technical capacity building & community awareness raising took place
8) Mothers in the visited woreda receiving vaccinations for their newborns have been referred to the CSOs for birth registration.
9) Religious and community leaders have disseminated messages on the benefits of registering births to their respective constituencies, and they have also referred mothers to CSOs to register the births of their newborn children.
10) CSO, WDA and HEWs held scheduled monthly meetings

Challenges in Implementing TA Plan

1) Mandatory requirement for both parents to be present while registering births;
2) Fees charged for issuance of certificates, increased fees for late and delayed registrations
3) Incomplete notifications/registrations/certifications in the kebele
4) Interruptions in the provision of notification forms by health facilities.
5) Absence of HEWs and CSOs due to other responsibilities
6) Insufficient advocacy work due to lack of adequate IEC/BCC materials

Amendments/Changes to the TA currently planned for the remaining of the year: None

5. UPDATE OF FINDINGS FROM PREVIOUS JOINT APPRAISAL

Provide the status of the prioritised strategic actions identified in the previous Joint Appraisal[18] and any additional significant Independent Review Committee (IRC) or High Level Review Panel (HLRP) recommendations (if applicable).

Prioritised actions from previous Joint Appraisal	Current status
1. Planning, Management, Monitoring, Coordination	• Coordination platforms at national and in most cases regional, level have been established or revitalized especially in line with the preparation for NVI. Only in major regions have zonal and Woreda level coordination platforms are functional. ▪ Disease specific outcome/impact monitoring as well as strengthening the VPD surveillance has been emphasized

[18] Refer to the section "Prioritised Country Needs" in last year's Joint Appraisal report

	during the reporting period. Periodic analysis of the VPD outbreaks and prevalence (mainly measles, AFP, NNT) has been integrated with RI data analysis and feedback given to lower level for action ▪ Polio legacy plan has been prepared and endorsed by the ICC. Implementation of the legacy plan is pending due to funding gap of USD 11,930,101. • Proposal for Measles Follow-up Campaign for the 2019 has been prepared and application will follow ▪ LMC support by GAVI in 2018 has been initiated through the ACASUS consulting group. Preliminary assessment and proposal has been prepared ▪ Efforts to strengthening immunization supply chain have been exerted through the HSS fund and CCEOP funding has been applied • Vaccine and cold chain management transition to EPSA implementation is nearly at final stage where all EPSA hubs are delivering vaccines directly to 91% Woredas as of October 2018. CCEI proposal has been prepared by EPHI and EVMA self-assessment will be conducted by EPSA.
2. Reduce immunization inequities and improve coverage	• The MoH is working closely with the EPI partners to narrow the gaps in developing regional states. Focusing on pocket areas, hard to reach areas and unimmunized population groups; periodic intensification of routine immunization (PIRI) in low performing districts has been planned and funding secured to address equity. Partner mapping in the selected zones and Woredas is in progress for required TA. • In the reporting period, the African regional RED/C guide has been nationally contextualized and has been printed. • In order to improve demand for immunization services and sustain public trust, advocacy and social mobilization activities have been implemented with special emphasis to developing regions. To improve the vaccination card retention rate, new passport sized maternal and child health card has been prepared, printed and distributed. The 8th African vaccination week has been commemorated to advocate for and to generate immunization demand.
3. Data Quality Improvement	• Health and immunization data quality improvement plan (2018-2020) has been prepared under the overall health system strengthening support. Funding support of 14,107,351.02 USD has been requested from GAVI and implementation is to commence starting from late 2018 for two and half years. PPD is conducting biannual joint supportive supervision where data quality improvement is one of its aims. Partners have also provided DQS/DQA for HIT and EPI managers and EPI focal persons as part of their capacity building in data quality improvement. • Advocacy works have been made for immunization data quality at different program reviews and meetings • Instituted data quality performance monitoring system • Availed standardized immunization HMIS tools to include the new vaccine introductions (MCV2 and HPV)

