

Country	Ethiopia
Full JA or JA update¹	<input checked="" type="checkbox"/> full JA <input type="checkbox"/> JA update
Date and location of Joint Appraisal meeting	13-15 November 2019, Addis Ababa, Ethiopia
Participants / affiliation²	GAVI TCA partners
Reporting period	July 2018-June 2019
Fiscal period³	2011 EFY
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 <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Does the vaccine renewal request include a switch request?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
HSS renewal request	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>
CCEOP renewal request	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>

2. GAVI GRANT PORTFOLIO

Existing vaccine support (to be pre-filled by Gavi Secretariat)

Introduced / Campaign	Date	2017 Coverage (WUENIC) by dose	2018 Target		Approx. Value \$	Comment
			%	Children		
Insert						
Insert						

Existing financial support (to be pre-filled by Gavi Secretariat)

¹ Information on the differentiation between full JA and JA update can be found in the Guidelines on reporting and renewal of Gavi support, <https://www.gavi.org/support/process/apply/report-renew/>

² If taking too much space, the list of participants may also be provided as an annex.

³ If the country reporting period deviates from the fiscal period, please provide a short explanation.

Grant	Channel	Period	First disbursement	Cumulative financing status @ June 2018				Compliance	
				Comm.	Appr.	Disb.	Util.	Fin.	Audit
Insert									
Insert									
Comments									

Indicative interest to introduce new vaccines or request Health System Strengthening support from Gavi in the future⁴

Indicative interest to introduce new vaccines or request HSS support from Gavi	Programme	Expected application year	Expected introduction year

Grant Performance Framework – latest reporting, for period 2018 (to be pre-filled by Gavi Secretariat)

Intermediate results indicator	Target	Actual
Insert		
Insert		
Comments		

PEF Targeted Country Assistance: Core and Expanded Partners at [insert date] (to be pre-filled by Gavi Secretariat)

	Year	Funding (US\$m)	Staff in-	Milestones	Comments
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⁴ Providing this information does not constitute any obligation for either the country or Gavi, it merely serves for information purposes. Countries are encouraged to highlight in subsequent sections and particular in the Action Plan in Section 7, key activities and potentially required technical assistance for the preparation of investment cases, applications and vaccine introductions, as applicable.

		Appr.	Disb.	Util.	post	met	
<u>Insert</u>							
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3. RECENT CHANGES IN COUNTRY CONTEXT AND POTENTIAL RISKS FOR NEXT YEAR

A year remains for the health sector to complete the first five-year phase of Health Sector Transformation Plan (HSTP) and the Expanded Program on Immunization (EPI) program to complete its comprehensive multi-year strategic plan (cMYP) for immunization. The Ministry of Health conducted the sector wide mid-term HSTP review in 2018 where the health program as a whole was reviewed and recommendations were given for improvement and indicators to fast track 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 a comprehensive external review of the EPI and vaccine preventable disease (VPD) surveillance and valuable recommendations for intervention was made. The routine immunization program has benefited from the implementation of both the sector wide plan, which was aligned with the cMYP that has been in effects since 2016. Major achievements were gained in the previous years, such as elimination of Maternal and Neonatal Tetanus (MNTE), reduction of deaths from measles disease and eradication of wild polio virus were also sustained in 2019. However the recently detected circulation of vaccine-derived poliovirus type (cVDPV) of type 2 cases in Bokh Woreda, Dollo zone of Somali, Ethiopia created a great concern and makes the situation to be national and sub-national public health emergency. Other program achievements in 2019 includes: two rounds of HPV vaccination for the 14 years old adolescent girls nationally and two rounds of bOPV campaigns in the estimated 13% of high-risk population located in the three zones of Oromia and Somali regions were conducted. In addition, introduction of measles containing vaccine (MCV2) during second year of life (2YL), continuing implementation of Periodic intensification of routine immunization (PIRI), systematically intensifying Reaching Every District/Child (RED/REC) implementation Effective Vaccine Management Assessment

(EVMA) and preparatory activities for the upcoming nationwide measles campaign targeting 15 million children of age between 9-59 months are some of the achievements gained in this year..

In 2019, the country continues to undergo political, social and economic reforms that affect overall health service delivery including immunizations. The political instability, social unrest and security challenges, aggravated by climate change induced drought and flood have led to complex humanitarian health and nutrition crises in many parts of the country.

According to the recent humanitarian and resilience plan mid-year review in the year 2019, around 7.5 to 8 million people needed humanitarian assistance in Ethiopia. The Government with partners have been working to ensure access to life saving health interventions for 2,885,369 people displaced from their residence and settled in over 1,200 IDP camps hosted in 300 woredas (WHO Weekly Health Emergency Bulletin).¹ The situation is complex and dispersed throughout the country in different regions including Amhara, Benshangul-Gumuz, Oromia, Southern Nation Nationality and People (SNNP), Somali and Tigray Regions and Dire Dawa city administrative council. In the majority of the regions, conflict is the primary cause of the displacement with an exception of Somali region which was due to both conflict and drought. Many IDP sites are very crowded and range from informal camps to schools, churches, and other similar types of structures. Crowded living conditions and the increased influx of people overstressing health services posed a high risk of disease threats, including VPDs. About 1.4 million people have returned to their origins by now, however many of them still need assistance for resilience and recovery, and because homes, farmland and health facilities were destroyed in some instances. 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 provide vaccine related services. In the past year, Ethiopia responded to outbreaks of cholera, measles, Yellow Fever, pertussis and chikungunya in various regions of the country. 1,282 suspected and 35 confirmed cholera cases were reported in Ethiopia from epidemiological week 17 to 37, 2019. Generally, there is a marked reduction on the incidence of cholera in recent months. Cholera cases are still arising in some woredas of SNNPR, Oromia, Somali and Afar regions with a total of 83 new cholera cases reported so far. Combined with the Water, Sanitation and Hygiene response, Oral Cholera Vaccine (OCV) were administered during June/July 2019 to areas identified as high risk at that point in time. Suspected measles cases totaling 3,692 were reported as of week 38 of 2019, of which 2,532 were confirmed most of which were reported from Amhara (546), Oromia (1690) and Somali (441). About

half (51%) of the suspected cases were children less than five years of age.

On weekly bases, 4,000-5,000 cases of SAM were reported across the nation during Quarter three. A total of 1,659 Severe Acute Malnutrition (SAM) cases with medical complications were admitted in stabilization centers in the IDPs hosted woredas and zones.

A confirmed chikungunya outbreak in Dire Dawa City, Eastern Ethiopia is still ongoing even at the time of generating this report. Since the outbreak was first identified in August up until September 17, 2019 a total of 40,340 cases were reported but no death have been reported (EPHI/PHEM, Ethiopia Weekly Epi Bulletin Vol. No. 7 Epidemiological Week 3 on 15 September 2019).

The circulating vaccine-derived poliovirus type 2 (cVDPV2) outbreaks continues to affect Somali region in 2019. The low population immunity and the mobility of the community aggravated the spread of the outbreak. Two children were paralyzed by cVDPV2 and same virus was isolated from four contact children that signify the intensity of the circulation in Dollo Zone of Somali Region in 2019. Genetic sequencing confirmed that the isolated virus is linked to an ongoing cVDPV2 outbreak detected in the Horn of Africa in 2018, with cases reported in Somalia and Somaliland as well as from an environmental sample in Kenya. Three rounds of high quality response mOPV2 campaigns were conducted from June to September 2019 involving five neighbouring zones of Somali region, Ethiopia.

The following are the predicted challenges confronting the immunization operation in the country where by the government and partners are making concerted efforts to mitigate the risks to reduce the likely negative effects on health and health related interventions

- Effect of the polio budget ramp down and unfilled budget gap for the polio transition plan(downsizing of HR, procurement test kits)
- Continued cVDPV2 circulation and mOPV2 responses
- As the last Measles SIA was conducted in 2017, population immunity is declining, and the number of measles cases and outbreaks is increasing
- Possible continuation of internal displacement, increased refugees and continued disease outbreaks
- The upcoming national election planned for May 2020 and population and housing census may affect health sector operations.
- The continued high turnover of trained health professionals and changes of leadership at national and subnational levels.

4. PERFORMANCE OF THE IMMUNISATION PROGRAMME

4.1. Immunization Coverage national and subnational performance

The Ethiopian routine immunization program targets more than 3 million birth cohorts annually with 11 antigens. In the reporting period, about 19,777 health facilities were reporting immunization services provided from the total of 21,631 health facilities that were providing and reporting health services in the country.

Ethiopia has fully transitioned to the DHIS-2 system in 2018, and nearly all of the public health facilities in Ethiopia (about 21,631 of the public health facilities) are reporting through this system. The reporting rate has been improving over time. Currently, monthly service reporting rate (including EPI program) has reached more than 91.7%; with 64.6 % of the reports being submitted timely as per the national standard Table 1.

4.1.1 Report Completeness and Timeliness

Table 1. Timeliness and completeness of health service reports by region, 2011 EFY

Region	Actual Reports	Expected Reports (#)	Completeness in Percent (%)	Reports On Time (#)	Timeliness in Percent (%)
Tigray	11,551	12,000	96.3%	9118	76.0%
Afar	3,965	5,196	76.3%	2487	47.9%
Amhara	51,925	53,364	97.3%	38510	72.2%
Oromiya	96,227	103,056	93.4%	74822	72.6%
Somali	11,129	16,824	66.1%	3798	22.6%
B/gumuz	5,330	6,708	79.5%	3921	58.5%
SNNPR	53,959	56,388	95.7%	32486	57.6%
Gambella	1,513	3,576	42.3%	939	26.3%
Harari	447	480	93.1%	381	79.4%
Dire Dawa	604	612	98.7%	495	80.9%
Addis Ababa	1,282	1,368	93.7%	856	62.6%
National	237,932	259,572	91.7%	167,813	64.6%

4.1.2 Immunization Performance

In 2011 EFY (July 2018 G.C to June 2019 G.C) the national Penta3 coverage was 97% and MCV1 was about 91% with large variations among Regions. Regions namely, Afar followed by Somali and Dire Dawa reported 60- to- 80% coverage of Penta3 while Amhara, Gambella and Tigray achieved between 80 to 90% penta3 coverage. On the other hand, Addis Ababa, B/Gumuz, Oromia, Harari and SNNPR regions

have achieved more than 90% coverage. With regard to MCV1, Afar, Gambella, Diredawa and Somali regions have reported MCV1 coverage of 60 to 80% while Amhara, Benishangul Gumuz, Harari and Tigray reported 80 to 90% Table 2.

The national Penta1 to Penta3 dropout rates was 7.0%: Harari 16.2%, Afar 16.5%, Somali 14.2%, Diredawa 13.8% and Gambella 12.9% are among regions that have reported higher dropout rates while the other regions, A.A, Amhara, SNNP and Tigray reported <10%. Penta 1 to MCV1 dropout rate was 12.8% at national level and all regions reported >5%. The highest rates were reported by Somali and Harari 25.5% and 24.5% respectively followed by Afar 24.4.0%, Diredawa 21.8%, Gambella 21.6% and Oromia 15.3%.

However, the national dropout rates reported from the mini-DHS 2019 for Penta1 to penta3 (20.2%) and Penta1 to measles (23.2%) were much higher from the mini-DHS 2019 as indicated on Table 3 were much higher than the report admin dropout rates. The dropout rate for penta1 to penta3 and penta1 to measles reduced from 27.3 and 25.8 in EDHS 2016 to 20.2 and 23.2 percent in 2019 mini DHS. Yet, the dropout rate for penta1 to penta3 and penta1 to measles is high in Afar (43 and 37.4) Oromia (27 and 33.7), SNNP (30 and 20) and Dire Dewa (22.1 for both). The dropout rate for both Penta and measles is low in Addis Ababa, Amhara Tigray and Benishangul Gumuz. These regions performed better in increasing coverage and reducing the dropout.

According to the admin reports, more than 105,876 children were reported unvaccinated for Penta 3 and 292,900 were unvaccinated for MCV1 nationally. Amhara region has the highest burden of unvaccinated children (Penta3: 87,062, MCV1: 113,334) followed by Somali (Penta3: 39,919, MCV1: 58,528) and Tigray (Penta3: 19,188, MCV1: 25,986). However the mini DHS showed there are more children missed (Table 3) than indicated in the admin report.

Missed opportunity as measured by variations between Penta3 and PCV3 showed, 17,748 (0.6%) children who took penta 3 were not vaccinated for PCV 3. About 12,848 children in Oromia region went back home without receiving their third dose of PCV. The possible explanations for missed opportunities , though which needs further study, could be stock-out of the antigens at the time of visit, fear of multiple injections by mothers and workload on the care providers

Table 2. Routine Immunization coverage for selected antigens for 2011 EFY by Regions (Source FMOH DHIS 2)

<i>Region</i>	<i>Surviving Infants</i>	<i>Penta 1</i>	<i>Penta 3</i>	<i>PCV3</i>	<i>MCV1</i>	<i>Dropouts Penta 1-3</i>	<i>Dropout Penta 1-MCV1</i>
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Although the rise in the coverage had not been as desired, in the last 19 years, DHS finding showed a positive trends in Penta3 and MCV1 was observed over time. Penta3 coverage increased from 21% in 2000 to 61% in 2019 and MCV1 from 27% to 59%, .(Figure 1a)

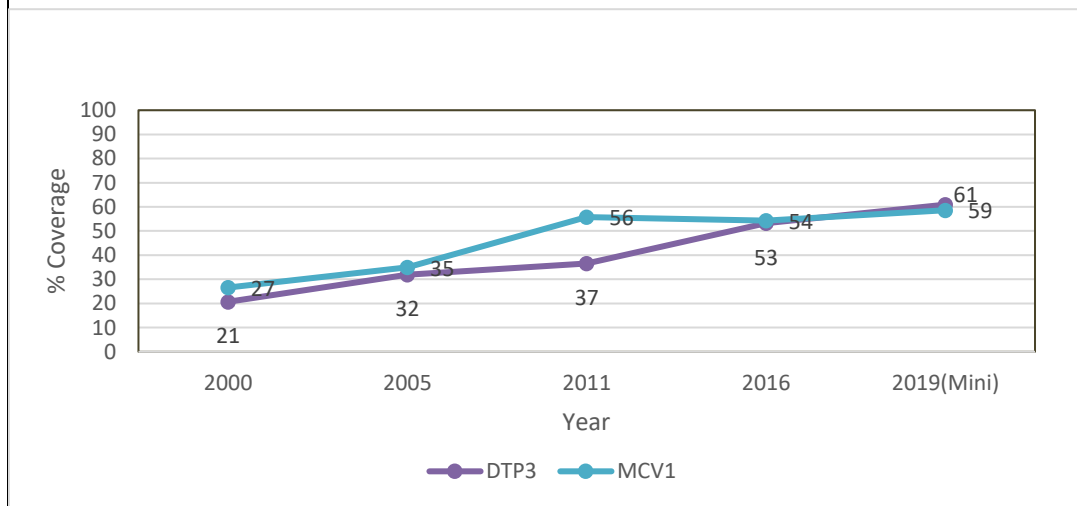


Figure 1a. Trends of Some DTP3/Penta3 and MCV1 vaccines coverage over time , based on DHS sources

The following figures (Figure 2 and 3) compare the Penta3 and MCV1 coverage rates with WUENIC and survey data from 2000 to 2019. The admin coverage data for both antigens are always high compared with WUENIC and Survey data. Penta3 coverage data from health facilities for the last 4 years consistently reported around mid-90’s while WUENIC estimates 70’s and survey reveal in the 60’s percentiles. The pattern is the same for MCV1 coverage too. The WUENIC estimates seem tallied with the survey and EDHS findings.

In general, measles surveillance data for confirmed measles incidence rates and outbreak data appear to correlate more with EDHS. High MCV1 coverage (e.g. Addis Ababa and Tigray) were reporting fewer measles cases and those reporting low MCV1 coverage reporting a higher incidence of measles cases (e.g. Somalia, SNNRP, Oromia and Amhara Regions).

Figure 2. Trends of Penta3 coverage by different data sources

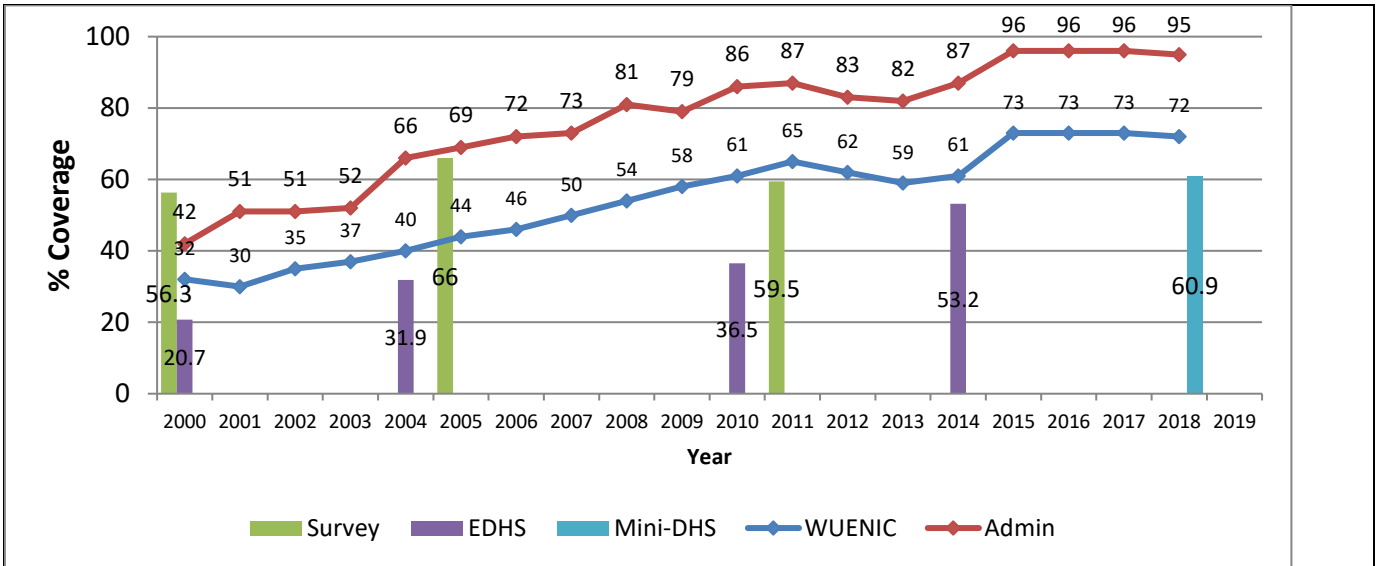


Figure 3. Trend of MCV1 coverage by different sources

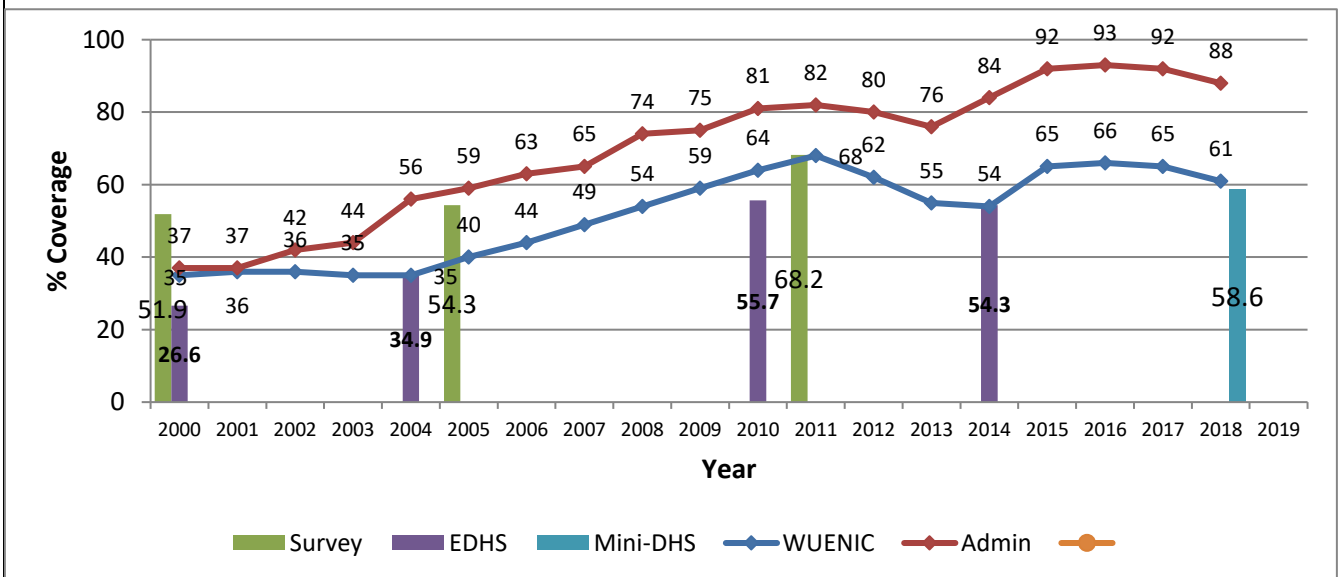


Table 3 describes the EMDHS findings by regions for the selected antigens. Penta3 coverage for Afar and Somali is extremely low, only 26% of the children received Penta3. Two regions, Oromia and SNNP achieved coverage of 53% and 50% respectively. Tigray, Benishangul, Amhara achieved 80% to 90% and two regions Diredawa and Gambella achieved between 70-79%. The pattern of MCV1 coverage is the same with that of Penta3 except the percentages reported are very low in most regions. Three regions, Oromia, SNNP and Amhara reported coverage of 49%, 58% and 71% respectively and these coverages are very low for a country that attempts to eliminate measles.

Children received all types of antigens in Afar and Somali rated <20%, and in Oromia and SNNP rated in the 30's percentages are very low coverage as revealed by the EMDHS.

Most regions reported very high dropout rates for Penta1 to 3 and Penta 1 to MCV1 in 2019 EMDHS. Penta1 to 3 and Penta1 to MCV1 dropout rates in Afar 43% and 37%, Somali 38% and 26% followed by SNNP 30% and 20% and Oromia 27% and 34%, respectively are regions with the highest number of defaulting children.

Table 3 EMDHS 2019 immunization coverage for selected antigens by region, Ethiopia

<i>Region</i>	<i>Penta 1</i>	<i>Penta 3</i>	<i>MCV1</i>	<i>MCV2</i>	<i>Dropouts Penta 1-3</i>	<i>Dropout Penta 1-MCV1</i>	<i>All types of vaccines</i>	<i>Never been vaccinated</i>
Addis Ababa	96.3	93.1	90.6	3.3	3	6	83.3	3.7
Afar	45.5	25.9	28.5	8.5	43	37	19.8	44.9
Amhara	84.4	80.2	71.3	13.3	5	16	62.1	14.8
B/Gumuz	89.2	81.2	77.4	1.6	9	13	66.7	9.8
Diredawa	95.2	74.2	74.2	17.7	22	22	53	2.6
Gambella	76.3	65	57.6	21.2	15	25	38.3	14.2
Harari	65.3	52.8	58.7	7	19	10	45.8	20.4
Oromia	73.4	53.6	48.7	5.2	27	34	29.9	18.9
SNNP	72.7	50.8	58.2	15.3	30	20	38	24.2
Somali	42.2	26.2	31.1	1.4	38	26	18.2	48.8
Tigray	95.4	84.4	82.9	17.2	12	13	73	4.6
National	76.3	60.9	58.6	9.1	20.2	23.2	43.1	19.2

Generally, the national MCV1 coverage showed a declining trend in the recent years, for example, from 92% in 2017 to 88% in 2018 (JRF reports). There are also marked differences in MCV1 coverage and dropout rates between Zones and Districts. The low MCV1 coverage in many zones/districts of the country indicates that there is fertile ground for fast accumulation of unprotected children leading to low herd immunity and subsequent heightened risk for measles outbreaks. The low MCV coverage and high dropout rate and high inequity in measles vaccination suggest that more work is required to increase measles vaccination. Ethiopia has not yet achieved the measles elimination milestones (achieve 95% MCV1 coverage and reducing measles incidence to less than 1 case per million population by 2020). Therefore, more efforts are required to improve routine immunization coverage and to achieve measles elimination targets of the country through accelerating the measles elimination interventions. The MCV2 platform can be utilized to improve routine EPI through vaccinating children who missed MCV1 and other antigens. In line with this, EPI policy/guides is updated to provide EPI services during the second year of life as part of MCV2.

4.2. Immunization Coverage and Equity Analysis

A. Administrative coverage of Penta3 and Measles as tracer indicator

During the last three years public grievance and conflicts were widespread across the country and affected socio-economic services including health service which led to interruption of vaccination service in many parts of the country. However, as indicated in Table 2 above, the administrative coverage for the year 2011 EFY (1st July 2018 to 30 June 2019) for Penta 3 was 97% which is higher than the previous years (95%). Indeed, the coverage varies across regions ranging from 74 percent for Afar to 111 percent for Harari. The administrative coverage varies across regions ranging from 74 percent for Afar to 111 percent for Harari. The administrative coverage shows lowest for Afar 74 percent, Somali 78 percent, Gambela 85 percent and Dire Dewa 78 percent. While the coverage for Addis Ababa, Oromia and SNNP is highest with 108, 104 and 100 percent for penta3 respectively.

According to administrative data of EFY 2011 national measles first dose coverage is 91% while MCV2 coverage is 47% with variations in coverage among 11 regions are widespread. MCV1 coverage ranges from lowest 74 percent in Afar to highest 111 percent in Harari. MCV2 launched in mid-February 2019 and the coverage till 30th June 2019 was reported 43 percent ranged from 15 percent in Afar to 59 percent in SNNP region. Similarly to other antigens, the coverage of MCV 2 varies significantly among different data sources. Moreover, the country faces measles outbreaks in many parts of the country due to enormous number of unimmunized children.

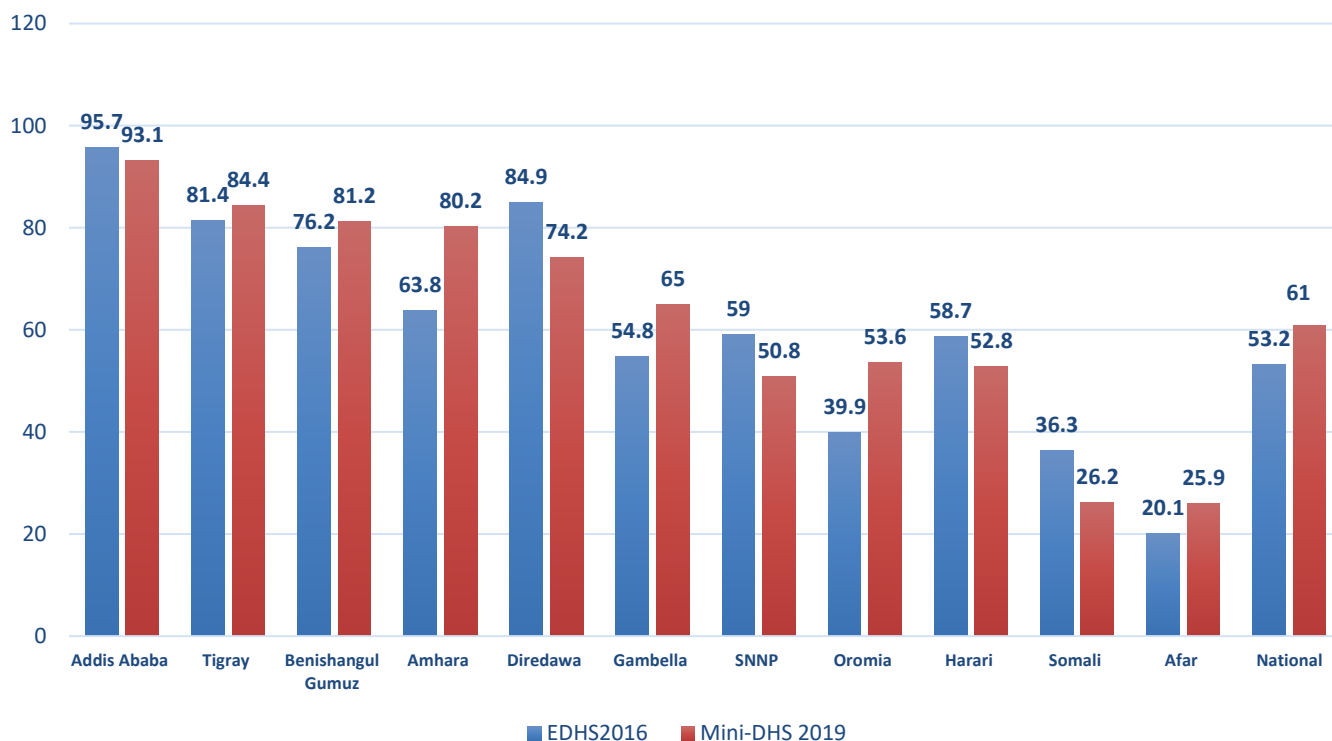
B. Equity analysis using survey data (EDHS 2016-Mini DHIS 2019)

The coverage of vaccination was observed and compared from survey data of EDHS 2016 and the 2019 Ethiopian mini-demographic and health survey disaggregated by administrative region. Contrasting the two surveys might not be appropriate as the sample size of EDHS 2016 and EMDHS 2019 differs. However, as both use similar methodology and approaches it is possible to look at the trends in vaccination coverage and equity. As indicated in Figure 5 below Nationally, there is notable progress in coverage of immunization.

According to mini DHS 2019, the coverage for penta 3 increased by 7.7 percent points from 53.2 percent in 2016 EDHS to 61 percent in 2019 mini DHS. Similarly, the coverage for the third dose of pentavalent vaccine increased by 16.4, 13.7, 10.2 and 5 percentage points for Amhara, Oromia, Gambella and Benshangul gumez regions respectively between 2016 and 2019. In contrast 10.7, 10.2, 8.6 and 6 percent points reduction indicated in Somali, Dire Dewa, SNNP and Harari regions respectively during similar period. Addis Ababa, Tigray, Benshangul Gumez and Amhara perform better

while the progress in Afar, Somali, and Oromia remain low. Regarding disparity among the regions, the difference between high performing (Addis Ababa) and the lowest performing region (Afar) for DPT-Hib, Hep-B 3 reduced from 4.7 folds in 2016 to 3.7 folds in 2019 mini DHS (Figure 4).

Penta 4 coverage trends by Regional States between EDHS 2016 and Mini DHS 2019)

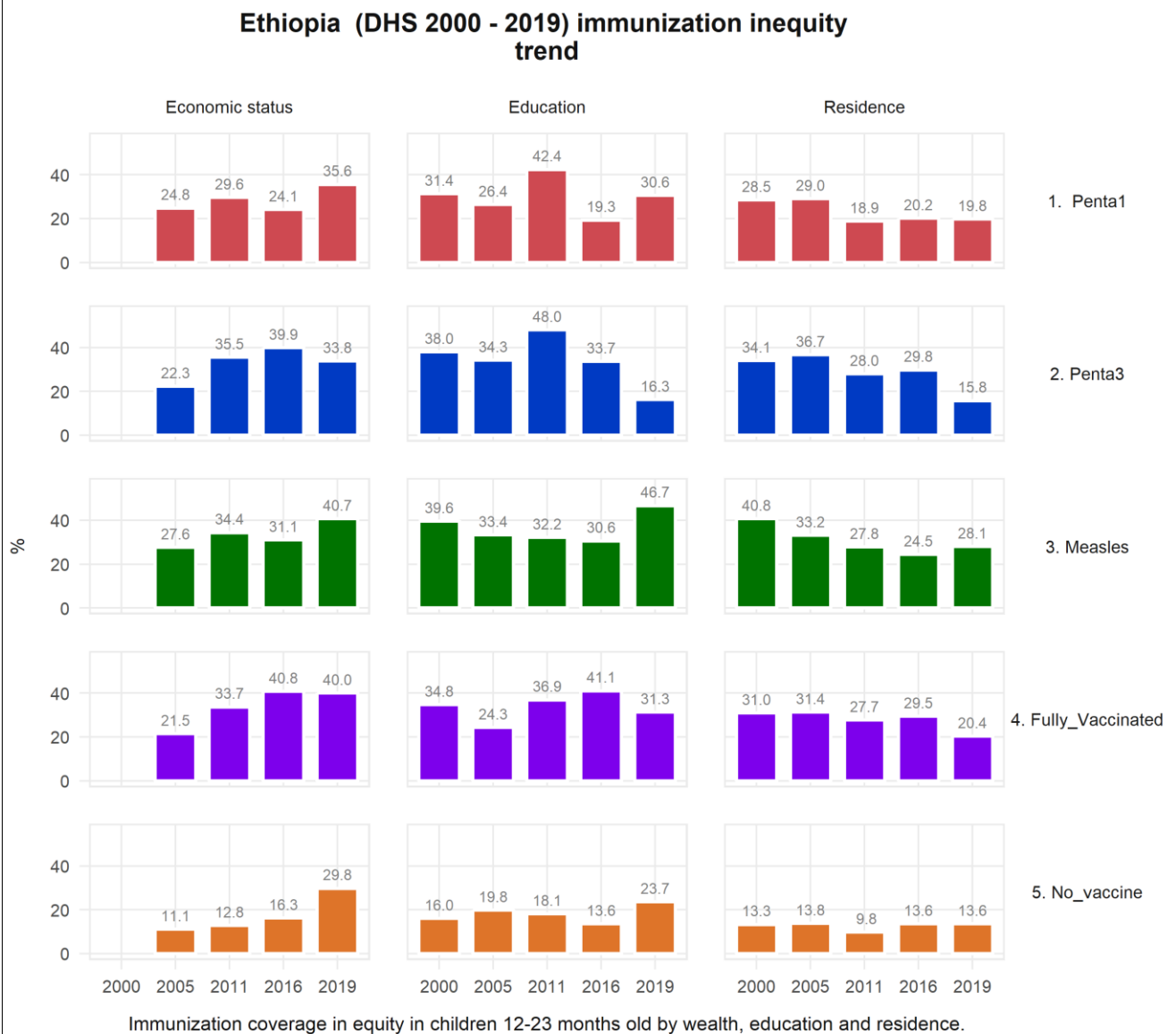


C. Trends of inequity in immunization coverage over time disaggregated equity markers

Vaccination inequity persists by equity markers in Ethiopia. The absolute equity 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 main determinants associated with inequity in coverage are the geographic area measured by regional administration, household wealth status, caregivers' education, and place of residence (urban vs rural).

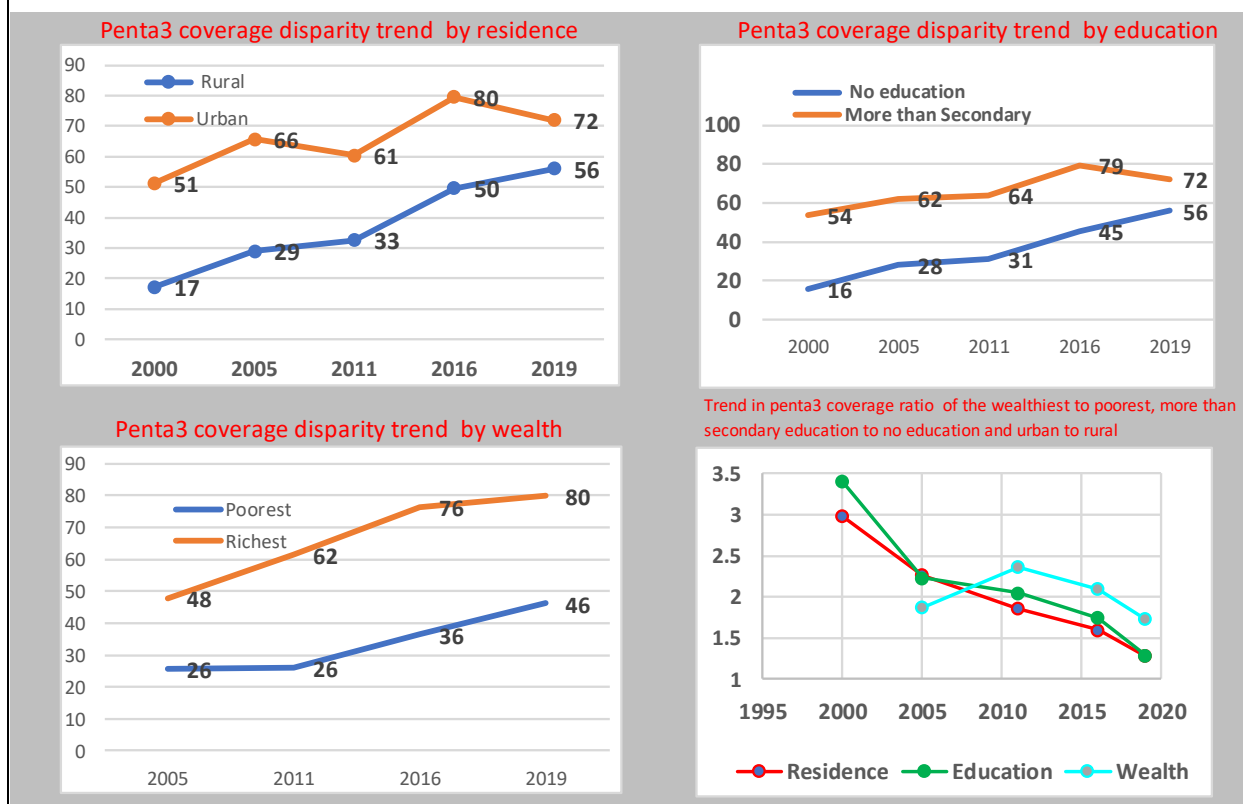
The inequity gap trend for Penta3 coverage is slightly reduced for place of residence, level of education and wealth quantile with time (Fig 4). Fully vaccinated showed similar narrowing in the inequity gap between 2000-2019 by education and place of residence while remained the same by House hold wealth status. Whereas for Penat1 and measles there is no consistent pattern in the trend of inequity by the equity markers over time.

Figure 4. Level and trends of disparity in immunization coverage for different antigens between highest and lowest economic status, uneducated and secondary+ and urban rural residents from 2000-2019 DHS source..



The Relative Penta3 coverage disparity as measured by of ratio of the wealthiest to poorest, more than secondary education to no education, urban to rural has been narrowing down over the period of 2000-2019 (DHS report analysis) Fig 5

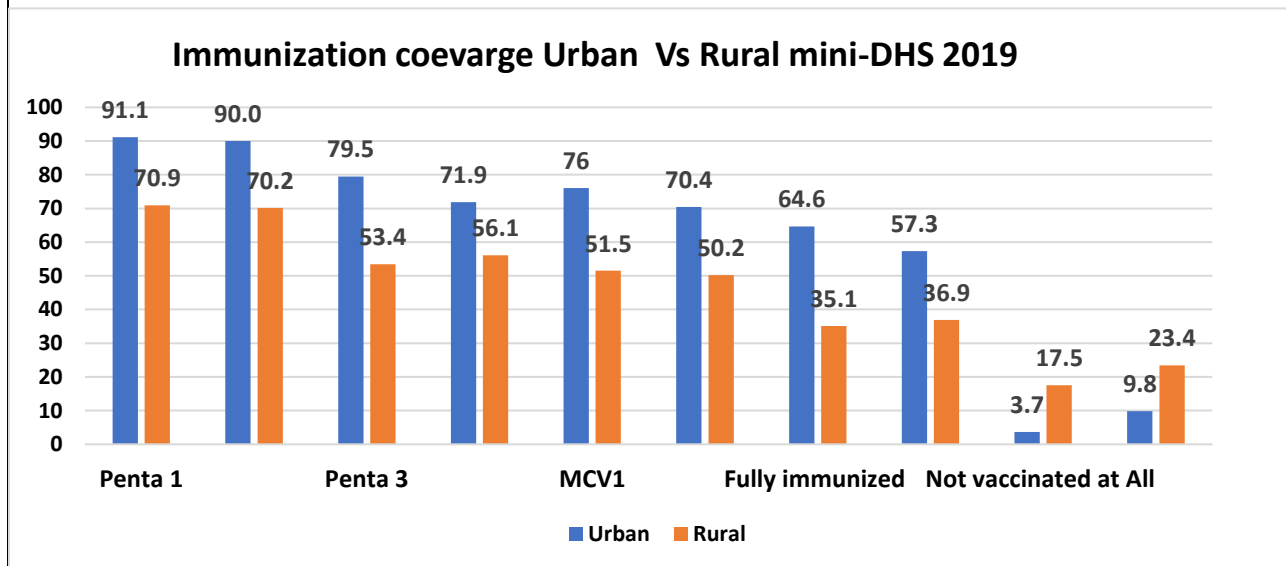
Figure 5. The absolute and relative Penta3 coverage disparity trend 2000-2019 by wealth, education and residence.



Inequality by Place of Residence

Place of residence is an influential factor for the utilization of primary health care services, as urban areas in general have more health infrastructure, better transport and shorter distances and better topography to services access and use compared to rural areas. Although urbanization is growing fast in Ethiopia, majority of the population (80%) live in rural areas. Children in urban areas were much more likely to be fully vaccinated than children in rural areas. The mini DHS data showed that while 57.3 per cent of children in urban areas were fully vaccinated while only 36.9 per cent of children living in rural areas had received all vaccines in the national schedule about 20.4 percentage points difference (Figure 6). However, the span of difference for fully vaccinated between urban and rural reduced from 30 percentage points to 20 percentage points between EDHS 2016 and Min EDHS 2019. Ten per cent of the children in urban areas were unvaccinated compared to 23 per cent of children in rural areas. The

proportion of totally unvaccinated children increased from four percent to ten percent in urban areas and from 17 to 23 percent in rural areas between 2016 and 2019. Place of residence remains an influential determinant of equity in vaccination in Ethiopia and steadily reducing over time.



Inequity by geographic area

According to mini DHS 2019, the coverage for DPT-Hib-HepB3 increased by 7.7 percent points that is from 53.2 percent in 2016 EDHS to 61 percent in 2019 mini DHS. Similarly, the coverage for the third dose of pentavalent vaccine increased by 16.4, 13.7, 10.2 and 5 percentage points for Amhara, Oromia, Gamella and Benshangul gumez regions respectively between 2016 and 2019. The notable coverage increases from 2016 EDHS in Amhara, Oromia and Benshangul Gumez regions might be attributed to the implementation of enhancing routine immunization in zones with high number of unvaccinated children during the last two years. In contrast 10.7, 10.2, 8.6 and 6 percent points reduction indicated in Somali, Dire Dewa, SNNP and Harari regions respectively during similar period. The reduction in these regions might be linked to conflicts that interrupted vaccination service for few weeks to months. Addis Ababa, Tigray, Benshangul Gumez and Amhara perform better while the progress in Afar, Somali, and Oromia remain low. Regarding disparity among the regions, the difference between high performing (Addis Ababa) and the lowest performing region (Afar) for DPT-Hib, Hep-B 3 reduced from 4.7 folds in 2016 to 3.7 folds in 2019 mini DHS.

Inequality by Sex

Generally, sex of the child is not an influential determinant of vaccination uptake in Ethiopia. The percentage of vaccinated girls was very close to that of boys. In Min DHS 2019 the difference between boys and girls is marginal with less than five percent points for various antigens.

Inequity by level of education of mothers/Caregiver

As other health service utilization, level of education of mothers/caregivers is one of the equity determinants for child vaccination. The gap in proportion of vaccination between children from uneducated and educated secondary and above mother /caregivers reduced for penta 3 and fully vaccinated. Children were more likely to continue to take subsequent doses of vaccines if their mothers or caregivers' level of education is higher (Fig 4). In summary, mothers' education strongly determines the probability that a child will be vaccinated.