4. New Vaccine introductions	• Preparatory activities for MCV2 introduction have been conducted. An integrated chronogram with HPV introduction has been developed and revised periodically. Facilitators' guide and participants' manual for the training on MCV2 has been printed. Job aid was prepared but printing is pending. Identification of eligible children (Under2 year's old) has not been done in most regions of . MCV2 RAT from the regions could be delayed as there are a number of RATs concurrently been conducted and Subnational RAT tool not developed. Same is true for the delay in MCV2 messaging to avoid confusion to the public on other concurrent initiatives. MCV2 training materials pre-testing as well as quality checking of the trainings using monitoring checklists in selected zones is planned. Date of launching is yet to be fixed until readiness with the above parameters is promising. • Preparatory activities for national scale up of HPV for 14 years of girls in the year of introduction have been conducted. Preparation for the upcoming national HPV rollout is going on. National and subnational RAT reports have been closely followed. National and subnational trainings were conducted. Official communication for active engagement of MoE and other relevant stakeholders down to the administrative structure has been ensured. Orientation materials to engage teachers and other community representatives as advocates for HPV vaccine is developed and shared. Media professionals' orientation training and advocacy meetings were conducted. Discussion on HPV introduction to be aired through national TV is prepared. Media professionals' orientation training and advocacy meetings were conducted. Vaccine has arrived in country and distribution to the regions is going on. Delay in printing for communication materials was a challenge. • Yellow fever vaccine introduction/application for 2019 has been prepared and it has been refined to be submitted for 2019 window of funding.
Additional significant IRC / HLRP recommendations (if applicable)	**Current status**

If findings have not been addressed and/or related actions have not taken place, provide a brief explanation and clarify whether this is being prioritised in the new action plan (section 6 below).

1. Planning, Management, Monitoring, Coordination

- Further emphasis on disease specific outcome/impact monitoring as well as strengthening the VPD surveillance upon the extent of gap in TA is required
- To realize the polio transition process in the five years (2018-2022); conduct donor round table meeting to mobilize the funding gap. Gavi investments through the HSS will be utilized to partly cover the gap as appropriate.
- Implementation of the LMC support by the ACASUS consulting group is pending.
- Focus CCEOP implementation
- Finalize the vaccine transition to EPSA. Conduct CCEI and EVM self-assessment.
- Application for 2019 Measles Follow-up Campaign

2. Reduce immunization inequities and improve coverage

- Implement PIRI in the selected 140 districts of the 28 low performing zones
- Distribute the nationally contextualized African regional RED/C guide, provide training orientation and monitor implementation
- Enhance demand generation and communication
- Capitalize the role of private facilities in immunization

3. Data Quality Improvement

- Commence the data improvement plan with the support of GAVI HSS grant
- Continue collecting and analysis of the NVI uptake using the updated HMIS tools through the DHIS2
- Continue capacity building and supportive supervision for data quality improvement

4. New Vaccine introductions

- Advance preparation for HPV and MCV2 national introduction with periodic national as well as subnational readiness assessment.
- Mitigate rumours and misconceptions surrounding HPV vaccine; ensure adequate HPV vaccine is in country and distributed as per micro plan.
- Follow up with application status and subsequent preparation for yellow fever vaccine introduction

6. ACTION PLAN: SUMMARY OF FINDINGS, ACTIONS AND RESOURCE/SUPPORT NEEDS IDENTIFIED AND AGREED DURING THE JOINT APPRAISAL

*Briefly summarise the **key activities to be implemented next year** with Gavi grant support, including if relevant any introductions for vaccine applications already approved; preparation of new applications, preparation of investment cases for additional vaccines, and/ or plans related to HSS / CCEOP grants.*

*In the context of these planned activities and based on the analyses provided in the above sections, describe the five **highest priority findings and actions to be undertaken to enhance the impact of Gavi support or to mitigate potential future risks to programme and grant performance**.*

Please indicate if any modifications to Gavi support are being requested, such as:

- *Changes to country targets as established earlier, either from the agreed Grant Performance Framework (GPF) or as part of the NVS renewal request submitted by 15 May;*
- *Plans to change any vaccine presentation or type;*
- *Plans to use available flexibilities to reallocate budgeted funds to focus on identified priority areas.*

Overview of key activities planned for the next year:

Improving immunization service delivery (equity and coverage)