Inequity by wealth quantile

Household economic status remains key determinant of vaccination in Ethiopia. All data sources indicated children in the richest wealth quintile households had better immunization coverage for all required vaccinations than children in the poorest wealth quintile households. Unlike other equity markers the span of the gap between children from the lowest and highest wealth quantile were not reducing during the last decade and half. For example, coverage gap for the first dose of DPT-Hib, Hep-B (Penta1) between children from poorest and wealthiest quantile households increased from 25.5 in EDHS 2016 to 35.6 percent in 2019. Similarly, the span for measles coverage between the lowest and highest quantile increased from 31 percent in 2016 to 35 percent in 2019. The gap between lowest and highest quantile remain between 35 to 40 percent points higher for the richest wealth quintile households than children in the poorest household both in EDHS 2016 and Mini DHS 2019 for penta3 and fully vaccinated children. The proportion of unvaccinated children among the lowest wealth quantile households increased from 24.4 percent in 2016 to 33.6 percent in 2019 mini DHS. Conversely it reduced from 6.3 to 3.8 percent for children from highest quantile during the same period. Thus, households' economic status is strongest determinant of child's vaccination status and the gap is increasing overtime than narrowing

Immunization in urban area

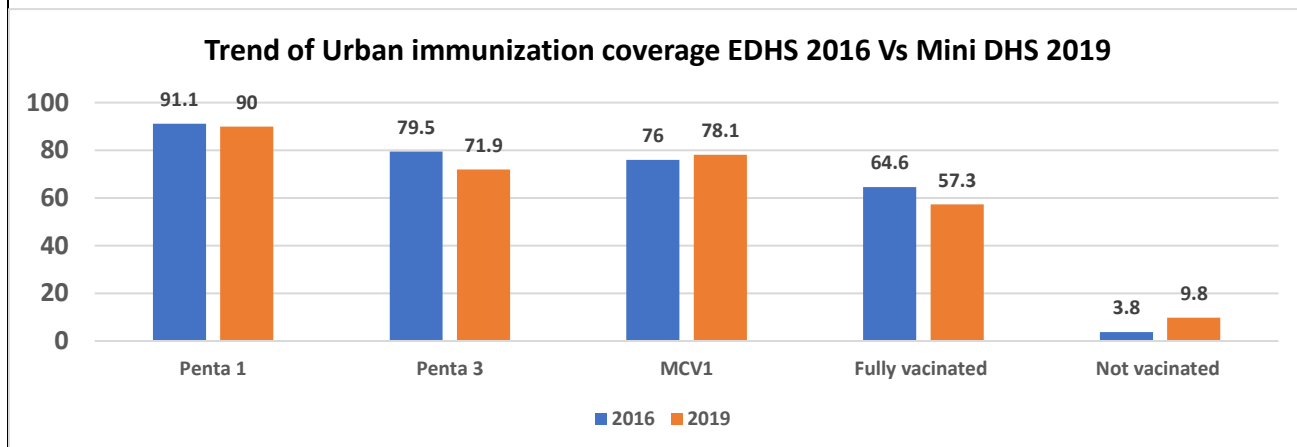
Urban population in Ethiopia is increasing faster in recent years. In many urban areas outskirts of the towns are undergoing expansion due to an influx of rural to urban migration for job seeking, due to

conflict and security reasons in some areas. Most migrants usually settle informally in outskirts or peripheries of urban areas. Although urban areas have better coverage of vaccination compared to rural, most informal settlers might not be considered in basic social services and might not be captured in the denominator as well.

Coverage for the third dose of pentavalent vaccine for urban children dropped by 7.6 percent points from 79.5 percent in 2016 DHS to 71.9 percent in 2019 mini DHS. Similarly, measles and fully vaccinated children coverage dropped by 11.4 and 7.3 percent points from DHS 2016 to Mini DHS 2019. Proportion of not vaccinated children in urban areas increased from 3.7 percent to 9.8 percent during similar period (Fig 6).

As indicated in various studies those who are unvaccinated and under vaccinated in urban areas are most likely children from low-socio-economic status. The increasing number of unvaccinated children in urban areas and reduction in coverage will increase susceptibility to occurrence of vaccine preventable diseases. The reduction in coverage in urban areas requires further investigation and attention in the coming years.

Figure 6. Urban immunization EDHS 2016 and mini DHS 2019



D. Trend of unvaccinated children for Penta 3 and Measles (EDHS and WUNEIC)

Ethiopia Demographic and Health Surveys (EDHS)

Successive Ethiopia Demographic and Health Surveys (EDHS) started from 2000 showed a consistent increase in the coverage over the years but, remains far below the targets and WUENIC Levels. Recently conducted mini-EDHS 2019 shows national Penta 3 coverage at 61% against the 72% for the corresponding period as per WUENIC.

At the current rate of 61 percent of Penta 3 and 59 percent of Measles coverage (Mini EDHS 2019), the number of unimmunized children for Penta 3 and Measles in the country is estimated to be ~1,210,144 and 1,281,321 respectively (Table 3).

Table 3. Number of unvaccinated children for penta3 and measles estimated from DHS 2016 and mini EDHS 2019, Ethiopia.

Year	Surviving infant	min EDHS 2019 coverage		#Vaccinated		#Unvaccinated	
		Penta 3	MCV1	Penta3	MCV1		
2016	2,951,902	53%	54%	1,564,508	1,594,027	1,387,394	1,357,875
2019	3,094,998	61%	59%	1,884,854	1,813,669	1,210,144	1,281,329

WHO and UNICEF National Estimate for Immunization Coverage (WUNEIC)

According to 2018 WUNEIC estimate with 72% Penta 3 and 61 % Measles, the number of unimmunized children for Penta3 and Measles in the country is estimated to be ~846,599 and 1,268,949 respectively (Fig 8).

Figure 8 Trend of unvaccinated children for Penta 3 and MCV1 (WUNEIC 201-2018)

Year	Surviving infants	WUNEIC		Unvaccinated	
		Penta3	MCV1	Penta3	MCV1
2013	2,742,695	72%	62%	767,955	1,042,224
2014	2,804,717	77%	70%	645,085	841,415
2015	2,885,510	77%	70%	663,667	865,653
2016	2,951,902	77%	70%	678,937	885,571
2017	3,016,878	73%	65%	814,557	1,055,907
2018	3,094,997	72%	59%	866,599	1,268,949

The analysis of EDHS 2019, data indicated below in table 5 shows that,

- The three agrarian regions of Amhara, Oromia, and SNNPR that consists 80% of the population and 82% surviving infants in the country contribute to 82% of the unvaccinated children in the country.
- Somali and Afar regions consist of 8% of the total population and 8% of the surviving infants in the country contribute to 14% of unvaccinated children.

- The remaining regions consist of 12% of the population and surviving infants contribute to 4% of the unvaccinated children in the country.

However, in previous years, as the administrative data reports higher coverage compared with survey, the actual number of unvaccinated children in the country was masked and adequate attention has not been given at national and subnational levels. Addressing inequity in immunization requires investments to and equity focused program design and implementation to reach the disadvantaged population

Table 5 Geographical location Unvaccinated children found (source Mini – DHIS 2019)

Region	Total population EFY2011 (2018/2019)	#SI	% of total population	% of surviving infants	% of children vaccinated with Penta3	% of children vaccinated with MCV1	# of children unvaccinated for Penta 3	# children unvaccinated MCV1
Oromia	38,170,03	1,204,77	37.9	39.1	53.6	48.7	559,016	618,050
Amhara	22,191,89	686,607	22.0	22	80.2	71.3	135,948	197,056
SNNP	20,551,60	611,538	20.4	20.9	50.8	58.2	300,877	255,623
Somali	6,202,766	181,755	6.2	5.8	26.2	31.1	134,135	125,229
Tigray	5,541,736	174,483	5.5	5.7	84.4	82.9	27,219	29,837
Addis Ababa	3,686,068	115,486	3.7	2.6	93.1	90.6	4,273	10,856
Afar	1,958,491	51,154	1.9	1.7	25.9	28.5	37,905	36,575
B/Gumu	1,141,275	33,461	1.1	1.1	81.2	77.4	6,291	7,562
Diredaw	506,639	15,015	0.5	0.5	74.2	74.2	3,874	3,874
Gambell	483,098	13,280	0.5	0.4	65	57.6	4,648	5,631
Harari	263,656	7,441	0.3	0.2	52.8	58.7	3,512	3,073
National	100,697,2	3,094,99			60.9%	58.6%	1,210,14	1,281,32

Determinants of poor immunization uptake

As indicated in subsequent studies, socio-economic status, geographic areas, place where child lives are key determinants of child vaccination in Ethiopia. Lack of awareness about benefit of immunization, not knowing date and place of vaccination, fear of multiple injection and fear of AEFI, obstacles such as illness of child or mother, family problem, care taker being busy, rumors, geographic distance and topographic to go to service delivery points, unfriendly service provider, vaccinator absent, other

competing priorities on the date of vaccination, frequent appointments for multi dose vaccines such as measles and BCG, inadequate knowledge, skill and motivation of service providers, stock-out of vaccines on the date of visit, lack of transportation to go to outreach sites are identified as key barriers for vaccination completion. Therefore, motivation of health workers, supportive supervisor, training and improving vaccine and logistic supply to service delivery points is critical.

Major barriers related to low immunization coverage in poor performing areas in Ethiopia are:

- During the previous 2-3 years public grievance driven political reform and following conflicts has affected service provision.
- Fatigue of community health system (HEP and community platform WHDA) has affected the vaccination services particularly in villages far from the health facilities
- High turnover of staff at all level has implication on the quality of immunization services
- Unreliable data (poor quality) particularly at woreda and health facility level
- Shortage of registration book, tools and tally sheet
- Inadequate budget allocation for immunization program
- Limited capacity of EPI managers at zonal and woreda level to conduct equity focused Immunization Data analysis.

Planned activities/ Next step

- Map conflict affected zones and woreda and re-establish routine immunization service delivery
- Develop tailored strategies that identify under vaccinated and unvaccinated using RED/REC approach
- Scale up the implementation of full component of REC/RED and PIRI strategies through familiarization and planning meetings in low performing zones/woredas /PHCUs
- Build the capacity of EPI managers at subnational level to analyze immunization data using equity lens and to cover large numbers of previously unreached or underserved communities.
- Routinely influence political leaders and parliamentarians using immunization dashboard to allocate domestic resources for Immunization at national and regional levels.
- Validation of reported administrative data at service delivery level regularly
- Ensure availability of vaccines and logistics and data recoding tools
- Regular monitoring of immunization performance through review meetings and supportive supervision
- Demand generation using community platforms by using context specific strategies for high risk

communities.

4.3. Immunization supply chain:

In line with Gavi's immunization supply chain strategy, positive achievements have been added on each of the five supply chain fundamentals.

System Design and Vaccine Transition from FMOH to EPSA

Using a phase-based transition approaches, currently, EPSA had managed distribution of vaccine and supplies to 825 of woredas (96%) all over the country. The agency has also started delivering vaccines and related supplies to 780 health centers and hospitals to accomplish the mid-year immunization supply chain strategic plan (2018 to 2023), reaching 1,500 health facilities by 2020.

Funding from gov't treasury was committed to implement the direct delivery to health facilities. Health facilities along to and in the woredas capital were targeted for direct delivery. In the last two years, Effective Vaccine Management (EVM) activities were piloted in different woredas and health facilities under 12 zones and Addis Ababa city administration. The end line sample assessment showed the average score of 83% with 75% facilities scored more than 80% which was very encouraging and based on the end-line assessment regions such as Amhara, B/Gumuz and others started to scale the best practice to regional level.

With the objective to review the status of vaccine and cold chain management, EPSA also conducted EVM self-assessment at 12 hubs and central vaccine store. Based on the findings of EVM assessment and guide, an improvement plan for effective vaccine management to deliver safe and potent vaccines to children was developed and its implementation is on good progress.

The nationwide EVM assessment conducted in March-May 2019 and reported a slight improvement in most of the indicators at national and subnational level. Overall, the results showed that there has been an improvement at the primary store (central National), Sub-national level (hubs), whereas the Woreda and health facility level have shown a decline in the scores.

EPSA conducted mid-year Pharmaceuticals strategic transformation plan (PSTP) and business process reengineering (BPT).

The agency has also handover the outsourcing of the refrigerated truck cooling unit maintenance from JSI to handle the contact by itself.

Supply Chain Leadership

Cold chain Technicians and Biomedical engineers received training on cold chain equipment maintenance, and new CCE installation through continues practical trainings: 56 biomedical engineers from Oromia, SNNPR and AA from Zones and Hospital trained on CCE maintenance for three weeks (theoretical and practical). Cold chain technicians' capacity built on cold room maintenance, installations and relocation at different sites (Jakros, EPSA head office, Semera and Assosa hubs, etc.) through on job training.

Experience sharing on immunization supply chain system design with the global supply chain experts was conducted by participating country supply chain leaders and experts at Abidjan, Cote D'Ivoire.

Cold chain users' level training was given to 750 immunization providers and their supervisors drawn from districts and health facilities from Oromia, Addis Ababa and Somali regions in this fiscal year.

Development and adoption of audiovisual learning tools on vaccine and cold chain management is on progress, recruitment of expert for text translation service for different local language is in process.

Data for management

Accurate, complete and timely data are essential in managing the supply chain, assessing its performance over time and identifying opportunities for improvement. Ethiopia uses a combination of integrated and interoperable information systems to manage vaccines within EPSA's supply chain.

VITAS is a transactional system that provides the data for the FANOS dashboards with all commodity data (quantities, costs, dates, product information, source, recipients etc.) captured in the VITAS database.

The system was upgraded to manage vaccines and deployed to cold rooms, and reports and FANOS dashboards were created for EPSA, FMOH, the EPI programme and other stakeholders to provide data for decision making.

The mobile application mBraná deployed at 763 woredas to manage vaccine inventories at woreda cold stores. mBraná allows for seamless supply chain management including electronic ordering, being interoperable with higher level stock management systems (central and regional/hub levels) to provide real time data visibility. To support and improve stock management and data visibility, phased role out of an eLMIS recommended as a priority, mBraná piloted in 17 health facilities in Tigray and Addis Ababa city administrations and to be scale up to the other health facilities.

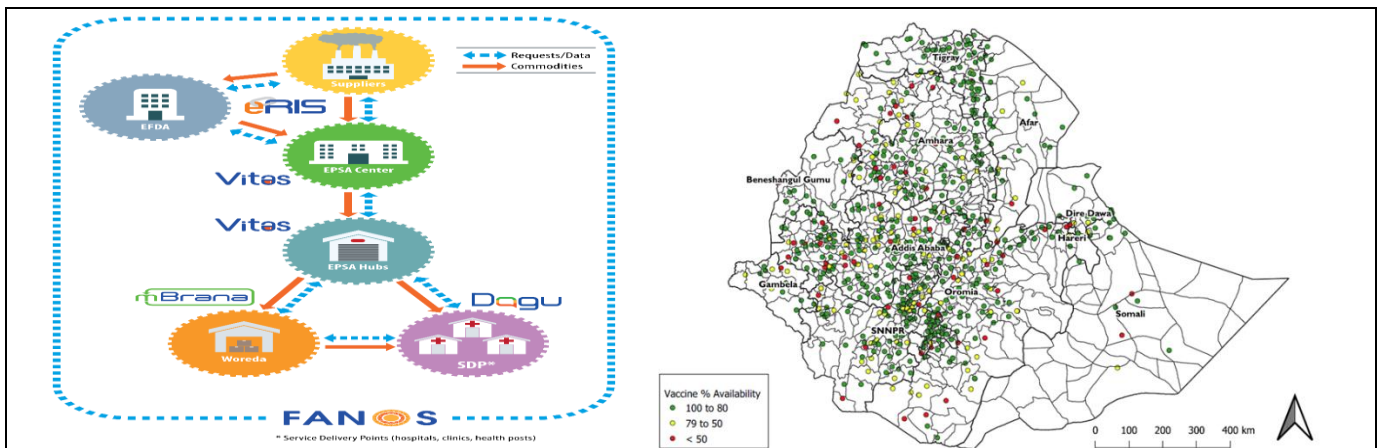


Figure 6. Supply chain information system and mBrana deployment sites

Visibility of Vaccines (ViVa) page opened for Ethiopia to monitor vaccine procurement, shipment, clearance and stock on pipeline.

Cold Chain Equipment Management

Regular cold room maintenance (emergency repair and regular maintenance) conducted. As a result, over 27 cold rooms maintained (both corrective and preventive) at different hubs. Five new cold rooms installation at different PSA hubs: (AA-Hana Mariam (2), AA- Jackros (1) Semera (1) & Assosa (1) and as a result of new (5) cold room installation cold storage volume increased by 462M3 gross.

Re-location of cold rooms from RHB/Zonal HO to PSA compound made in five sites (Diredawa, Semera, Dessie, Nekemte & Assosa).

Monitoring of cold rooms temperature through installing of Remote Temperature Monitoring devices (RTMDs) is being conducted to all EPSA hubs, (except Negele hub). In addition, temperature monitoring devices with GPS to monitor the temperatures of refrigerator trucks equipped with RTMD recently and using data for action will start soon.

Renovation/ Refurbishment of electrical & ceiling systems conducted at Assosa hub with same standard as that of Semera hub (refurbished last year). Temperature data recording, reviewing and reporting to the next level initiated in targeted zones and regions.

Final evaluation for the Passive Vaccine Storage Devices following field follow up project. The report indicated that the PVSD used in the field trial follow -up was useful and easy-to-use devices in support of vaccination programs at health post level.

There are ongoing activities which support monitoring of temperature for refrigerators (SDDs) remotely and make it visible at national and sub national level (using centrally managed dashboard).

To conduct temperature mapping and monitoring study, sales order posted to procure 500

programmable temperature loggers.

Preparation for national CCEI by EPHI is on progress; proposal developed, and resource mobilized from donors (BMGF), data collection tool and guideline developed, data collectors and supervisors recruitment initiated and training is going to be conducted.

Additional capacities through Gavi HSS & other funding sources.

- One of the reasons behind low immunization outcome is lack of and or sub optimal cold chain equipment at service delivery point. To this end, Gavi has committed resource for procurement and installation of CCEs at all level.
- The country procured over 6,134 Solar Direct Drive refrigerators (SDDs) and installed over 99.8% of it to accommodate newly introduced vaccine, replacing the old and expanding immunization service to hard and difficult to reach areas. These efforts bring up the total health post with cold chain equipment (optimal and non-optimal) providing immunization service point estimated to more than 50%.
- Additionally, the equipment in the CCEOP application includes about 5,000 Solar Direct Drive refrigerators, and 655 Ice-Lined Refrigerators with voltage regulator. The first phase procurement finalized and expected to be deployed in 2019. Existing CCE at woreda cold stores will be re-positioned as needed and non-functional CCE will be repaired until woreda cold stores are bypassed through PSA's supply chain strategy, at which point the remaining CCE equipment will be relocated to health facilities.
- The combined SDG-PF and the CCEOP funding will enable Ethiopia to cover 100% of the requirement of CCE need at the health center level and close to 70% for major health posts located in different regions.
- The additional Gavi HSS fund which was targeted towards addressing coverage and equity will contribute a significant portion on addressing low immunization outcomes (missed opportunities, frequent outbreaks). Proposal developed and submitted for Gavi, from which 37% of the budget share accounted to enhance the vaccine and cold chain management at national and subnational levels (EPSA).

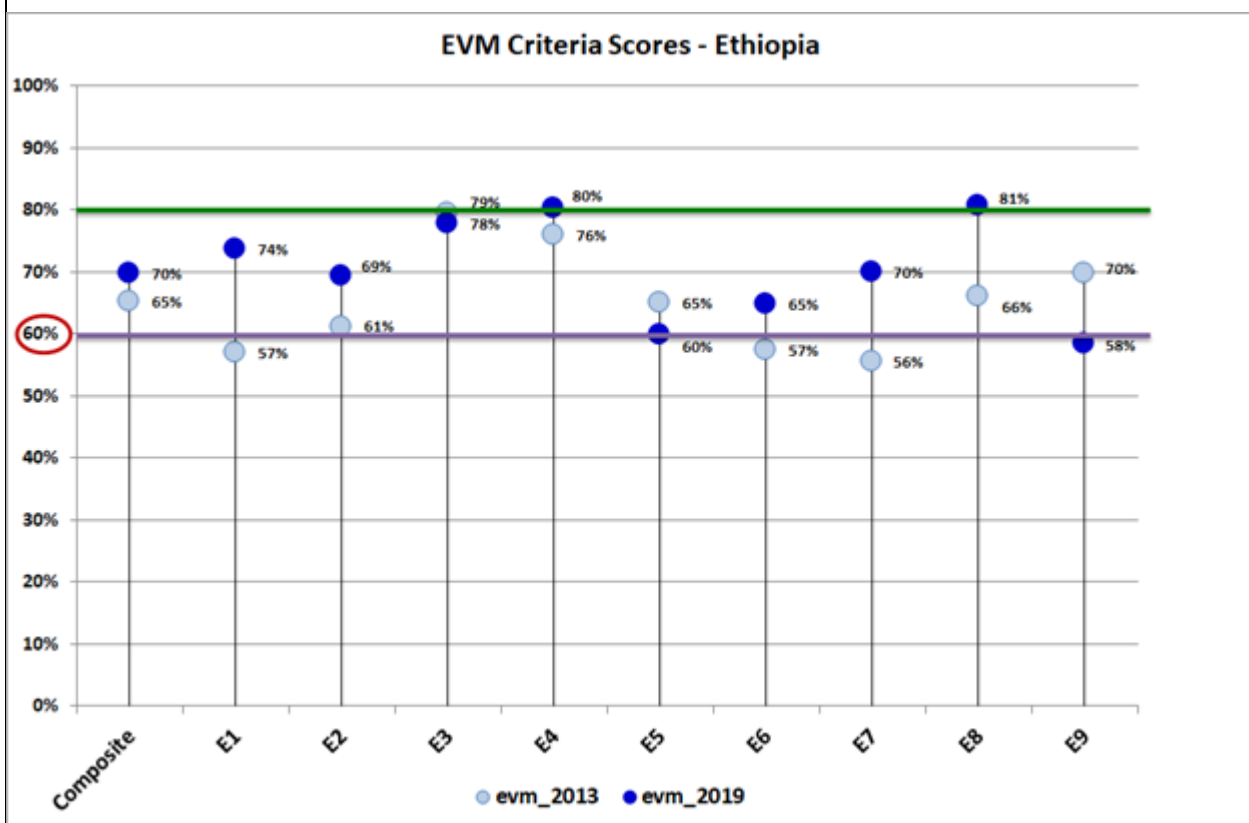
Continuous improvement Planning

The national EVM assessment was conducted in 2019 and the final draft report showed that a slight improvement in most of the indicators at national and subnational level. Overall, the results show that there has been an improvement at the primary store (National), Sub-national level, whereas the Woreda

and health facility level have shown a decline in the score.

Adequacy of cold and dry storage capacity, good conditions of building, good staff knowledge on vaccine management (VVM, Shake test, etc.) and availability of Standard Operation Procedures (SOPs) are of points identified as strength. However, lack of proper documentation of temperature review activities and actions taking, lack of using temperature monitoring devices during vaccine transportation, lack of up-to-date Temperature monitoring studies and mapping data, timely updating of transactions and archiving vaccines and supplies ledgers and lack of regular wastage monitoring are some of the gaps identified.

Figure 7. Assessment results EVMA 2013 & 2019 – Composite and Criteria score



There is a marked variation among the health institutions which needs further analysis during development of continues improvement plan (cIP).

Figure 8. EVM performance per supply chain level for 2013 and 2019

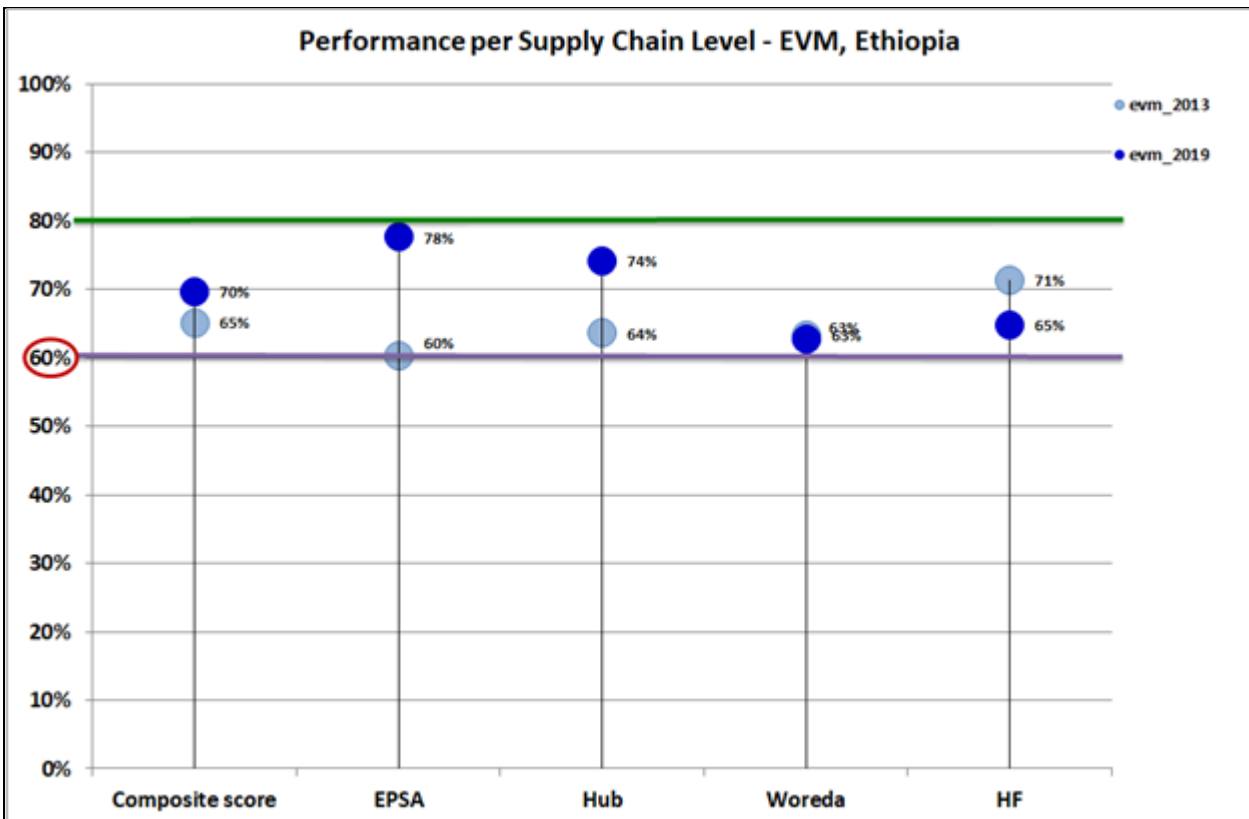
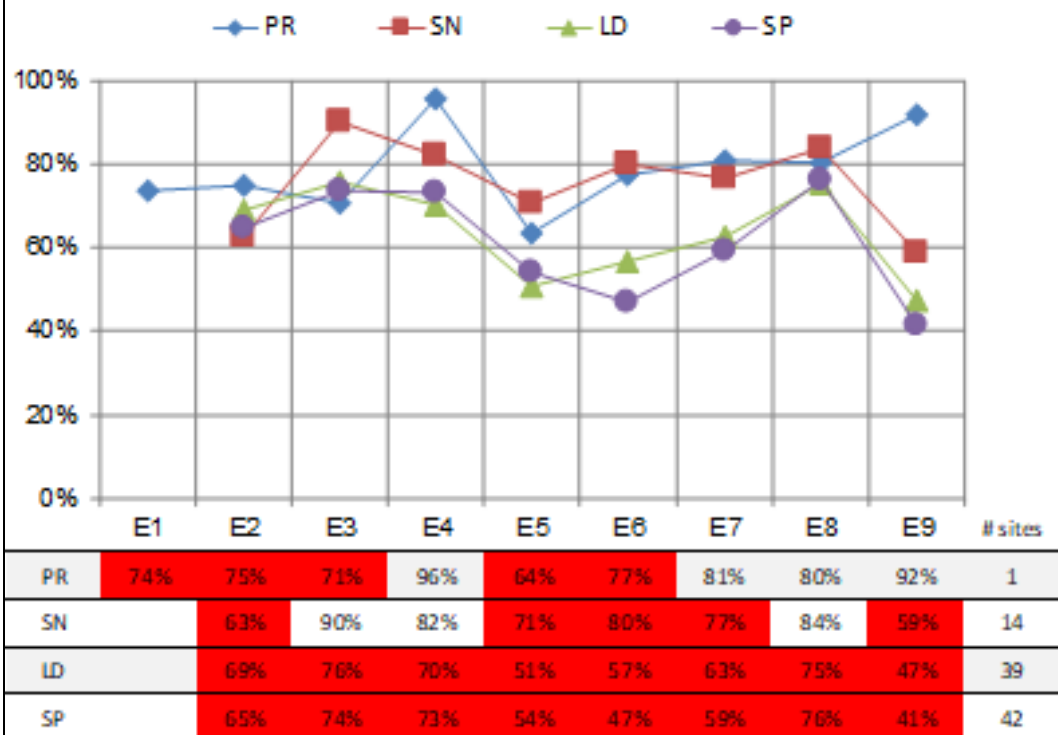


Figure 9: EVM assessment results per supply chain level and criteria for 2019



Vaccine related issues which may have been highlighted for the vaccine renewals

Vaccine forecasting at the national level is usually based on the national target and estimated coverage

which the country is anticipating to reach. This trend has showed limitations on accuracy of forecast which in turn has affected the inventory management system. To this end, the country has been trying to improve inventory data visibility along the supply chain levels. To mention some, a standard VRF (both electronic and manual) has been used for reporting and requisition of vaccines and supplies at each level. Monthly stock status reporting and monitoring was also conducted at national and subnational levels. The newly designed mobile-based inventory management system (mBrana) which has been scaled up for about 763 woredas showed a significant improvement on the visibility of inventory at district level. Real time data visibility is getting ensured by using the Fanos dashboard at subnational level and the mBrana at district level. Though, higher level of stock out reported through SARA, the inventory at woreda is indicated to be more than 80% which actually needs further investigation and action. Due to the above reasons, this year`s vaccine forecasting was based on consumption method. Average vaccine consumption for the previous three years was used to forecast for 2020.

The DHIS2 is also updated to capture vaccine wastage rates at service delivery points. There are initiatives to monitor open and unopened vial wastage taking the data from the DHIS2.

Major Challenges on immunization supply chain

- Resource constraint limited the full scale-up of last mile delivery. On top of this, those demanding hard to reach and pastoralist areas are yet uncovered even for the woreda level vaccine delivery.
- Limitation on CCE maintenance activities, human resource, spare parts management
- Delay of CCEI due to competing priorities also affected timely evidence based cold chain expansion and rehabilitation strategic plan development.
- Delayed clearance of vaccine from airport due to shortage of cold storage space, compromising vaccine quality and huge demurrage cost.
- Limited stock management system at lower level (weak management of wastage rate, utilization of VRF, data analysis and utilization cultures and commitment)
- Low and a marked variation among the health institutions in national EVMA assessment (least score at the woreda and health institutions).

Planned activities/ Next steps

- Continue scaling up of cold chain equipment distribution, installation and build the capacity of HWs on vaccine management
- Finalizing EVM assessment report and development of cIP & follow up the implementation.
- Reviewing and supporting the implementation of iSCM strategic plan & SOPs, and provide feedbacks.

- Conducting impact assessment on deployment of the 6000 SDDs and share findings with stakeholders
- Finalizing national CCE inventory and based on the report revise cold chain rehabilitation and expansion plan
- Enhance logistics data triangulation and analysis using the admin report (coverage and wastage rates reported with DHIS2) and other data sources at national and sub national level, share findings with the regional officials and relevant stakeholders.
- Conduct 6000 SDDs installation project evaluation
- Implementation of the initial phase and follow up for scale up phase for the Gavi CCEOP deployments
- Coordinate the effort of system ownership on the newly designed LMIS (mBrana, Dashboards, etc.)
- Testing (piloting) new technologies to reach the last mile (Drone delivery)

4.4. Demand generation:

Major achievements

Crisis and risk communication for EPI

During the reporting period, the national capacity on HPV crisis and risk communication created through the development of tools and guidelines, installation of crisis communication teams (CCT), assessment of the national and subnational capacity in crisis and risk communication. Key stakeholders also involved in preventing and responding with communication activities to a vaccine-related event; social listening with Talkwallker[®] for identifying rumors around vaccines on social media.

A crisis communication guideline is developed and disseminated to all the regions for contextualization. Currently, a national crisis communication team is developed within the EPI program. On top of this, 44 participants comprised from federal I and regional level EPI team coordinator, EPI and Family Planning officers, national and regional Public Relations personnel and National crisis communication team members trained on crisis and risk communication.

Coordination and partnerships to raise community awareness:

Regional communication TWGs revitalized in all regions by optimizing the use of resources from different partners. A total of 9 C4D consultants organized joint planning sessions on communication for HPV and MCV2 and supported the demand creation activities using different communication strategies.

Building social and political will around EPI:

The 9th African Vaccination Week organized and celebrated in Somali region to create awareness on routine immunization, MCV2, HPV and Polio HOA outbreak response. High level advocacy meeting with regional government and different stakeholder was conducted in Somali region to gain decision makers commitment and engagement to support the national effort in improving routine immunization coverage and vaccine preventable outbreak response in the region. The coordination between Health and education at different levels improved during the implementation of HPV1 and HPV2.

Shaping social norms and reinforcing awareness on EPI by engaging with gate keepers and key influential and through mass communication:

Key influential and gate keepers identified for promoting and building trust in immunization services, especially related to increase the HPV and MCV2 vaccine uptake. Various audio and video communication materials were produced and disseminated through different national and regional channels including Education sector's channels.

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

MNCH integrated EPI communication plans are available in Oromia, Amhara, Gambella, Afar and Addis Ababa. Consultants were recruited to support the regions in developing and monitoring the implementation of the communication activities. Intensive communication activities were conducted in Gambella with cascaded communication training for 800 HEWs and community outreach agents.

Contributing to the improvement of quality of services through social accountability mechanisms:

To strengthen community feedback on the quality of health services, the community score card (CSC) is implemented under the leadership of the Reform and Good Governance Directorate/MoH. A technical working group is put in place, including key stakeholders from government and partners. The EPI program is one of the key members of the TWG. To date, 414 woredas are implementing the CSC, which helps in reducing low quality of services related to poor IPC by the HEWs, vaccine and other drug stock outs and health service interruption.

Evidence generation for better EPI communication programming:

Two studies namely EPI/MNCH key barrier analysis and Impact assessment of the communication activities on population's knowledge on and attitude towards EPI are under implementation and will be finalized by the end of 2019.

Major Challenges in demand creation

Successes in increasing the immunization coverage in the last 15 to 20 years are potentially attributable to the implementation of the Health extension program with around 38,000 HEWs deployed throughout

the country, who are working closely with around 3,000,000 community volunteers (WDAs).

However, the program is currently demonstrating a decrease in its performance. Furthermore, the network of community volunteers (WDAs) – which is not only dedicated to the health sector needs as per the design of the program – is also less operational. One of the main causes of this situation is the declared overburden of these community structures with other non-health related assignments. The HEP is the backbone of the community health service delivery in Ethiopia, especially in rural areas. Therefore, any issues affecting the HEP will affect the Immunization program especially in demand generation. Also, IPC skills by HEWs remains limited. This might be emanated from from the HEP issues mentioned above, potentially impacting on the motivation of the HEWs.

During new vaccine introduction and immunization campaign, demand generation activities are well accelerated at all levels yet such an effort didn't sustain for routine immunization. In addition to this, there is no clear HR structure and financial support for demand generation activities at subnational and lower level.

It was also reported that hard to reach areas are not accessed by vaccination teams, this might imply the need for more collaboration with the local community for reaching those areas. As per the EMDHS national vaccination dropout rate analysis, nine regions out of 11 are experiencing high DOR which indicates poor utilization. This finding is supported by the study result from “determinants of poor immunization uptake” which reveals social determinants that must be addressed through demand generation activities.

Regarding MCV2, it was claimed the reasons for low coverage is due to limited caregivers knowledge on 2nd YL vaccination, inability to trace the right age, underutilization of job-aids and EPI IEC materials for social mobilization by HEWs and community volunteers and the like. However, some other reasons not related to demand generation were also reported both for HPV2 and MCV2 and need to be addressed holistically, implying one catch up plan for both supply and demand side barriers.

The “Determinants of poor immunization uptake” study done in Amhara, SNNP, Oromia and Addis Ababa (Aug 2019) revealed social and structural determinants that must be addressed through demand generation and social accountability interventions are crucial. Among them, mothers and caretakers do not know where to go, forget the date of appointment, don't believe that it's important to go to health facility unless the child is sick, mothers do not have knowledge on the importance of vaccination. Some respondents also mentioned husband's decision making and the cost of transport as a determinant factor. It was also mentioned, the mistreat by HEWs, fear of multiple injections, mothers fear of acceptance by HEWs (those mothers who gave birth at home and visiting health facility for vaccination),

absence of vaccinators, vaccine stock outs and loss of vaccination card are some of the determinant factors for poor immunization service uptake. Change of place of residence (mobility) might also influence vaccine uptake, particularly those young mothers who gave birth travelling to their mother's home and start vaccination there but forget to bring their vaccination card. Also, rural people moving to urban areas don't know where to go for vaccination. Geographical accessibility was rarely mentioned during this study.

Demand generation next steps

To tackle the bottlenecks on demand generation activities and the reasons for children missing vaccination mentioned above, the following key activities will be conducted to ensure improved demand on RI. i) focused demand generation activities in the most underserved areas

ii) strengthening community engagement and interpersonal communication between HEWs / community volunteers and the community members for tailored solutions to local bottlenecks to RI

iii) improving social accountability for better quality of immunization services

iv) Strengthening coordination and monitoring of demand generation activities involving health programmes, partners including CSOs at federal and regional levels.

To achieve these objectives, the following interventions will be implemented:

Investment area 1: Enhance service quality and accountability

- Pursue efforts in strengthening the IPC and community engagement skills of HEWs by identifying and implementing recommendations from the "Assessment of the Immunization IPC manual" To improve frontline worker skills in IPC and ability to answer caregiver's questions
- Support the implementation of the community score card to help tailoring services (time, location, care, etc.) to meet the needs of caregivers
- Build HEW's capacity in monitoring SBCC activities, supportive supervision and quality assurance

Investment area 2: Engaging communities and shaping social norms

- Enhance community-based monitoring of vaccine eligible children by engaging community leaders and volunteers in monitoring the vaccination status of individual children to help guide reminder and motivational visits
- Pursue efforts in putting in place a project for mobile phone reminders of EPI appointments, linked to the national electronic immunization registry (eCHIS) to help remind caregivers to vaccinate on time and reduce drop outs
- Reinforce community participation, especially women, in the planning and monitoring of immunization sessions in the framework of the RED/REC (through deployment of C4D technical

assistants)

Investment area 3: Managing risk and building resilience

- Installation of the regional crisis communication teams and cascaded capacity building on the national crisis communication guideline to increase national capacity in risk and crisis communications, to ensure effective and timely responses to AEFI, vaccine related events and vaccine hesitancy
- Strengthen social listening mechanism already put in place with Talkwalker[®] to pick up events, rumours and misinformation to guide quick response by Government and partners in country

Investment area 4: Building political will

- Strengthen SBCC coordination at regional level, including programmes, particularly of EPI and HEP, and partners including local CSOs; Development of one plan focused on priority geographical areas and the most underserved population subgroups to optimize use of resources (human, financial, material) from different stakeholders for reaching common goals
- Advocacy for resource mobilization for the implementation of the one plan to increase resources used for demand generation in Immunization
- Build SBCC coordination structures capacity in systematically engaging women at all levels and key steps of the programming

Investment area 5: Using social data for learning and decision making

- Pursue already started efforts on developing tailored behaviour and social change interventions to reach high risk communities in remote areas, pastoralist context and urban slums – adjust strategies and actions plans to the results of the upcoming studies on immunization for evidence-based interventions focusing on hard to reach communities

Major challenges in Immunization coverage and Equity

- Children from rural areas, lowest wealth quintile and from non-educated mothers tend to receive lower DTP3 vaccines. However, analysis of routine Immunization data from administrative sources indicate only geographic variation in DPT coverage.
- The aggregated administrative data reports higher coverage compared with survey and masks inequity in immunization coverage in high-risk communities (urban slum, remote rural, pastoralist and conflict affected areas). 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.

- Limited capacity of EPI managers at zonal and woreda level to conduct Immunization Data in depth analysis to examine the reasons for unvaccinated and under vaccinated populations.
- Immunization coverage variation from various sources of data such as administrative, WHO-UNICEF estimate of immunization coverage and survey remain large.
- 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.
- Constraints in data quality management, archiving and analysis at service delivery points: Numerous assessments, review meetings and routine supervisions exercises have remarked on the poor quality of data collection compilation and absence of data analysis for action. Immunization coverage data are not used for planning purposes nor for shaping decisions on community mobilization. Furthermore, updated, monitoring charts and stock ledger were often unavailable or unused in sites surveyed. The use of defaulter tracing is not a common practice across regions and in some regions tally sheets and immunization registries, are not universally used or identified at health facility level.
- Lack of standardized immunization dashboard to routinely influence political leaders and parliamentarians to allocate domestic resources for Immunization and national and regional levels. Addressing inequity requires investments to reach the disadvantaged communities.

5. PERFORMANCE OF GAVI SUPPORT

5.1. 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, budget and workplan, and significant deviations from plans (e.g. implementation delays, low expenditure rates, etc.), using the below table.**

Objective 1	
Objective of the HSS grant (as per the HSS proposal 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 changes in technical assistance ⁵)	
Objective 2:	

Objective of the HSS grant (as per the HSS proposal 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 changes in technical assistance ⁵)	
Objective 3:	
Objective of the HSS grant (as per the HSS proposal 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 changes in technical assistance ⁵	

In the text box below, briefly describe:

- ***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/national targets. Which indicators in the GPF were achieved / impacted by the activities conducted?
- How Gavi support is ***contributing to address the key drivers of low immunisation*** outcomes?
- 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.

⁵ 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 extent 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.

- *Planned **budget reallocations** (please attach the revised budget, using the Gavi budget template).*
- *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?*
- ***Complementarity and synergies with other donor support** (e.g. the Global Fund, Global Financing Facility)*
- ***Private Sector and INFUSE⁶ partnerships** and key outcomes (e.g. increasing capacity building and demand, improving service delivery and data management). Please outline the sources (e.g. Private sector contributions, Gavi matching Fund and Gavi core funding – HSS/PEF) and amount of funding.*
- ***Civil Society Organisation (CSO) participation** in service delivery and the funding modality (i.e. whether support provided through Gavi’s HSS or other donor funding).*

Achievements against agreed targets

The Government of Ethiopia values the GAVI’s support for the country’s immunization programme with its NVS, NVI, SIAs, HSS and CCEOP initiatives. In the year 2018, Gavi approved USD 59,665,136 for NVS and ongoing support through HSS and CCEOP worth of close to USD 100 million and 20,875,664, respectively are on progress. The NVS covers cost of pentavalent, PCV, Rota and IPV vaccines whereas the Government co-finances 0.20 USD per dose for the new vaccines except IPV (which is entirely covered by the NVS). According to the 2018, Gavi Grant Performance framework, the agreed country targets for Penta 3, PCV3 and Rota 2 were: 98%, 96% and 95%, respectively (Table 6). The country achieved over 90% which is closer to the targets set for all these antigens. The dropout rate for all vaccines is close to 5% and shows improving trend. In 2019, the revised HMIS indicators are in use and it includes the indicators on HPV, MCV2 and OPV3 as well."