- Measles SIAs application for 2020 implementation
- Switch from TT to Td
- Application for switch from PCV2 to PCV4 dose vaccine presentation
- PIRI implementation in the pastoralist, selected low performing 140 Woredas and urban slums.
- Operationalize the newly contextualized RED/REC approach
- Conduct biannual SS emphasizing on service availability and readiness at all level
- Conduct one national program review meeting
- Strengthen Rota, PBM and CRS Sentinel surveillance
- Enhance private facilities engagement for improved immunization quality
- Technology assisted program monitoring-document LMC support findings
- Support evidence generation by NITAG through systematic review
- Conduct evidence generation on immunization bottlenecks with social determinants
- Print additional HBR for the new cohort
- Conduct national workshop on AEFI Surveillance

Capacity building

- Provide Immunization in Practice (IIP) training

- Provide immunization Mid-level managers (MLM) training
- Provide Integrated Refresher Training (IRT) to health extension workers
- Attain vaccinology training at higher level immunization program mangers
- Conduct RED/REC guide familiarization
- Cascade Periodic Intensified routine immunization (PIRI) orientation

New and under-used vaccine introduction (NUVI) and change in vaccine presentation

- Submit application for Yellow fever vaccine national introduction
- Provide HPV second dose vaccination and prepare for second year with wider cohort (2019)
- Conduct capacity building on NUVI (MCV2, YF) for health workers

Cold chain and logistics management

- Conduct Effective Vaccine Management Assessment (EVMA) and EVM improvement plan implementation and disseminate findings
- Conduct cold Chain Inventory (CCI)
- Implement Cold Chain Equipment Optimization Platform (CCEOP) plan
- Support the Pharmaceutical Supply Agency's (PSA) vaccine transition
- Enhance facility level vaccine and supplies stock visibility through eCHIS
- Conduct training to senior technicians on curative and preventive maintenance of cold chain equipment

Demand generation and communication

- Plan and implement NUVI communication intervention (Material development, capacity building and perform communication activities for the planned NUVI)
- Conduct Inter Personal Communication (IPC) manual utilization assessment
- Conduct EPI behavioural determinant survey (Agrarian)
- Commemorate the African Vaccination Week (AVW)
- Conduct one sub-national consultative meeting at region level on immunization

Data quality improvement and use

- Conduct training on DQA/S
- Conduct data analysis and triangulation training to EPI program managers and focal persons at national and sub-national level
- Utilizing data from different sources (HMIS, surveys, VPD, vaccine logistics) on routine basis
- Conduct biannual program supportive supervision
- Conduct quarterly DQR
- Conduct Data Quality Review workshop to enable national and Regional coverage estimates through triangulation of different sources
- Avail HMIS tools

HSS support (extension)

Submit HSS support application

Key finding / Action 1	The 2018 Service Availability and Readiness Assessment (SARA) in Ethiopia showed 81% of health facilities are providing immunization services. However, there is significant regional variation ranging from 17% to 88% in Addis Ababa and Oromia respectively. EDHS 2016 indicated inequality by household wealth quantile is increasing. These findings call for improving immunization service delivery (equity and coverage)
Current response	• PIRI proposal developed, funding secured and distributed to regional health bureaus; training at national level conducted. • The new AFRO RED/REC guide contextualized; printed and distributed • Annual integrated supportive supervision is being conducted along with other programs • National program review meeting conducted with partners • Initiated Rota, PBM and CRS sentinel surveillance • Initiated engaging private facilities to improve immunization coverage and quality • NITAG has been established and is functional to help decision making process. • Supply related immunization bottleneck analysis conducted to inform program • National AEFI guideline has been developed and capacity building done
Agreed country actions	• Enhance private facilities engagement for improved immunization quality • Support evidence generation by NITAG through systematic review • Conduct evidence generation on immunization bottlenecks with social determinants • Conduct national workshop on AEFI Surveillance • Measles SIAs application for 2020 implementation • Switch from TT to Td • Application for switch from PCV2 to PCV4 dose vaccine presentation • Technology assisted program monitoring-document LMC support findings
Expected outputs / results	Increased coverage and quality of immunization services through equitable access and utilization
Associated timeline	July 8, 2018- July 7, 2019
Required resources / support	• HSS additional support • There is technical assistance from partners in areas of: ✓ Proposal application, ✓ Material preparation (training guide, IEC material…) ✓ capacity building focusing on technical skills, ✓ Monitoring & supervision.
Key finding / Action 2	New and under-used vaccine introduction (NUVI) and change in vaccine presentation
Current response	• Application on Yellow fever vaccine national introduction prepared • HPV national rollout launched • MCV2 national preparation undergoing
Agreed country actions	• Submit application for Yellow fever vaccine national introduction • Provide HPV second dose vaccination and prepare for second year with wider cohort (2019) • Conduct capacity building on NUVI (MCV2, YF) for health workers
Expected outputs / results	HPV2 coverage of 95% and MCV2 80% achieved
Associated timeline	July 8, 2018- July 7, 2019