⁶ INFUSE was launched by the Gavi Alliance to help bridge the gap between the supply and demand side for new technologies and innovations and to create a market place for these innovations.

Table 6. Performance of Gavi NVS, 2018

	Penta 3	PCV3	Rota 2	DPT1-DPT3 DOR	RV1-RV2 DOR	IPV
Country	98%	96%	95%	4.1%	3.1%	94%
Target						
JRF/Admin	97%	96%	95%	7%	12.8%	No data
Status	Achieved	Achieved	Achieved	Not achieved	Not achieved	N/A

5.2. 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:

- **Vaccine-related issues which may have been highlighted for the vaccine renewals**, such as challenges on stock management (overstock, stock-outs, significant consumption variations etc.), wastage rates, target assumptions, annual consumption trend, quantification data triangulation, etc., and **plans to address them**.
- **NVS introductions and switches:** If country has recently introduced or switched the product or presentation of an existing vaccine, then the country is requested to highlight the performance (coverage) and lessons learned from the introduction/switch, key implementation challenges and the next steps to address them.
- **Campaigns/SIA:** Provide information on recent campaigns (since last JA) and key results of the post-campaign survey, including the coverage achieved. If achieved coverage was low, provide reasons. Provide other key lessons learned and the next steps to address them. If post-campaign survey has not been conducted, highlight reasons for the delay and the expected timelines. Are there any key observations concerning how the operational cost support was 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 levels⁷) 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 or decisions to switch vaccine product, presentation or schedule) **and associated changes in technical assistance⁵.**

Vaccine related issues which may have been highlighted for the vaccine renewals ... see section 4.3

NVS introductions and switches

HPV vaccination

The country has introduced HPV vaccine for a single age cohort of 14-year-old adolescent girls using in and out of schools platform. Formative assessment was done in three selected regions to determine community perception on cervical cancer and HPV vaccination prior to the scale-up at national level. Given the various inputs into the demonstration program, cost analysis was done to estimate vaccine cost for each fully vaccinated girl. Guidelines, IEC materials and other recording and reporting tools, were produced and printed. Tally sheets and Vaccination cards were translated to different local languages. All regions developed micro-plan and submitted to FMOH. Cold chain capacity was done and training of supervisors and vaccinators were conducted in a cascaded manner including school principals at all levels. Readiness Assessment Tool (RAT) using ODK platform was conducted in all regions. Advocacy, social mobilization and effective communication interventions were made including sensitization workshop to media professionals, Public Relations officers and other key stakeholders engaging multiple channels. FMOH State Minister launched HPV1 Vaccination on the 3rd of December, 2018, targeting 1,226,291 girls, in "Tesfa Kokeb" first and second cycle primary school. A total of 1,179,126 girls were vaccinated for HPV 1 showing administrative coverage of (96.2%).

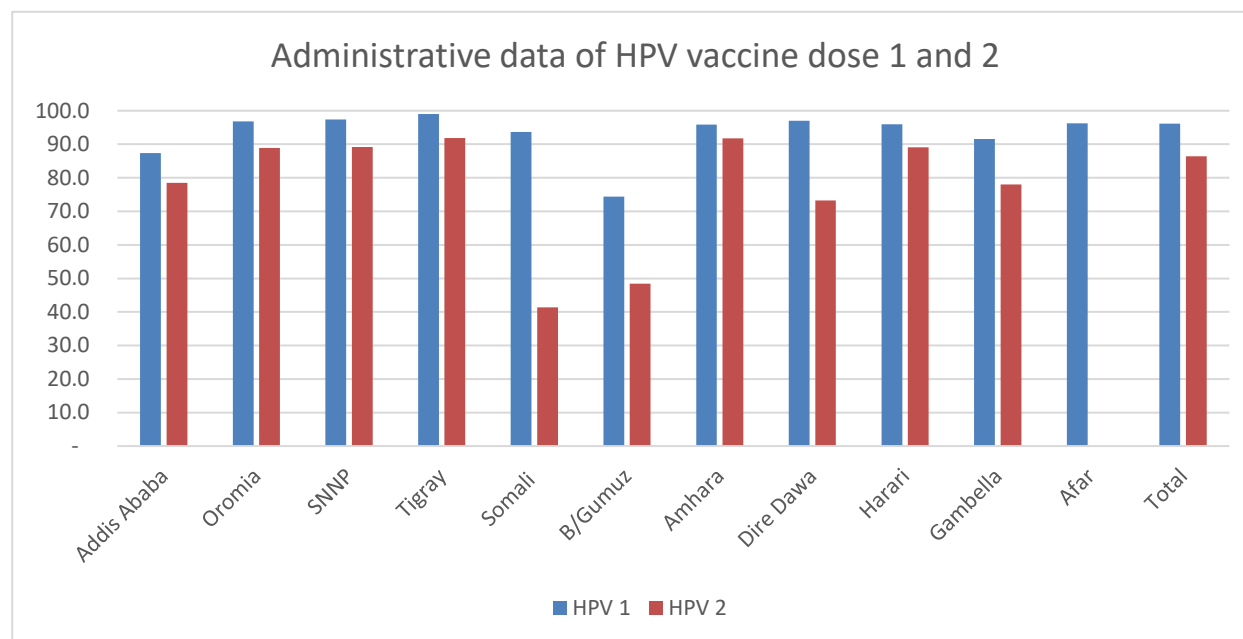
Second dose of HPV vaccination was initiated six months later on the first week of June, 2019 and administered to girls that received the first dose. The vaccination was given to target girls residing in 845 woredas. Total of 1,079,282 girls vaccinated for HPV 2. Preliminary administrative coverage of HPV2, shows 88%. The reported coverage varies among regions with the highest 92% in Tigray and the lowest 61.2% in Benishangul Gumuz region Afar Region is yet to conduct HPV2 in October 2019 along the second year of HPV Vaccination.

Following HPV1 and HPV2 Vaccination, review meetings were conducted in 5 regions (Amhara, Oromia, SNNPR,

⁷ Please refer to the JA analysis guidance document for additional information on the expected analyses for measles and rubella.

Tigray and Addis Ababa). The review meeting created opportunity to review routine immunization performances as well.

Figure 11: HPV1 and 2 coverages by Regions, 2019 Ethiopia. (Source FMOH)



Lessons learned from HPV introduction

- Strong collaboration between the health and Education sectors particularly at lower level resulted in effective community mobilization and HPV vaccination performances using the school vaccine delivery strategy
- The failure to synchronize HPV Vaccination schedule with School calendar in the first cohort HPV vaccination is well taken to best fit the HPV Vaccination schedule with School calendar for subsequent HPV vaccinations
- Strong coordination and leadership by the MoH and engagement of all EPI partners in speeding up the HPV Vaccine introduction with full commitment to realize HPV introduction and the efforts made to mobilize resources for key preparatory activities were best practices to scale for future endeavors.

Major Challenges

- Postponement of MAC Implementation due to global HPV Vaccine supply shortage which will delay routinizing HPV Vaccination to 9 years old girls
- Issue of denominator(there was no readily available data source on single age cohort, 14 years old girls) and difficulty of age determination at time of vaccination
- Operational budget deficit resulted in delay of some key activities like; printing and social mobilization

activities

- Rumors/misconceptions
- Failure to Vaccinate significant number of the out of school girls
- Security issues(IDP, Conflicts)

Next Steps /Priorities

- Advocacy for adequate funding and Supply
- Map the correct estimate of 14 years old girls
- Conduct MAC HPV coverage from 9 to 14 years and routinely vaccinate 9 years old girls
- Implement School, community outreach and HFs strategies to Vaccinate both the In and out of schools girls simultaneously.
- Strengthen tailored communication strategies and crisis communication
- Conduct PIE
- Document and utilize HPV Vaccination lessons to improve future HPV vaccination performances

MCV2 introduction

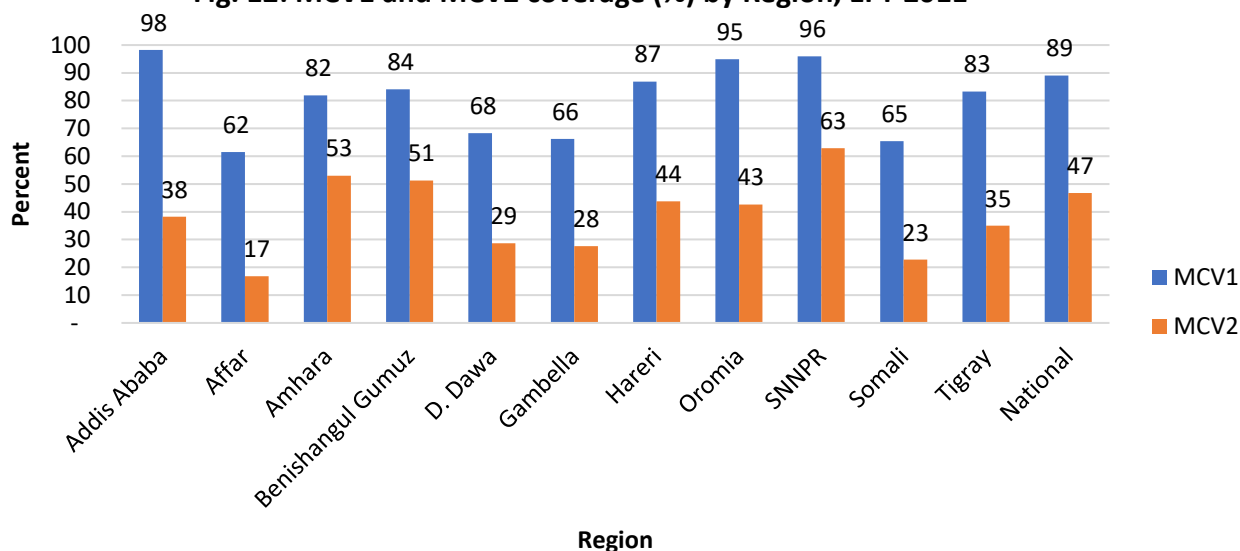
Ethiopia has introduced MCV2 in February 2019, after readiness assessed to introduce MCV2 at all levels. MCV2 was launched by State Minister of Health on February 2019 at Welenchiti Health center in Oromia. Readiness for MCV2 introduction was assessed from all regions and feedback given. National level TOT was conducted and 25 EPI focal from all regions were trained. Training for the health worker was given at woreda level. The age of administration for MCV2 as decided by FMOH to be 15 -23 months of age, however any child who have taken MCV1 with an interval of four weeks and age 15 month and above can receive MCV2 (children age between 15-23 months (second year of life (2YL).

In 2011 EFY, the National MCV2 coverage was 47% in five months of introduction, ranging from 17% in Afar to 63% in SNNPR.

The EMDHS 2019 showed a national MCV1 & MCV2 coverage as 62% and 10%, respectively.

Figure 12 shows the coverage for both MCV1 & MCV2 by regions.

Fig. 12: MCV1 and MCV2 coverage (%) by Region, EFY 2011



Lessons Learned from MCV2 Introduction

- House to house registration in areas helped for better MCV2 coverage
- Mobilizing resources from partners to implement key activities such as printing which otherwise were bottlenecks for MCV2 introduction

Major Challenges

- Incomplete Registration of children under 2 years eligible for MCV2 Micro planning ,
- Missed opportunity of children's for MCV2 coming for other health services like (IMNCI, Vit-A)
- There are still some HP/HC not enrolled MCV2 introduction
- Under-utilization of job-aid and EPI IEC materials for social mobilization

Next Steps in MCV2

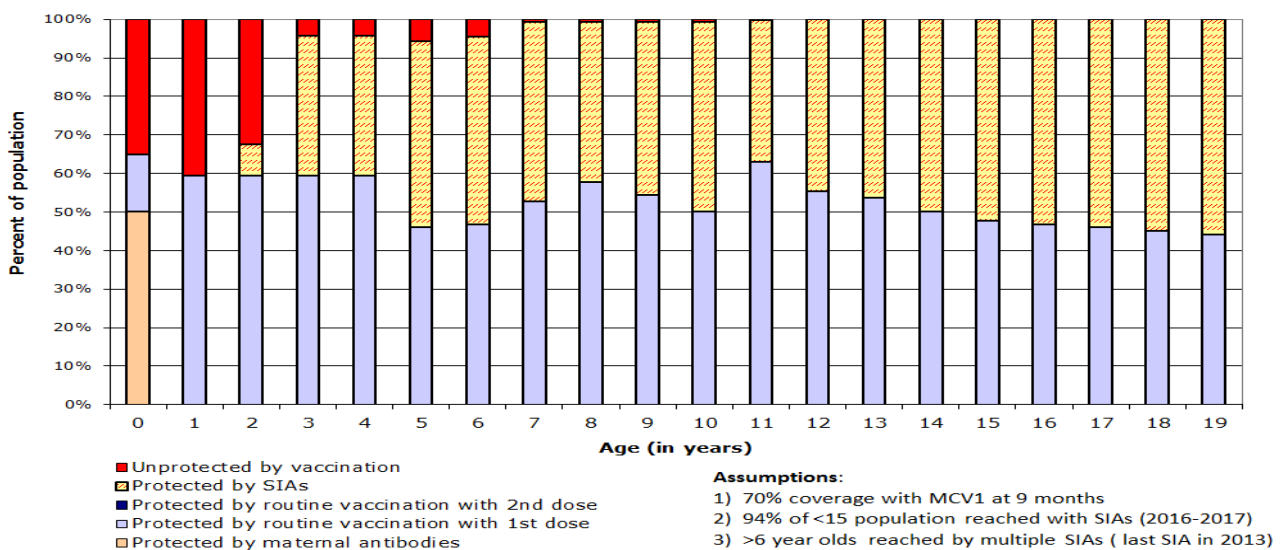
- Enhance monitoring of MCV2 coverage and rollout through regular monitoring, supportive supervision, review meeting and feedback mechanism
- Ensure supply of monitoring, reporting and recording materials
- Enhance Social mobilization using existing community platform
- Strengthen 2nd year of life immunization platform through integration with other health interventions.

Measles susceptibility profile for Ethiopia

The Measles Strategic Planning (MSP) tool was used to estimate the measles susceptibility profile in Ethiopia. High population immunity is seen in children >5 years of age mainly due to high coverage achieved during the last wide age range (9 month- 15 years) SIA conducted in 2016-2017; In the birth cohort born after the 2017 measles

campaign, it is estimated that 35-40% of each birth cohort remain susceptible, representing children missed by the routine immunization programme. By the end of 2019, about 3.5 million accumulated children (more than one birth cohort) will be susceptible to measles disease. This suggests that the country will experience outbreaks in late 2019 and/or early 2020 unless significant efforts are undertaken to close the immunity gaps. There is sub-national (regional, zone and woreda) differences in the susceptibility profile, especially in areas estimated to have lower sub-national MCV1 and SIA coverage have wider immunity gaps than the national susceptibility profile.

Figure 14. Measles susceptibility profile for population ≤19 years, Ethiopia, 2019.



Measles Epidemiology and Surveillance Situation in Ethiopia

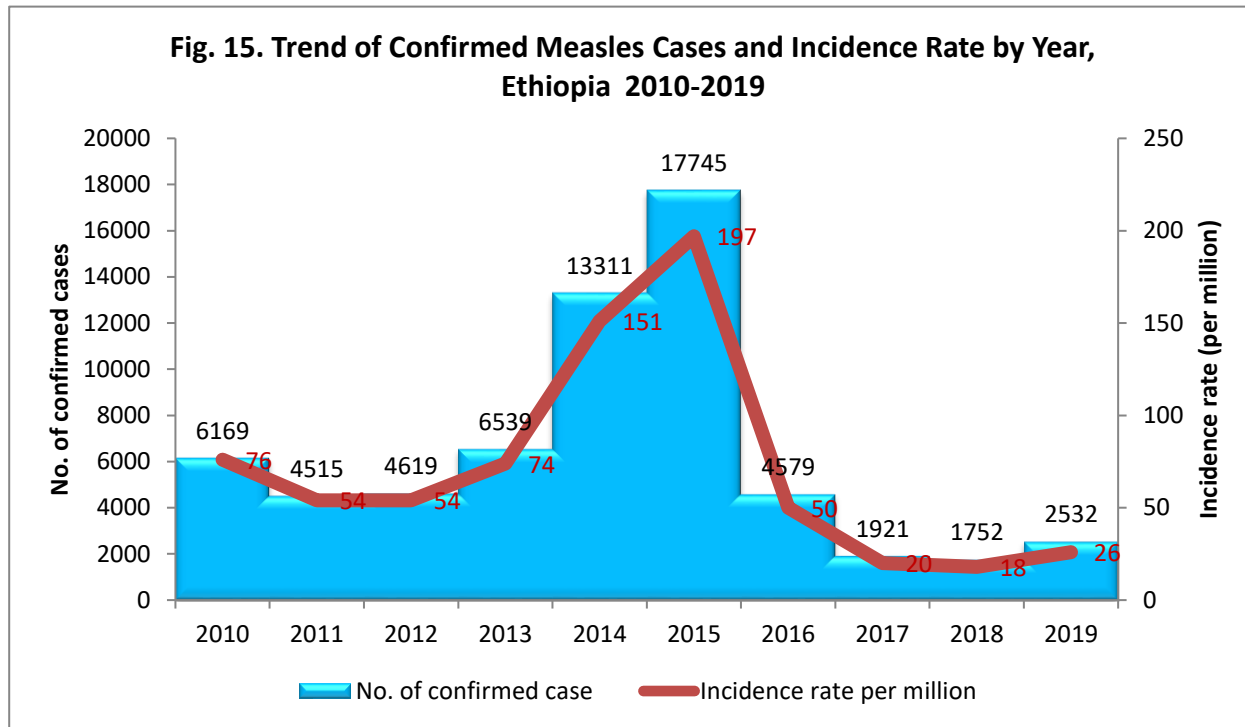
Incidence of Measles

Measles is endemic in Ethiopia and becomes epidemic every two to three years mainly affecting many children and adolescents in the country.

Figure 15 shows the ten years measles epidemiology profile of the country. Of the 3,692 suspected cases detected nationwide through the case-based surveillance system, a total of 2,532 confirmed measles cases were reported as of week 38 for 2019 compared to only 1,752 cases (of which 2.3% clinically compatible) throughout the whole year of 2018. Nearly half (47%) of the confirmed cases in 2019 were clinically compatible. The clinical compatible cases have significantly increased in 2019 as most suspected cases were not tested due to stock outs of test kits particularly during the first half of the year.

In 2019, the annualized incidence rate for the confirmed cases as of week 38 is 26 per one million population compared to 18 per million at end of 2018, a sign that country will be facing a huge outbreak by the end of this

year and beginning of 2020 (See Fig. 15 below).

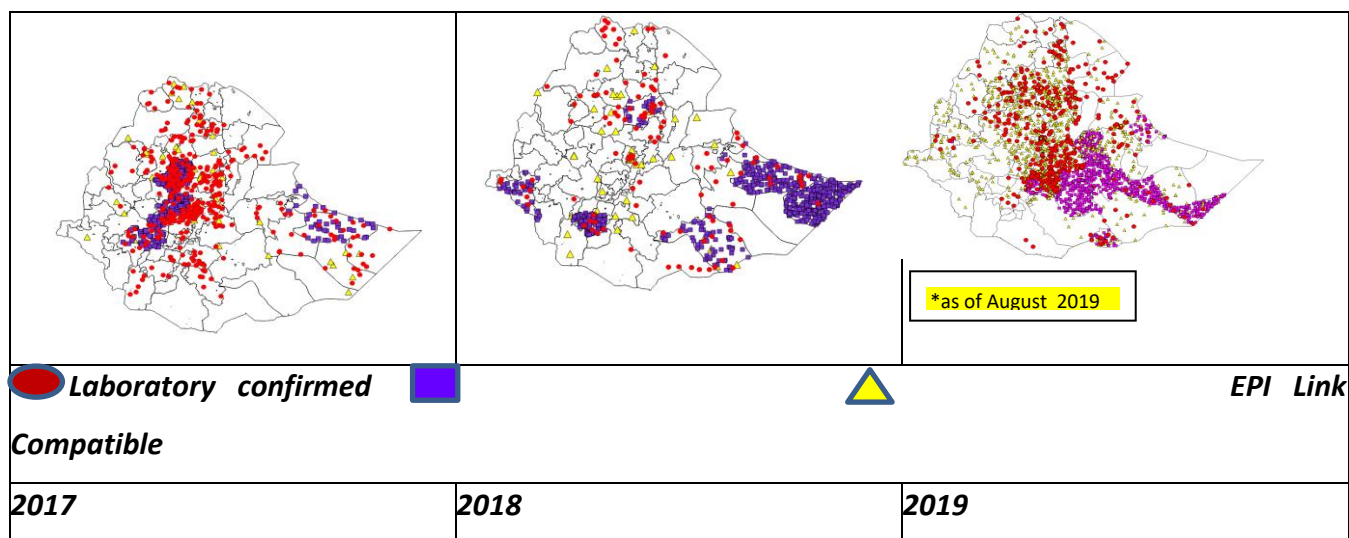


*As of week 38 for 2019

Geographic Distribution of Confirmed Measles Cases

Figure 16 below compares distribution of confirmed measles cases from 2017 to 2019. While most of the confirmed measles cases are more or less concentrated in the central parts of the country where the population density is high, a trend of an increasing shift was observed towards Somali and eastern parts of Oromia particularly during the last quarter of 2018 and 2019.

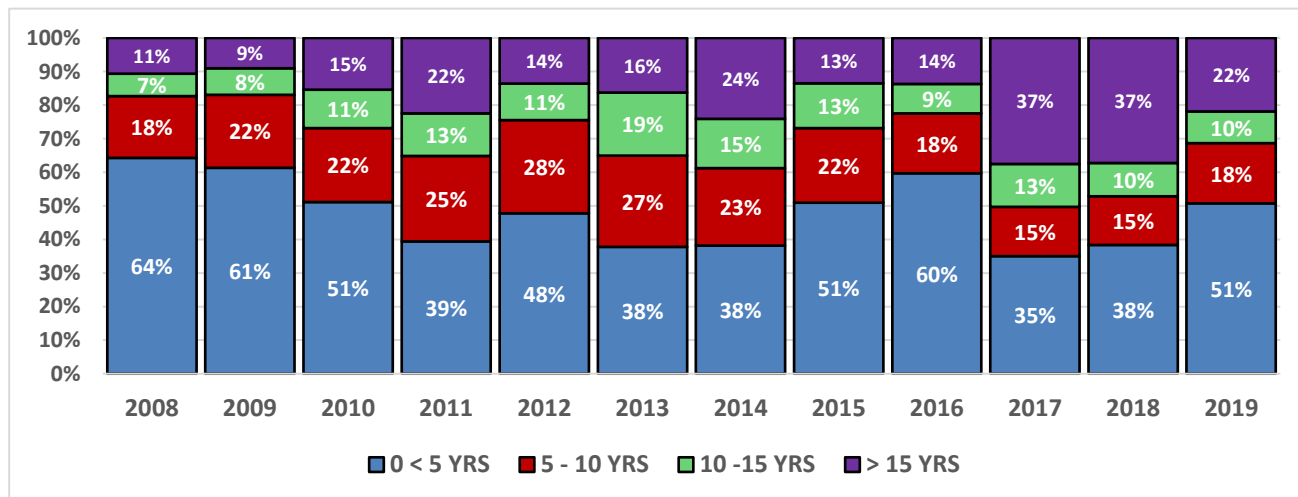
Figure: 16 Spot map of confirmed measles cases by zone, Ethiopia 2017–2019*



Age distribution of confirmed cases

Figure: 17 shows trends for age distribution of confirmed measles cases for the last twelve years (2008 to 2019). This year, more than 50% of confirmed cases are children younger than five years old and 25% are age above 15 years old. The overall trend reveals that there has been an apparent shift towards older age group during or immediately after campaign years (2010, 2013, and 2017).

Figure 17. Age Distribution of Confirmed Measles Cases, Ethiopia, 2008 – 2019



Vaccination status of Confirmed Measles Cases

Of the total of 2,532 confirmed measles cases reported as of week 38 in 2019, nearly one third (30.3%) were with zero doses while significant proportion (38.5%) of the measles cases were with unknown vaccination status (see Fig. 18 below).

Fig. 18: Vaccination Status(%) of Confirmed Measles Cases (age 9 months and older), 2019*

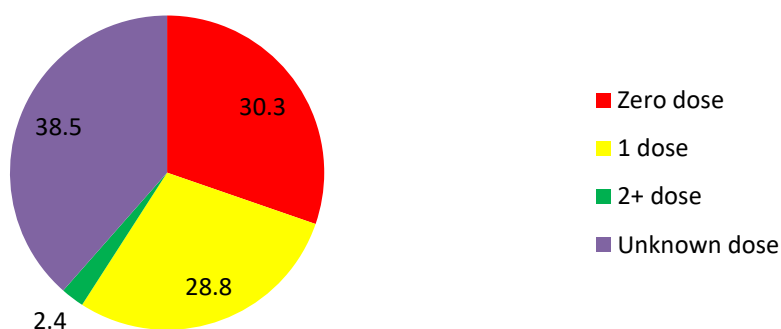
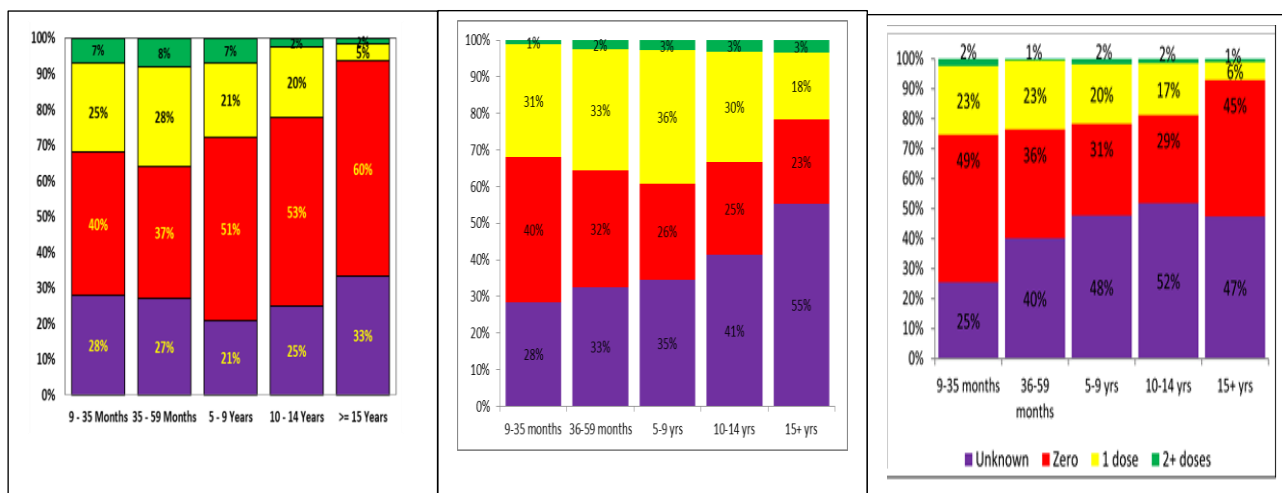


Fig. 19: Vaccination Status by Age distribution of confirmed measles cases (≥ 9 months, Ethiopia, 2017-2019)



In 2019, more than three quarters of zero doses of confirmed measles cases reported from Somali, 230 (53%) and Oromia 432 (28%) regions.

Measles surveillance performance

The non-measles febrile rash illness in 2019 as of week 38 was 1.6 which is low because of unusually higher proportion of compatible measles cases. Only 59% of suspected cases from which blood specimen was collected were tested in 2019 because of diagnostic kit shortage. The IgM positivity rate for tested samples is 19.1% which is higher than the target set to be less than 10%.

Table 4. Measles case-based surveillance performance indicators, 2009-2018

<i>Indicators</i>	<i>Target</i>	<i>2009</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>	<i>2019</i>
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	3.9	4.1
Non-Measles Febrile Rash Rate	>=2	2.5	2.6	2	3.8	3.9	2.1	2.3	1.9	2.4	3.3	1.6
Proportion of woredas with >= 1 case per 100,000 with a blood specimen (%)	>=80	90	83	96	99	100	80	76	63	69	72	68
Proportion of reported measles cases with blood specimen (%)	>=80	100	100	100	96	99	91	42	100	100	100	100
Proportion of measles IgM+ (%)	<10	22	14	29	26	35	53	49	40	18	14	19.1

Measles Outbreak in Ethiopia

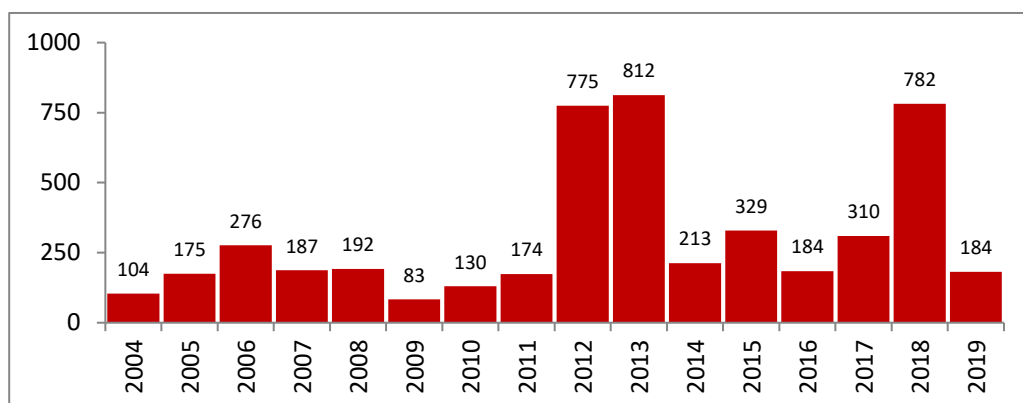
The country was relatively relieved from hits of huge outbreaks in 2017 and 2018 after the wider age group measles campaign conducted in 2017; however, nowadays, the country is receiving measles cases at outbreak proportions in many parts of the country.

While only 63 outbreak episodes were recorded by end of 2018, five more outbreaks were confirmed as of week 38 2019 through the case-based surveillance system. Nearly half (43%) of the outbreaks were from Oromia Region followed by Amhara (28%).

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. Rubella outbreaks are not routinely investigated limiting the epidemiological information available for these apparent outbreaks. The number of laboratory confirmed rubella cases are seemingly lower in 2019 compared to 2018 and 2017 due to the lack of testing for rubella because of stocks out of diagnostic kits in the year. However, there has been a generally increased trend of lab confirmed cases over the last four years (Fig. 20)

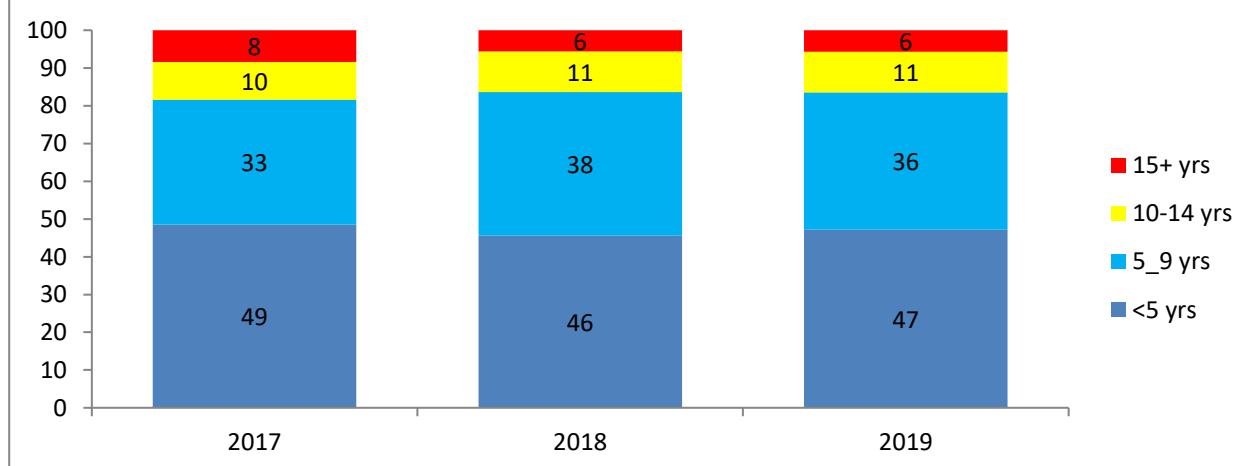
Figure 20. Number of Lab-confirmed Rubella Cases, 2004-2019



Nearly one in five (19.5%) of the tested cases were positive for rubella IgM which is slightly lower than the rate for 2018 (25.8%). The rubella IgM positivity rate has continued to be relatively higher than the national average in urban settings such as Addis Ababa and Dire Dawa and other regions with better routine immunization coverage such as Tigray.

During 2017-2019, the highest proportions of rubella cases were detected among children less than 10 years of age consistent with the pre-vaccine epidemiology for rubella.

Fig. 21: Age distribution of laboratory confirmed rubella cases, 2017-2019*



*As of week 38 for 2019

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.

Challenges in measles and rubella elimination

1. Sub-national immunity gaps
2. Persistently missed children in hard to reach and pastoralist regions
3. Sub-national measles surveillance gaps
4. Shortage of skilled human, vaccine and financial resources for outbreak investigation, response and documentation at sub-national levels
5. Stock out of laboratory reagents for the measles and rubella confirmations
6. Inadequate support on measles surveillance: There has been a continued dependence of measles surveillance on AFP surveillance system for funding for staff, vehicles and other resources used in active surveillance, outbreak investigation and laboratory diagnosis.

Planned activities for 2020:

1. Implement second dose of HPV vaccine for 14 years old girls cohorts in the in October 2019 and the second dose will be April 2020
2. Introduce HepB Birth dose in selected region
3. Introduce Second Year of Life (2YL) platform for measles and other antigens
4. Complete GAVI application for Yellow fever vaccine introduction to routine schedule
5. Conduct measles SIAs follow up SIAs for children aged 9-59 months nationally.
6. Switches.
 - 6.1. PCV-10/ 2 dose to PCV-13/ 4 dose
 - 6.2. Implement TT to Td Td
7. Strengthen surveillance and measles case management using IMNCI approach.
8. Strengthen CRS sentinel surveillance and generate information for decision making.
9. Mobilize additional funds to bridge funding gaps to sustain key functions and for the implementation of global polio eradication transition plan
10. With the global polio fund ramp down, VPD surveillance needs special focus to get funding support for timely identification and early warning of potential disease outbreaks.
11. 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

5.3. 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** on five mandatory CCEOP indicators and other related intermediate results – achievement against agreed targets as specified in the grant performance framework (GPF) with discussion on successes, challenges and solutions for reaching targets;
- **Implementation status** (number of equipment installed / waiting installation, user feedback on preventive maintenance training, refrigerator performance, etc.), including any challenges / lessons learned;
- **Contribution** of CCEOP to immunisation performance (i.e. how CCEOP is contributing to improving coverage and equity);
- **Changes in technical assistance** in implementing CCEOP support.⁵

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

The equipment in the CCEOP application includes about 5,000 Solar Direct Drive refrigerators, and 655 Ice-Lined Refrigerators with voltage regulator. Based on the contract agreement with UNICEF SD, the procurement of cold chain equipment for phase one initiated and the operational deployment plan shared with UNICEF SD and shipment, distribution and installation expected to be started by the end 2019. Target facilities for initial phase are total of 934 and these are from Somali, Afar, Benishangul Gumuz and Gambella regions and from Borena, Bale and Guji zones from Oromia and South Omo zone from SNNP regions with low immunization coverage which are mainly pastoralists are targeted. The new equipment will help to close equity and coverage gaps among districts and the regions.

- In addition to SDDs, ILRs refrigerators with voltage stabilizer, fridge tags and set of spare parts procurement is initiated through UNICEF SD.
- Temperature mapping and monitoring studies devices procurement is on process and available in mid-October 2019 for use.
- Cold chain equipment decommissioning protocol draft is ready for experts' inputs. Final draft will be available for in-house review/consultation and endorsement before December 2019.
- Impact assessment on program performance following the installation of the 6000 SDDs

proposal is developed and awaiting to secure funding. This will help as a benchmark to conduct similar assessment on CCEOP impact on program performance.

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 — Tools procurement is on processes for mapping temperature monitoring study effective during October – November 2019.
- Cold chain equipment decommissioning protocol draft is ready for further fine-tuning by expert on local codes and stakeholders. Technical expert recruitment is on process.

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 on selected priority areas in coordination with RMNCAH-N directorate research team (RAC).

5.4. 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 separately⁸;*
- ***Compliance** with financial reporting and audit requirements noting each grant (listing the compliance with each cash support grant separately, as above);*

⁸ If in your country Gavi funds are managed by partners (i.e. UNICEF and WHO), fund utilisation by these agencies should also be reviewed.

- Status of high-priority “show stopper” actions from the Grant Management Requirements (GMRs) and other issues (such as misuse of funds and reimbursement status) arising from review engagements (e.g. Gavi cash programme audits, annual external audits, internal audits, etc.);
- Financial management **systems**⁹.

Financial Absorption

By the reporting period GAVI disbursed \$11,639,745.0 for Data quality and, \$15,350,000 for cold chain activities (GAVI HSS) SDG pooled. The active grants which is the current year disbursement for Data quality and the previous year \$2,968,334 for HPV & \$ 2,672,270.4 for MCV2 introduction budget utilization status for the period of July8/2018 –July7/2019 are shown below:

Table 7. GAVI grant Cash utilization table from July8/2018-July7/2019

Federal Ministry of Health											
GAVI HPV and Measles Operational Cost utilization status as of June/ 2019											
Name of Program/ Active	Per iod	Exch ange rate	Collectio n in ETB	Collecti on in USD	Disbursed/Utilized & committed		Cash balance		utiliza tion statu s %		
			ETB	USD	ETB	USD	ETB	USD			
1	GAVI MCV2 introduction OPC NEW	2018	27.2212	72,742,443	2,672,270.40	31,844,567	1,169,844	40,897,876	1,502,416	44%	
2	GAVI HPV	2018	27.2435	80,867,910.61	2,968,334.00	77,622,801.73	2,849,219	3,245,109	119,114	96%	
3	GAVI Data quality	2019	27.7492	322,993,056.97	11,639,745.00	244,422,945.20	8,808,303.46	78,570,102.55	2,831,441.54	5,018,662	75%
4	GAVI HSS	2019	27.7492		15,349,380.00	SDG POOLD FUND MANAGEND ACCORDING ON JFA					
Grand total				476,603,410	17,280,349	293,196,817	10,640,146	183,406,593	6,640,192	62%	

Note:- Since GAVI HSS is managed by SDG pooled fund mechanism it is not possible to show the status here. For detail financial utilization analysis for HSS fund refers the SDG quarter reports

⁹ In case any modifications have been made or are planned to the financial management arrangements please indicate them in this section.

which is uploaded on GAVI portal.

As per the above financial utilization

The HPV and MCV2 introduction grants utilization status are 96% & 44 % respectively. Out of the remaining 40,897,876 (56%) birr for MCV2 budget, total Birr 18,000,000 was utilized as of august/2019 which IS 25 % of the total budget. Hence 69% of the MCV2 budget is utilized. Regarding the cold chain grant, \$1.2 million transferred to UNICEF as of September/2019 to be used for budget gap filling for CCEOP. To utilize the budget committed for data quality GAVI data quality proposal came into effect under the general objective of strengthening the routine health information system that will generate ensure quality immunization data for better service delivery. Under this proposal major planned activities include standardization and ensuring availability of HMIS tools, building the capacity of staff on data quality, establishing data quality management and monitoring systems and rollout of electronic health information systems at the facility and community levels. Currently as per the plan, the rollout of DHIS2 is being cascaded down but the rollout of eCHIS will be initiated in Mid Oct 2019 and continue until the end of the FY. To ensure the availability of HMIS tools and child passport card, request has been made but the printing process will take place as per the procurement directive. In addition, in order to establish data quality management, provision of data quality training and the assessment of routine data quality (RDQA) is planned in the month of November 2019.

On the other hand the previous year old grants Regional outstanding status on the reporting period is shown as below:

Table: 6 Summary of Old GAVI Programs outstanding Report for Grants Closure -By Grants , as of

July 7/2019

Grant	Transferred	Settled before Dec31/2017	Remaining Balance/Unliquidated balance as of Dec.31/2017	Settled of 2018/19 fiscal year	cumulative utilization	Remaining Balance/Unliquidated balance as of Aug 30/2019	Performance %age
IPV	50,895,202.00	48,504,201.32	2,391,000.68	2,112,047.47	50,616,248.79	278,953.21	99%
HPV	2,500,588.00	1,355,988.23	1,144,599.77	844,070.00	2,200,058.23	300,529.77	88%
SIA 1	83,031,199.40	81,931,959.26	1,099,240.14	814.43	81,932,773.69	1,098,425.71	99%
SIA 2	92,851,322.68	82,012,690.11	10,838,632.57	8,133,134.55	90,145,824.66	2,705,498.02	97%
Rota	26,572,624.85	26,200,752.60	371,872.25	452.27	26,201,204.87	371,419.98	99%
Men A	<u>342,427,229.20</u>	<u>327,873,582.94</u>	<u>14,553,646.26</u>	9,823,983.67	337,697,566.61	4,729,662.59	99%
-	<u>598,278,166.13</u>	<u>567,879,174.46</u>	<u>30,398,991.67</u>	<u>20,914,502.39</u>	<u>588,793,676.85</u>	<u>9,484,489.28</u>	98%

Currently, MOH is working by focusing on the long outstanding problems and trying to address it using different mechanisms. One of these mechanisms is strengthening the grant management unit by recruiting TAs and create liquidation team within the finance section. Accordingly, the previous year old grants outstanding liquidation status are showing improvement as indicated in the table below. Besides, by conducting smooth communication with implementing directorate, better follow up of the grant, and supportive supervision the ministry is striving for timely liquidation and minimize outstanding transactions.

Table: 7 Summary of Old GAVI Programs Liquidation Status Report for Grants Closure -By Regions

Region	Transferred	Settled before Dec31/2017	Remaining Balance/Unliquidated balance as of Dec.31/2017	Settled of 2018/19 fiscal year	cumulative utilization as of Aug/2019	Remaining Balance/Unliquidated balance as of today	%age
Tigray	28,507,587.16	26,528,053.83	1,979,533.33	1,144,005.87	27,672,059.70	835,527.46	97%
Afar	21,065,037.89	20,689,765.89	375,272.00	375,272.00	21,065,037.89	-	100%
Amhara	97,783,781.69	88,429,334.70	9,354,446.99	7,349,823.74	95,779,158.44	2,004,623.25	98%
Oromia	229,510,673.81	222,140,944.25	7,369,729.56	2,460,139.04	224,601,083.29	4,909,590.52	98%
Somaily	60,683,721.77	60,533,538.80	150,182.97	-	60,533,538.80	150,182.97	100%
B/gumuze	8,939,122.62	8,303,616.26	635,506.36	635,506.36	8,939,122.62		100%
SNNPR	116,040,759.48	106,548,254.76	9,492,504.72	7,959,976.01	114,508,230.77	1,532,528.71	99%
Gambela	2,561,801.12	2,560,794.17	1,006.95	1,006.95	2,561,801.12		100%
Harari	2,951,955.82	2,938,174.13	13,781.69	13,781.69	2,951,955.82		100%
Dire Dawa	3,849,617.38	3,476,849.87	372,767.51	361,467.21	3,838,317.08	11,300.30	100%
Addis Abeba	26,384,107.39	25,729,847.80	654,259.59	613,523.52	26,343,371.32	40,736.07	100%
	598,278,16	567,879,17	30,398,991				98%

	<u>6.13</u>	<u>4.46</u>	<u>.67</u>	<u>20,914,502</u>	<u>588,793,67</u>	<u>9,484,489</u>	
				<u>.39</u>	<u>6.85</u>	<u>.28</u>	

PIRI

PIRI account was created from unutilized \$1.2 million that is remaining cash balance from old GAVI grants, which is requested and approved by GAVI and reprogramming for PIRI implementation. The 1.2 million PIRI fund is still pending on the MOH account. GAVI didn't disbursed the additional \$3.5 million for PIRI implementation. Though the first two quarters of PIRI activities are covered by WHO grants MOH is still waiting for the remaining \$3.5million to cascade PIRI for the next quarters.