Required resources / support	• NVI grant support • There is technical assistance from partners in areas of: ✓ Proposal application, ✓ Material preparation (training guide, IEC material…) ✓ capacity building focusing on technical skills, ✓ Monitoring & supervision.
Key finding / Action 3	The 2018 Service Availability and Readiness Assessment (SARA) in Ethiopia showed only 14% of health posts are equipped with refrigerators and vaccine availability ranges from 28% to 30% at all types of health facilities.
Current response	• National level Effective Vaccine Management Assessment (EVMA) conducted • Developed Cold Chain Equipment Optimization Platform (CCEOP) plan • Vaccine and logistics transition of PSA reached up to Woreda level (91%). • Enhance facility level vaccine and supplies stock visibility through eCHIS • Conducted training to senior technicians on corrective and preventive maintenance of cold chain equipment
Agreed country actions	• Finalize EVMA and EVM improvement plan implementation and disseminate findings • Conduct cold Chain Inventory (CCI) • Implement Cold Chain Equipment Optimization Platform (CCEOP) plan • Support the Pharmaceutical Supply Agency's (PSA) vaccine transition up to health facility • Enhance facility level vaccine and supplies stock visibility through eCHIS in 1000 health posts • Conduct training to senior technicians on corrective maintenance of cold room
Expected outputs / results	EVMA and inventory of cold chain equipment conducted
Associated timeline	July 8, 2018- July 7, 2019
Required resources / support	There is technical assistance from partners in areas of: ✓ Material preparation (training guide, IEC material…) ✓ capacity building focusing on technical skills, ✓ Monitoring & supervision.
Key finding / Action 4	The recently conducted (2018) bottleneck assessment and the previously conducted behavioural determinant survey indicated that suboptimal IPC is the major gap that contributed to high dropout rate. Moreover, EDHS 2016 indicated that card retention at home was only 34.1% (16.7% in Affar region and 90.3% Addis Ababa)
Current response	• NUVI communication materials developed, capacity building provided and performed communication activities for HPV. • Inter Personal Communication (IPC) material prepared, printed and distributed • Commemorated the 2018 African Vaccination Week (AVW) • New Home Based Recording produced and printed
Agreed country actions	• Plan and implement NUVI communication intervention (Material development, capacity building and perform communication activities for the planned NUVI) • Conduct Inter Personal Communication (IPC) manual utilization assessment • Conduct EPI behavioural determinant survey (Agrarian) • Commemorate the 2019 African Vaccination Week (AVW)

	• Conduct one sub-national consultative meeting at region level on immunization • Print additional HBR for the new cohort
Expected outputs / results	Improved coverage and reduced dropout rate (below 5% nationally)
Associated timeline	July 8, 2018- July 7, 2019
Required resources / support	Financial support There is technical assistance from partners in areas of: ✓ Material preparation (training guide, IEC material…) ✓ capacity building focusing on technical skills, ✓ Monitoring & supervision.
Key finding / Action 5	Nationally conducted DQR (2018) showed that report completeness was 96%. All source documents and reports were available in 75% of health facilities. However, only 51 % of facilities showed matched penta3 data with the source document. This needs increased effort for data quality improvement and use.
Current response	• Training conducted on DQA/S • Utilizing data from different sources (HMIS, surveys, VPD surveillance, vaccine logistics) on routine basis • Conducted annual program supportive supervision • Conducted quarterly DQR • Availing HMIS tools
Agreed country actions	• Conduct training on DQA/S • Conduct data analysis and triangulation training to EPI program managers and focal persons at national and sub-national level • Utilizing data from different sources (HMIS, surveys, VPD, vaccine logistics) on routine basis • Conduct biannual program supportive supervision • Conduct quarterly DQR • Conduct Data Quality Review workshop to enable national and Regional coverage estimates through triangulation of different sources • Avail HMIS tools
Expected outputs / results	Timeliness, completeness, accuracy and validity of data improved
Associated timeline	July 8, 2018- July 7, 2019
Required resources / support	• HSS additional support • There is technical assistance from partners in areas of: ✓ Proposal application, ✓ Material preparation (training guide, IEC material…) ✓ capacity building focusing on technical skills, ✓ Monitoring & supervision.