GAVI HSS

GAVI HSS support is part of the SDG Performance Fund, which is a pooled funding mechanism managed by the Government using the GOE's financial management, audit and procurement systems. This funding mechanism is managed according to Joint Financing Arrangement of which GAVI is one of the signatories. SDG Performance Fund is providing specific grants for public goods and capacity building activities within the framework of the health system strengthening.

In the reporting period GAVI contributed \$15.3million to the SDG Performance Fund. The major contributor to SDG PF in the budget year was DFID followed by World Bank and GAVI. The pooled fund has one plan, one budget and one reporting mechanism. This agreement prevents contributors from conducting separate assessments or bilateral discussions on achievements and challenges regarding the SDG PF. The quarterly SDG PF report that is shared on a quarterly basis will comprehensively address all issues related to program activities, grant performance and financial management.

During the reporting period a total resource amounted to USD 618 million was allocated for all activities planned of which USD 589 (95.2%) was utilized for those activities indicated in the annual work plan. The details of cash collection and utilization are as follows: -

Table : 8 Cash collection Table from partners on SDG pool fund on the reporting period

S.N	Source of Fund	Commitment (in USD) in EFY 2011	Disbursement in USD in EFY 2011	Percentage of Disbursement	Remark
1	SDG Performance Fund				Remark
1	DFID	91,000,000.00	91,157,500.00	100.17%	57%
2	World Bank	82,000,000.00	34,537,810.53	42.12%	22%
3	Netherland Embassy	11,000,000.00	10,999,980.00	100.00%	7%
4	Spanish Aid	1,130,000.00	1,139,799.00	100.87%	1%
5	UNICEF	500,000.00	500,000.00	100.00%	0%
6	UNFPA	50,000.00	50,000.00	100.00%	0%
7	WHO	50,000.00	50,000.00	100.00%	0%
8	GAVI	15,350,000.00	15,349,980.00	100.00%	10%
9	ACIS (Italian Cooperation)	3,390,000			0%
10	Irish Aid	6,780,000.00	6,087,398.00	89.78%	4%
	Total	211,250,000.00	159,872,467.53	75.68%	

As per the upper disbursement schedule GAVI is the 3rd contributor after DFID and World bank.

Table : 9 SDG pooled fund utilization table on the reporting period

Major Activity	Budget in USD	Expenditure in USD	%age
Public Health Commodity	135,499,622	160,655,406	118.57%
Maternal Health	151,755,379	156,730,257	103.28%
Child Health Services	76,802,433		81.21%

		62,370,806	
Prevention Communicable & Non-Communicable Disease	30,533,735	31,229,091	102.28%
Health Service Delivery	27,494,288	29,422,931	107.01%
Health System Strengthening	184,474,266	140,570,437	76.20%
Health Extension Program	11,825,105	7,921,917	66.99%
Total Amount	618,384,827	588,900,844	95.23%

Financial management and compliance

The SDG Performance Fund plan will to be extracted from the comprehensive plan and will be discussed and agreed among MOH and contributors. Approvals of the annual plan, priority setting, and review and appraisal of the draft plans will be done after consultations between MOH and all donor partners. Budget utilization/execution will be monitored and reviewed through the consolidated HSTP annual performance report, quarterly reports, and the joint review mission.

The Grant Management Unit will be responsible for the budget monitoring activities. Monthly, the case team produces budget monitoring report and circulates to the relevant directorates. In addition, the quarterly report will compare budget with actual expenditure with relevant explanations.

The ministry uses modified cash basis of accounting along with the region and woredas to account the grant funds and also all procurement will follow the government procedures as well. Quarterly financial and activity report will be shared within 45 days of the end of each quarter to signatories' partner. The report will contain information on the implementation of the fund over the previous quarter, including financial reporting, reporting, procurement, distribution, and key process:-

The Office of the Federal Auditor General (OFAG), or an auditor to be assigned by it, will conduct the annual audit of the financial statement of the SDG Performance Fund in accordance with terms of reference agreed upon by all SDG PF donor partners. The resultant audit report and management letter will be submitted to the SDG PF partners and within nine months after the end of the

Government of Ethiopia fiscal year.

Major challenges

The major challenges for financial management of MOH

- The pool financial management system in the lower level of government structure create obstacle to minimize the long outstanding advance;
- Lengthy government structure from MoH down to Woreda level to transfer funds;
- Late disbursement of partners contribution;
- Staff turnover at all level;
- Current political situation of the country results in delay in program implementation.

Way forward

- Further improve Governance, Grant oversight, collaboration and strengthen relationships with Key stakeholders
- Regular grant management review meeting and conduct joint supportive supervision
- Closely work with the government policy makers (Ministry of Finance) on Financial Management System
- Enhance collaborative planning and implementation of programs with implementing partners to improve Financial performance

5.5. Transition plan monitoring (applicable if 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.*

NA

5.6. Technical Assistance (TA) (progress on ongoing TCA plan)

- *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 milestones, summarise the progress of partners in delivering technical assistance.*
- *Highlight progress and challenges in implementing the TCA plan.*
- *Specify any amendments/ changes to the TA currently planned for the remainder 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 TA support provided:

1. Coverage and equity

1.1. Reaching Every District Guide

PATH provided technical assistance to finalize the national Reaching Every District (RED) guide and continues to support implementation of the guide.

1.2. Translation, printing and implementation of the new health passport

The new health passport was translated into Afar and Somali, and 10,000 copies were printed for Afar and 15,000 copies were printed for Somali. The copies were distributed to all health facilities in the project woredas of the two regions. Service providers were oriented on how to use the new health passport, in collaboration with woreda health office staff, as part of supportive supervision visits to the health facilities. Currently, all health facilities in the project woredas are using the new health passport

1.3. Integrated Refresher Training for Health Extension workers

A total of 104 HEWs and health post nurses were trained from the four projects woredas in Afar and two project woredas in Somali. Following the training each participant developed and action plan to improve the EPI services in their catchment areas. Implementation of the action plans were monitored jointly by the woreda health offices and PATH staff.

1.4. Implementation of Periodic Intensification of Routine Immunization

Implementation of PIRI was supported in the four woredas in Afar and two woredas in Somali. PATH supported the implementation of PIRI in the four project woredas of Afar and two woredas of Somali based on the identified pocket and hard-to-reach areas and the plan developed together with each woreda health office. Support included orientation of woreda staff on the PIRI strategy, criteria to follow in selection of sites for PIRI implementation, planning and implementation technical assistance, transportation (vehicle) and logistics for the supervisory team, and a daily subsistence allowance for the team. During these support a total of 1,566 doses in Afar and 4, 460 doses in Somali were administered.

2. Demand creation and promotion

2.1. Capacity building training for social mobilization committee members

PATH trained Social Mobilization Committee (SMCs) selected by their communities on action-based health messaging to bring about positive changes in household health behaviors. In the first round of training, a total of 114 SMC members (74 from Afar and 40 from Somali) were trained on basic social mobilization interventions and practices and on key immunization messages. A second round of training was provided in Afar Region, with prior approval from Gavi; as many of the kebeles in Afar woredas had not been included in the first training, and SMCs that had not been functional and had to be revitalized after project initiation, so most members were new to the SMC membership roles and responsibilities. A total of 77 SMC members participated in the second-round training in Afar.

All SMCs in both regions have been revitalized, and the trainings helped to equip SMC members to own immunization as part of their social mobilization agendas for their respective communities

2.2. Supportive supervision and on-the-job training for SMC members

PATH conducted two rounds of supportive supervision and on-the-job training to build the capacity of SMCs and to assess the current practices of the trained SMC members. Gaps identified during the first round of visits were given due attention during the second round. In addition, implementation of the community-tailored action plans developed during the SMC training workshops was evaluated. Totally, 52 kebeles were visited during this support.

3. Data

3.1. ToT on data quality for data managers and HMIS officers

PATH in collaboration with FMOH and Afar and Somali RHBs conducted a three-day data quality training for EPI focal persons, health management information system (HMIS) officers, health information technologists, and M&E officers from the FMOH, Afar and Somali RHBs, and the four target woredas in Afar and two woredas in Somali. The training included basic data quality concepts, current policies in Ethiopia regarding documentation and reporting, and EPI registration and reporting tools. A total of 32 participants attended the training and were certified by the FMOH upon successful completion of the course.

3.2. EPI data quality review meeting

Annual EPI review meeting was organized for Afar region and all woredas in Afar were participated. On this two days review meeting the 2011 EFY EPI performances were reviewed and 2012 EFY plan was drafted.

3.3. Supportive supervision and mentoring on immunization data quality

Supportive supervision and on-the-job training on EPI data quality were conducted in Afar Region

April 9–19, 2019, and in Somali Region May 6–12, 2019, and May 20–26, 2019. The supportive supervision and training mainly targeted EPI focal persons, HMIS officers, and woreda health office heads; and in health centers, the EPI focal person, HMIS officer, and medical director. All four selected woreda health offices and two health centers in each woreda in Afar received the supervision visits and training; and in Somali, the two woreda health offices and all health centers in each woreda were covered.

The main purpose of this activity was to assess the status of EPI data quality at each unit and provide on-the-job capacity-building. The DQAs focused on documentation, archiving, reporting, data consistency among different EPI tools and across the reporting channel, report completeness, report timeliness, and data use for evidence-based decision-making and planning. The assessments were guided by a checklist and staff were provided with feedback and mentoring on possible solutions/recommendations for closing observed gaps

4. Advocacy

4.1. Plan and organized 2019 AVW

PATH played key role in planning, organizing and facilitating AVW, together with the FMOH and Somali RHB. PATH prepared banners in three languages (Amharic, English, and Somaligna), t-shirts, caps, and bags. In addition, PATH staff participated in advocacy visits and site selection for the immunization campaigns.

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
- ✓ HPV Supply and Logistics
- ✓ HPV Communication Activities
- ✓ Monitoring and Evaluation/training
- ✓ Facilitated the national level HPV ToT and regional level HPV cascade trainings

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

Despite several challenges that were hindering the implementation of activities especially at community level, almost all the activities were implemented properly.

Challenges in implementing the TA plan

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

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

- ✓ Printing of the new RED guide (reprogrammed)
- ✓ Immunization-tailored public-private partnership (PPP) consultative workshop for participants from private hospitals in Addis Ababa and Dire Dawa (reprogrammed)
- ✓ National-level EPI annual bulletin prepared and printed (reprogrammed)

World Health Organization (WHO)

GAVI support through WHO Strategic approach

WHO in consultations with FMOH and regional health bureaus has selected 7 zones in four regions, Amhara, Oromia, SNNPR and Tigray using the preliminary set criteria and proceed to build the capacity of regions and zones to bridge the knowledge and skill gap of health workers , empower woreda officers to plan ,implement and monitor immunization system, ultimately to improve immunization coverage and enhance service utilizations through trainings, technical assistance ,supervision, monitoring, training materials development and supplies.

1. Vaccine specific support

1.1. WHO has supported in the development of revised RED guide, printing of 22,000 copies and distributed to all regions. In line with this Draft Simplified RED job aid for vaccinators, has been developed taking into consideration the Uganda and Ghana experience with the support from AFRO/IST.- workshop will be organized to finalize and soon will be shared to FMOH for comments and reviews.

1.2. The capacity building support extended to woreda EPI officials and familiarized them with the newly revised RED guide and a total of 298 Woreda EPI officers trained from Amhara, Oromia, SNNPR and Tigray region and able to empowered woreda officers to plan implement and monitor immunization activities. Trained officers produced EPI micro-plan of their respective woredas and cascaded to health facilities.

- 1.3. WHO has supported 7 priority zones, three zones in Amhara, two zones in Oromia, one zone of SNNPR and one zone of Tigray region. Trained a total of 478 health workers on comprehensive immunization in practice (IIP) which improves the knowledge and skill of health workers and which enables them to provide quality services.
- 1.4. Capacity building Support given to 9 regional and 2 city administrative Mid-level managers at national level and cascaded to 8 priority zones for EPI officers using updated MLM modules: Midlevel managerial (MLM) training given to 38 EPI mid-level managers for 6 days. The training was facilitated by experts from AFRO & IST and covered 6 very critical modules selected by FMOH. Participants were encouraged to complete one module online during their stay. The training was given with aim to strengthen the managerial roles of participants in planning, coordination, monitoring and supervision of immunization program
- 1.5. Post RED/IIP training follow-up supervision conducted in the 8 zones of Amhara, Oromia, SNNPR and Tigray region implementing RED approaches and documented lesson learned and good practices to use results for improved quality of Immunization services.
- 1.6. Post HPV/EPI vaccine introduction review meetings conducted in Amhara, Oromia, Tigray, Addis Ababa and SNNPR regions. An average of 70-80 participants were attended the two days review meetings in each regions which enable them to identify challenges in these regions, able to draw lessons learned, documented best practices and forwarded recommendations which helps to improve performance for the next HPV cohort vaccination
- 1.7. MCV2 introduction training manual for health workers and facilitators guide development supported technically through the NVI technical working group. Moreover WHO has supported printing of facilitators guide which helps the trainers easily facilitate and to address key training messages
- 1.8. WHO supported the MCV2 introduction by deploying two national consultants for a period of 15 months and analyzed mcv2 introduction readiness data from regions and provided feedback to TWGs and regions so that they can be able to enhance activities required for introduction 1.8. To strengthen the country planning, management and coordination, initiated process to train the new and existing NITAG members, communication

has been started with AFRO/IST after selection of the new members the training will be given around December, 2019.

1.9. Data: WHO has provided technical and financial assistance to DireDawa and Harari regions to conduct Data quality self-assessment training to 44 health workers for 3 days. The training comprise presentation ,exercise and field work to 8 health facilities to assess the immunization data quality which enable the health workers to improve their knowledge and skill on data quality and self-assessment. Moreover showed the benefit of integrating DQS in immunization monitoring system.

1.10. WHO has supported effective vaccine management assessment technically and financially the country has conducted the second **Effective Vaccine Management Assessment**_(EVMA) from 4th March to April 30, 2019. The methodology used to conduct the assessment included training assessors to visit the randomly selected facilities using the EVM methodology to determine the strengths and weaknesses across the supply chain. International consultant was deployed to led the assessment, write report, incorporate comments from dissemination workshop and develop road map. for the result achieved refer the supply section part of this report

2. Surveillance specific support

2.1. Conduct bi-annual review meeting to strengthen sentinel surveillance (Rota, PBM and CRS): Two meetings were conducted to review performances and challenges of each of Rota and pediatric bacterial meningitis (PBM) sentinel surveillance. Post review meeting supportive supervisory visits were conducted to the six sentinel sites of Rota and PBM. Case detection and investigations have improved during the second half of 2019.

2.2. Supported sample collection and transportation reimbursement for lab-based measles and rubella surveillance as per the national guideline: Measles and rubella surveillance was supported through transfer of some amount of fund for sample reimbursements at the two subnational measles laboratories.

2.3. Support Post-introduction Evaluation (HPV and/or MCV2): Planned for December 2019/January 2020

2.4. Monthly ADC report produced and shared: measles and rubella data has been analyzed and shared on weekly and monthly basis to guide all EPI actors for timely actions for further strengthening of surveillance and immunization.

A total amount of 7,777,408 (268,186 USD) activities are on the pipeline to be implemented until June 30,2020

1. Provide Comprehensive IIP training for 480 health workers in 8 priority zones. Budget allocated 3,814,848. planned for November 2019
2. Regional level 30 zonal &woreda EPI focal persons familiarized with the revised RED approach planning Budgeted allocated 130,212. Planned for November 2019
3. Zonal level 480 HW will be trained on revised RED/C approach. Budget allocated 1,834,848. planned for December 2019
4. Data triangulation workshop in 4 regions (Amhara, Oromia,Tigray, SNNPR). Budget allocated 275,500. planned for December 2019
5. Support Post-introduction Evaluation (HPV and/or MCV2). Budget allocated 1,160,000. planned for December 2019
6. Support sample collection and transportation reimbursement for lab-based measles and rubella surveillance as per the national guideline. Budget allocated 562,000. planned for November -December 2019

Constraints in implementing the TA plan

1. GAVI Fiscal and TCA activity time frame alignments: WHO was involved in implementing 2018 activities and clearing 2018 TCA budget during the first two quarters of 2019. By the time when JA is conducted we just happened to start implementing 2019 budget.
2. Frequent postponing of planned activities due to competing priorities at federal, regional and zonal levels.
3. The ongoing political reforms and insecurity limits implementation in some selected part of the country, particularly in the selected zones of focus areas
4. Lack of clarity in financial management (WHO prefers DFC over DI) and difficulties in using DFC transactions in the anticipated time.
5. Some TCA activities involve other units as EPHI and PPD that requires intense negotiations to implement planned activities.

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

None

UNICEF

A. Strategic approach

Despite significant progress has been made over decades, significant proportion of children in the country have not vaccinated and reaching underserved children is remained the greatest challenge. The 2017 WHO and UNICEF estimate for 2017, 2018 Immunization system bottleneck analysis and National analysis of Trends in Vaccination Coverage and Inequalities in Ethiopia 2000 - 2016 have showed gaps in equity on immunization performance. UNICEF TCA is focusing on improving immunization coverage and equity targeting regions with high number of unimmunized children with the scope of immunization and health system strengthening approach in line with 2019 National immunization priorities.

- During 2019 UNICEF provided solid technical assistance at national, sub-national and implementation level. At national level, UNICEF provided technical assistance through its staff and through hiring short term consultants. The technical assistance at national level include development of strategic documents, review meeting, 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, assessment on service utilization and developing evidence-based planning and implementation guide. At sub national and implementation level UNICEF provided technical support on the development of strategic and operational plans, capacity building through trainings, supportive supervision, Joint programme monitoring, review and on-site trainings for woreda EPI focal persons and service providers.

B. Major TA support provided:

- 1. Coordination and program management** – At national level UNICEF involved and significantly contributed to coordination forums including ICC, JCC, TWG, M & E, Logistics and cold chain, communication for development, and other periodic and ad-hoc coordination forums. UNICEF has contributed in GAVI, HSS, Yellow fever and measles proposal preparation, MCV2 vaccine introduction including supportive supervision and field monitoring. At subnational levels, through UNICEF staffs in eight regional field

offices contributed on planning, implementation, monitoring and review of EFY 2011 EPI activities UNICEF staff involved and provided support on implementation of 2019 TCA and new vaccine introduction MCV2 and second dose of HPV.

- 2. 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 supported development of operational deployment plan for GAVI Cold chain optimization platform (CCEOP) implementation and development of immunization supply management and logistic strategic plan. UNICEF contributed for 2019 effective vaccine management assessment. The assessment result has shown modest improvement.

Coverage and Equity- During the reporting period, at national level UNICEF conducted inequality analysis and trends using survey data (EMDHS 2019) to inform EPI program and policy. UNICEF also conducted an exploratory study to understand why low-socio-economic status mothers are not completing immunization and not vaccinated children. The study will help to design strategy to reduce dropout. UNICEF continued to contributed on the implementation of RED/REC and PIRI to reach unreached in low performing zones. UNICEF through its field staff and 15 imbedded technical assistants in Zones with high number of unimmunized children three big regions provided technical support on planning, implementation and monitoring of EPI activities through enhancing immunization coverage and equity. A total 172 Health workers (109 males and 63 females) and 108 female Health extension workers were reoriented for service restoration and catch-up service provision from conflict affected areas in Amhara and SNNPR. Additionally, a total of 81 woreda EPI managers and Health centres were received concept on Equity and RED/REC planning workshop from two low performing zones in Benshangul Gumuz region.

- 3.** UNICEF provided implementation monitoring and review of coverage, data validation, conducted many rapid convenience survey. UNICEF's contribution has shown coverage

and equity improvement two big (Amhara and Oromia) regions. The 2019, Mini DHS has showed improvement in Penta 3 coverage in Amhara region from 63.8% to 80.2% and from 39.9% to 53.6%.

- 4. Data** - UNICEF supported data validation and verification at health facility level where much of data quality is an issue. The data quality assurance at implementation level in 14 low performing zones in Amhara, SNNPR and Oromia region has improved report quality where Zonal TAs are deployed. UNICEF supported printing of home based registration (HBR). The introduction of new HBR improved card retention, tracking and monitoring of vaccination status. UNICEF also provided technical support on timely submission of 2018 JRF reports.
- 5. 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.