7. JOINT APPRAISAL PROCESS, ENDORSEMENT BY THE NATIONAL COORDINATION FORUM (ICC, HSCC OR EQUIVALENT) AND ADDITIONAL COMMENTS

- *Does the national Coordination Forum (ICC, HSCC or equivalent) meet the Gavi requirements (please refer to http://www.gavi.org/support/coordination/ for the requirements)?*
- *Briefly describe how the Joint Appraisal was reviewed, discussed and endorsed by the relevant national Coordination Forum (ICC, HSCC or equivalent), including key discussion points, attendees, key recommendations and decisions, and whether the quorum was met. Alternatively, share the meeting minutes outlining these points.*
- *If applicable, provide any additional comments from the Ministry of Health, Gavi Alliance partners, or other stakeholders.*

Under the leadership of the FMoH, a technical team was organized from the different directorates of the FMOH (EPI, Partnership and Cooperation Directorate, Finance & Procurement Directorate, Policy Planning, Monitoring and Evaluation Directorate and Pharmaceutical and Medical Equipment Directorate), agencies (PSA, FDA and EPHA/PHEM), WHO, UNICEF, CDC, CHAI, PATH, JHPIEGO, World Bank, JSI/UI-FHS. Preparation of the report was initiated two months ahead of the JA meeting by sharing tasks among TWG members by developing an activity chronogram and meeting on weekly basis to monitor progresses. Two days' closed draft report write up meeting, agenda setting and power point presentation preparation was also held by the team outside Addis before the JA. The draft Joint Appraisal report was further enriched in report consolidation and TCA 2019 preparation meeting held 17&18 Dec 2018, following feedbacks obtained in the three days' JA meeting held 12-14 Dec 2018 in Addis Ababa in the presence of national, regional and global stakeholders and partners including GAVI, BMGF, USAID, WHO, UNICEF and CDC. In the current JA meeting delegates of regional health bureaus were invited and all reflected their opinion and support areas during the meeting. ICC meeting was convened on 20 December 2018 to endorse the JA report along with the detailed TCA 2019 plan of partners with provision of further comments that were addressed and submitted to GAVI.

8. ANNEX: Compliance with Gavi reporting requirements

Please confirm the status of reporting to Gavi, indicating whether the following reports have been uploaded onto the Country Portal. ***It is important to note that in the case that key reporting requirements (marked with *) are not complied with, Gavi support will not be reviewed for renewal.***

	Yes	No	Not applicable
1. Grant Performance Framework (GPF) * reporting against all due indicators	✓		
2. Financial Reports *			
2.1. Periodic financial reports	✓		
2.2. Annual financial statement	✓		
2.3. Annual financial audit report	✓		
3. End of year stock level report (which is normally provided by 15 May as part of the vaccine renewal request) ****	✓		
4. Campaign reports *			
4.1. Supplementary Immunisation Activity technical report	✓		
4.2. Campaign coverage survey report	✓		
5. Immunisation financing and expenditure information	✓		
6. Data quality and survey reporting			
6.1. Annual data quality desk review		✓	
6.2. Data improvement plan (DIP)	✓		
6.3. Progress report on data improvement plan implementation			✓
6.4. In-depth data assessment (conducted in the last five years)	✓		
6.5. Nationally representative coverage survey (conducted in the last five years)	✓		
7. Annual progress update on the Effective Vaccine Management (EVM) improvement plan	✓		
8. CCEOP: updated CCE inventory		✓	
9. Post Introduction Evaluation (PIE)			✓
10. Measles & rubella situation analysis and 5 year plan	✓		
11. Operational plan for the immunisation programme			
12. HSS end of grant evaluation report			✓
13. HPV specific reports	✓		
Reporting by partners on TCA and PEF functions			

In case any of the required reporting documents is not available at the time of the Joint Appraisal, provide information when the missing document/information will be provided.

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