C. Challenges

1. Establishment of new zones (Gondar splitted in to 3 zones, Guji in to 2 zones, GamoGofa into 2 zones) hindered the HR capacity and affected resource allocation
2. Poor staffing for immunization in newly established zones (Gofazone in SNNPR North Gondar and west Gondar in Amhara)
3. Local conflict and political instability in targeted zones have disrupted immunization service provision and restrict movement of Staffs and TAs (Gofa, Sidama, in SNNPR, west wolega and woredas bordering Somali region in Guji zone of Oromia region , woredas between Central and west Gondar in Amhara region New establishment ogf woredas
4. Establishment of new woredas following government reform (The No. of woredas increased from 23 to 36, In wolayta from 15 to 20 , in central Gondar from 13 to 15 woredas) In west Godar from 4 to 5 woredas priorities were given to reform

D. Amendment

No amendment during the reporting period

Centres for Disease Control and Prevention (CDC):

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

- a) Provision of technical assistance with MCV2 introduction at the sub-national level and uptake of second year of life (2YL) services
- b) Examine the impact of measles vial size on missed opportunities for vaccination in Ethiopia
- c) Strengthen Congenital Rubella Syndrome (CRS) surveillance in Ethiopia to inform the burden of CRS, and monitor progress of potential future introduction of rubella vaccine. Introduction of rubella vaccine will promote equity of use of this vaccine available in almost all high- and middle-income countries.
- d) Provide TA to the measles SIA planned for 2020

Progress in delivering technical assistance and major activities accomplished

- a) Provision of technical assistance with MCV2 introduction at the sub-national level and uptake of second year of life (2YL) services

The funding was received at the CDC Foundation for the activity. During the last several months, formal approval has been sought through the Federal Ministry of Health and the Regional Health Bureau to provide technical assistance on MCV2 directly to Oromia Region. CDC is in the process of developing a Memorandum of Understanding with Oromia Regional Health Bureau to outline the support provided and the terms of reference. All parties have agreed to placing an MCV2 consultant to sit at the Oromia Regional Health Bureau, thus a wide distribution hiring announcement was disseminated to key professional networks in Ethiopia, other groups and organizations. The candidates are currently being shortlisted for interview by the CDC Foundation from a large pool of applicants. The plan is to have the consultant placed in the Region in the coming months to assist with strengthening MCV2 uptake, identify areas in need of additional focus, identify barriers to uptake of MCV2, examine recording/reporting of vaccines doses delivered, review communications messaging to increase awareness and demand for MCV2, and other activities in support of increased uptake and awareness of MCV2 in the Region. The team, supported by CDC Atlanta headquarters staff are gathering reference materials from other countries and drafting a protocol or use in identification of barriers to MCV2 uptake, and impact of existing messaging, in Oromia. The consultant, once hired will implement the protocol.

In addition, CDC facilitated a capacity building and joint experience sharing meeting on 2nd Year of

Life (2YL) initiatives between the EPI teams of the Federal Ministry of Health (FMoH) of Ethiopia and the Ministry of Health of Ghana. The experience sharing event took place at the Maternal, Nutrition and Child Health Directorate of the FMoH on May 24th, 2019. Dr. George Bonsu, Ghana EPI Manager presented on 2YL experience in Ghana, and the FMoH in Ethiopia likewise presented 2YL experiences from Ethiopia and future. Materials were shared, and all agreed to continue the experience sharing on 2YL.

b) Examine the impact of measles vial size on missed opportunities for vaccination in Ethiopia

The IRB protocol has been approved by the Ethiopian Public Health Institute, Scientific and Ethical Review Committee to carry out a cluster-randomized controlled trial to measure: 1) the effectiveness improving health worker knowledge on when to open a measles vial for an eligible infant and 2) the effectiveness of improving health worker knowledge on when to open a measles vial for an eligible infant combined with switching from a 10-dose measles vaccine vial to a 5-dose measles vaccine vial. The general objectives of this study are to measure the effectiveness of health worker education, and switching to a 5-dose measles vial combined with health worker education on routine measles vaccination coverage among infants.

The piloting and baseline survey are planned to take place by October 2019. Planning for the implementation phase after the baseline survey and towards the end of 2019 is actively underway. The health worker training curriculum and implementation plan will be finalized by the end of 2019, after which time the orientation workshops will be conducted and implementation will be initiated (expected to be in early 2020).

c) Strengthen Congenital Rubella Syndrome (CRS) surveillance

Final implementation of this project has been delayed, despite numerous efforts to hold the initial training. The delay has been primarily due to security issues and competing in country priorities, which have made finding a mutual agreed time to travel to country challenging (e.g. security situation limited travel to country, response campaigns in-country staff are obliged to support, travel limited by US Embassy do to uncertain security situation in July).

d) Provide TA to the measles SIA planned for 2020

This TA activity has not started at the point of report writing.

Challenges in implementing the TA plan

For provision of MCV2 support to the sub-national level: a challenge in timely provision of TA has been the lengthy processes for gaining all relevant approvals to support a particular Region.

For the measles 5-dose vaccine vial study: challenges in agreement with respect to which areas of the country are deemed appropriate to carry out the study from a security perspective, and a cumbersome IRB approval process.

For CRS surveillance strengthening: Final implementation of this project has been delayed, despite numerous efforts to hold the initial training. The delay has been primarily due to security issues and competing in country priorities, which have made finding a mutual agreed time to travel to country challenging (e.g. security situation limited travel to country, response campaigns in-country staff are obliged to support, travel limited by US Embassy do to uncertain security situation in July).

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

None

JHPIEGO

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

In 2018, The Federal Ministry of Health (FMoH) of the Government of Ethiopia (GOE) tasked Jhpiego collaborate with a consortium of expanded partners to introduce nationally both the human papillomavirus (HPV) vaccine and second dose of measles vaccine (MCV2). Although these two vaccines have different target groups and timelines, Jhpiego was assigned with supporting the capacity-building needs for these two vaccines concurrently, through the development of learning resources.

Activities Conducted

1. Developed and adopted HPV and MCV2 training packages

The JHPIAGO-Ethiopia team identified and reviewed the existing HPV vaccination training packages from Ethiopia's HPV vaccine demonstration project. Following the standards for updating training materials, we revised and aligned the existing HPV training materials to the national guidelines and validated the updated training materials with FMoH focal persons assigned for this task and other partners. Using a similar process, we developed the MCV2 training package, which was validated and endorsed by the TWG and FMoH. Both training packages were used for all subsequent HPV and MCV2 trainings.

2. Supported FMoH with the national launch of HPV vaccine

On December 3, 2018, the FMoH launched its national HPV vaccine introduction. Jhpiego, along with other partners, supported the FMoH in the planning and implementation of the launch and the subsequent national rollout. To celebrate the launch, the FMoH held a large event at the Tesfa Kokeb

Primary School in Addis Ababa. Jhpiego sponsored youth groups that performed music and a show, and coordinated, along with the TWG, a one-hour television program that was rolled out in conjunction to the launch, in order to create awareness about the vaccine. The TV show included a Q&A session with a physician, and provided viewers an opportunity to send in questions directly to the show via social media and other platforms.

3. Developed educational training video on HPV

In collaboration with the FMoH, Jhpiego supported the development of an educational video that describes the benefits of the HPV vaccine, and where and when to get the vaccine. The former first lady, an obstetrician and gynecologist, a cervical cancer survivor, an FMoH focal person and local school children participated in the production of the video. The video has now been shared with donors and other partners, and has been transmitted through the MoE TV channel, which has nationwide coverage 24 hours a day.

4. Conducted pilot testing of MCV2 training courses for 18 health care providers

Jhpiego, in collaboration with the FMoH, field-tested the MCV2 training course packages in the Oromia region, with 18 health care providers. A pre-course knowledge assessment was administered to identify individual knowledge gaps and training needs; none of the participants scored the standard pass mark of the pretest and the scores ranged from 13.3% to 73.26%. The various sessions were discussed as illustrated lectures, small group activities and role plays, followed by plenary sessions and discussions.

After covering all sessions, a post-course knowledge assessment administered. Five participants passed the post-course knowledge assessment questionnaires on the first attempt. Ten participants scored below the 85% threshold. They were advised to review the material again, and trainers discussed the participants' questions and provided answers that same day. For those who scored below the threshold, re-testing was not done, as the duration of the training was planned for only one day. From the pre- and post-course knowledge assessment results, we can conclude that, though EPI service provision has been practiced for a long period of time in the country, more training is required to bring health care providers up to the required knowledge and skills standards. Over all participants expressed satisfaction with the training and found it to be a useful means of refreshing and reinforcing their previous knowledge, as well as adding new knowledge on second dose of measles vaccine. All of the findings and feedback were provided to the Zonal HO and FMoH for continued training and improvement.

5. Conducted on-site mentorship and monitoring visits during HPV and MCV2 vaccine training courses

Monitoring visits were conducted for district level HPV (3 sessions) and MCV2 (2 sessions) trainings, with the following objectives:

- Ensure the quality of trainings
- Ensure trainings are conducted as per the standards
- Provide technical assistance, as needed.

Prior to the visits, Jhpiego developed a standard checklist and used throughout the visits. Some of the findings from the visits included:

- Lack of lighting and ventilation in training rooms, as well as too many participants packed into a small room
- Facilitators did not use different training methodologies, specifically participatory training methods
- Absence of facilitator and participant manuals
- Inadequate proportion of the number of trainers to the number of participants

Immediate feedback was given to districts and FMOH, with suggestions including to improve the training sessions by applying a combination of different training methodologies and adult principles in the teaching process and to provide training materials ahead of time. A delay in the transfer of money to regions and districts to make preparations ahead of time and to conduct the trainings, as well as a delay in distribution of training materials from FMOH, were mentioned as reasons for the poor coordination of the trainings. Findings from all visits were compiled and shared with the FMOH and district managers for continued training and improvement.

6. Conduct supervisory skills training for district level EPI coordinators in four regions

In order to help program leaders at different levels ensure the quality of HPV and MCV2 vaccine programs, four 3-day supervisory skills trainings, focusing on EPI programs, were conducted with 87 district level EPI coordinators in Amhara, Oromia, SNNP and Tigray regions.

7. Developed strategy for effectively reaching out-of-school girls in Afar Region

Across all regions of Ethiopia, the Afar region has the highest proportion of OOS girls, with an estimated 80% of 14-year-olds having never or no longer attending school. For this reason, in collaboration with the FMOH, it was decided to conduct human-centered design workshops in the Afar region, in three districts where many pastoralist communities and OOS girls live, in order to

design a context-specific strategy for reaching OOS with the HPV vaccine. The participants of the first two, 3-day workshops, in Dubti (35 participants) and Asayita (32 participants) districts, included:

- OOS girls, ages 9-15
- Mothers and fathers of OOS girls
- Community, religious and clan leaders
- Teachers

CHAI

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

Provide both management and technical support to the FMOH in the national HPV vaccine introduction preparations and post-introduction follow-ups. Help plan, implement and monitor the timely execution of all HPV introduction activities, including stakeholder engagement towards integrating HPV vaccine delivery and adolescent health, and post-introduction monitoring activities. Coordinate and align the effort of partners and other key stakeholders in the timely introduction of the HPV vaccine in Ethiopia. CHAI is closely working with the government on providing continuous technical support on HPV introduction at national, sub-national and implementation level. The technical support mainly focused on planning, coordination, implementation, and monitoring and evaluation of all NVI preparatory activities to ensure quality HPV Vaccine introduction. CHAI provided technical assistance to FMOH/Immunization team, through three consultants recruited using Gavi TCA; of which one is coordinating the overall activity at national level and the other two are supporting the two big regional health bureaus of Amhara and Oromia region.

Activities performed:

1. Planning and coordination

- CHAI have significantly contributed to coordination forums including immunization task force, TWG, ICC, and led the small HPV team under M & E team at FMOH
- Prepared detailed, comprehensive and budgeted HPV vaccine introduction work plan with set time line of implementation of all activities
- Provided technical assistance on the overall coordination in engagement of key stakeholders at national and subnational levels
- CHAI plays continuous role in strengthening national working groups (Logistics, M&E and Communication)
- Established strong inter-sectoral collaboration with partners and key stakeholders

including Ministry of Education

- Supported the overall coordination with key stakeholders
- Developed HPV Vaccination Micro-planning template and oriented Health workers and utilized the template to map in and out of school girls that are eligible for the first cohort of 14 years old girls

2. Monitoring and Evaluation

- provided critical support on development of guidelines and training manuals including, documents for HPV introduction, health workers training manuals, pocket guide, IEC materials, job aids and other reporting and recording tools
- Organized, facilitated and conducted the National level master ToT
- Facilitated sub-national HPV introduction cascade trainings
- adopted national HPV readiness assessment and monitored preparatory activities accordingly
- Supported in the compilation and analysis of national HPV data along with narration of technical report
- CHAI embedded TAs continued to monitor the progress of HPV2 Vaccination and the preparatory activities for the second cohort HPV Vaccination implementation

3. Communication and Social mobilization

- Developed proposals for sensitization workshop and other strategic documents that enables the ministry to enhance internal capacity on HPV introduction and mobilize resource from different partners
- Organized and facilitated Key stakeholders familiarization workshop
- Organized national sensitization workshop to key stakeholders including media professionals and Public Relations officers to create awareness and increase public acceptance on cervical cancer prevention and HPV vaccination.
- Supported timely execution of communication activities
- Supported Amhara and Afar regions financially to mitigate rumors and misconceptions with intensified social mobilization and risk communication

4. Logistics and supply

- Supported in forecasting (estimating) vaccine and other supplies

- Supported in vaccine storage capacity assessment & filling gaps
- Supported the printing of Tally sheets and vaccination cards
- Facilitated distribution of vaccines, supplies and printing materials at sub-national level

5. Implementation and Post implementation activities

- CHAI hosted the National HPV Vaccination launching ceremony
- Conducted rapid implementation and post-implementation assessment and forwarded workable recommendations to mitigate bottlenecks
- Conducted joint supportive supervision during HPV vaccination in both rounds

➤ Support to Amhara and Oromia Regions with the recruited TAs

- Supported in HPV, MCV2 and PIRI introduction at regional and woreda levels
- Supported regional TWG meetings,
- Facilitated RAT monitoring for NVI(HPV, MCV2) and with regular feedback to the lower level accordingly
- Organized and facilitated regional level ToT and cascaded trainings on NVI
- Supported timely execution of communication activities and facilitated distribution of vaccine and printing materials at sub-national level
- Facilitated distribution of vaccine and printing materials at sub-national level.
- Quick Post HPV introduction assessment was also done by the technical assistances to evaluate implementation performance

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

- CHAI has requested Gavi for 5 months NCE and secured Gavi endorsement

Challenges

- Denominator issue/Vaccine shortage
- Rumors/misconceptions spread by social media
- Shortfall of operational budget
- Failure to vaccinate significant proportion of out of school girls
- Security issue (conflicts, IDP)

Next steps to support FMOH in NVI

- CHAI will continue to support FMOH to increase and reach high sustainable HPV coverage
- Support other upcoming NVI in the country
- Continue providing robust guidance in accelerating the HPV vaccination uptake and improving coverage both for in and out of school girls using all the HPV vaccination platforms
- CHAI will continue providing technical support for HPV vaccination for the next cohort of girls and other NVIs initiatives
- Support FMOH and sub-national levels in the overall coordination, planning, and monitoring of NVI initiatives and to ensure a smooth transition to the routine 9-year-old cohort and sustainable HPV Vaccine uptake with the 3 embedded TAs.

JSI

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

JSI John Snow, Inc. through Gavi targeted country assistance (TCA) support is contributing to the national immunization program, particularly strengthening measles 1st dose coverage through successful measles second dose (MCV2) introduction, including both pre-launch and post-launch technical support. The technical support included:

- assistance with operationalization of RED micro planning,
- the development of standardized training curriculum and Job-Aids on MCV2,
- regular post introduction monitoring and supervision,
- supporting woreda/district level EPI review meetings using standard QRM process and
- Sharing lessons of other countries experience on strengthening new vaccine (MCV2) introduction to FMOH/EPI team.

In addition to this, JSI coordinates national and woreda/district level activities by embedding full time immunization technical advisor to the FMOH and deployed four regional level consultants to support low performing prioritized zones and woredas in Oromia, Somali, SNNPRs and Afar regions. Moreover to improve coverage and equity of immunization service, JSI is working closely with Federal Ministry of Health and its sister JSI projects and other partners to expand vaccination in to 2YL platform and support the vaccination functions to hard to reach populations targeted by PIRI mainly in the DRS.

Major activities accomplished include:

Planning

- Provided direct technical support on MCV2 vaccine and logistics forecasting, distribution and monitoring in coordination with Ethiopian pharmaceutical supply agency (EPSA).
- Provided technical input on the design and implementation of 2YL registration and MCV2 RED micro planning to Somali, Benishangul Gumuz, SNNPR and Gambella Regional Health Bureaus.
- Regular monitoring of pre-introduction readiness in all regions using RAT

Training and capacity building

- Provided technical input on the development of MCV2 training guidelines, Job-Aid and preparation of standard Power point presentations
- Conducted field pre-testing of training materials in Assela Zone of Oromia region in collaboration with communication working group and Jhpiego
- Provided technical support and facilitating a training of trainers (TOT) at national level for 26 regional health workers and technical assistants.
- Provided technical support during MCV2 cascade training in Oromia and Addis Ababa regions, as well as orientation training for health workers in Harar, Dire Dawa, and Desses (Amhara region) on the new vaccine introduction

Communication, demand creation and social mobilization

- Provided technical support during orientation training on new vaccine introduction and MCV2, for 60 participants from TV and radio media agencies, organized by FMOH.
- Provided technical support to effective messaging on MCV2-related IEC and BCC materials (brochures, banners, TV spot, and radio spot) and monitoring of media outlets on the national TV and radio broadcast
- Provided technical facilitation and coordination support to the organization of national level MCV2 introduction launching ceremony conducted in Welenchiti town, Oromia region on Feb 13, 2019 with the presence of the State Minister of Health (program) and higher officials and representatives of national and international partner organizations including GAVI and Global Fund.

Monitoring and supervision

- Provided technical support on the development of a revised EPI supportive supervision tool

to include the component of new vaccine (MCV2 and HPV) and coordination of monitoring visits to different regions targeting Woredas, Health centers, health posts, and the community. Results and key findings of the monitoring activities (MCV2 and HPV) at Woreda, zonal, regional and national level was presented and feedback given to the national team in the presences of senior officials.

- Provided technical support to incorporate new vaccine agenda (MCV2 and 2YL vaccination) as discussion point during the national EPI review meeting held at Adama town from Jun 17-18, 2019.

Study tour to Tanzania

- JSI organized a study tour to Tanzania, Mwanza region, from June 17-21, 2019 to learn and share experiences on how high MCV2 coverage was achieved and obstacles were addressed. Two FMOH EPI experts and two JSI staff participated. The visit included field visits and discussions with national, regional and district EPI manager, meetings with political leaders, in-depth discussions with EPI experts at Regional and District health offices and health facilities.
- Lessons taken on immunization system of Tanzania particularly on MCV2 were:
 - Strong primary health care system with all EPI service components integrated with other family health services, adequate staffing of lower level HWs, follow up after training and mentoring of HWs knowledge, vaccine auditing, use of Africa vaccination week (AVW) and PIRI activities as opportunity for mop up of measles vaccination and 2YL vaccination were major lessons learnt. In addition, use of electronic tablet to monitor immunization data quality and provide online feedback to Health facilities at district and regional level.

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

- There are encouraging progress in achieving rollout of MCV2 vaccination to all health facilities and achieving coverage of 45% in 2011 EFY. JSI focuses on prioritized intervention for the coming years to strengthen MCV2 coverage through; developing MCV2 refresher guide as a problem solving tools which will address basic knowledge gaps among HWs at vaccination sites, integrate with JSI/UI-FHS projects on addressing MCV2 and 2YL vaccination on quarterly EPI review meeting (QRM) processes and emphasis catch-up vaccination in 2YL using PIRI interventions.

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

- Based on national performance review and identification of low performer regions and zones, JSI deployed 4 MCV2 regional consultants to Oromia, SNNPR, Somali and Afar regions to support post MCV2 introduction activities and strengthen the routine EPI system at large. The consultants supported MCV2 rollout to all HFs, RED micro planning, MCV2 on job training, regular supportive supervision, and insure data quality related to EPI and MCV2 particularly at regional, district and health facility levels. Furthermore, the technical support will be aligned with activities targeted on PIRI interventions in areas targeted through regional consultants. To continue support for this year, JSI requested no cost extension to GAVI up to Jun 2020.

D. Challenges in implementing the TA plan

- Overlapping priorities and staff turnover, of lower level health workforce following reforms on the health system.
- Disruption of regular services due to insecurity in some areas of the country
- Stock out of measles vaccine in some health facilities due to re-allocation for measles vaccines for outbreak responses in these areas
- Denominator and immunization data quality concerns

CCRDA/CGPP Secretariat

Describe the strategic approach to Technical Assistance (TA) delivery to improving coverage and equity.

CCRDA working to contribute for improvement of immunization coverage and equity in Afar and Somali Region of Ethiopia through strengthening data quality and community demand generation. This project is operationalized in four woredas (Elidar, Dubti, Kore, and Dewe) in Afar region implemented by Amref Health Africa and four woredas (Filtu, Dekasuftu, Adadile and Gode) of Somali Region by Pastoralists Concern (PC) and Organization for Welfare and Development in Action (OWDA). The selected Words are low performing and prioritized by the Regional Health Bureaus (RHB). The direct beneficiaries of the project are estimated to be 18,366 surviving infants; 20,789 pregnant women and 63,966 under five years old children.

Major activities accomplished with the TA support:

Activities to strengthen immunization data quality

- Conducted bottom up and doable RED/C micro planning at woreda level with the involvement of 125 HEWs and Kebele administration and community representatives participates in 8 woredas.
- Conducted data quality self-assessment training for 73 woreda health office experts and health workers /HMIS officers/ to build their capacity in data quality assessment.
- Data quality self-assessment was conducted in all implementing woredas by field officers to identify major gaps existing visited health facilities, provide necessary technical supports accordingly and distribute recording and reporting materials if any.
- Routine Data Quality Assessment (RDQS) report was finalized and submitted to GAVI.
- Printed and distributing 280 EPI registration books and tally sheet are distributed in 8 woredas (district) and 280 archiving file folder are purchasing and distributed for Health facility.
- Established and monitored woreda EPI Data validation team at woreda level.

Activities to Generate Community Demand on Immunization

- Conducted two days immunization advocacy meeting at zonal level
- Provide three days training for religious leaders on EPI mainstreaming with a total of 197 woreda Islamic Affairs Council and Mosques.
- Provide 3 days community conversation facilitation training for 58 HEWs in selected low performing and hard to reach kebeles.
- Support and established woreda EPI task forces on both Afar and Somali regions.
- I was selected in 60 low performing Kebeles in Afar and Somali region based on their actual achievement and we conducted extra supports.
- Organized 20 outreach vaccination sessions in Somali and Afar region to reach defaulters and unvaccinated children.

Activities on Monitoring and Evaluation

- Conducted joint supportive supervision (JSS) at all HC & HP in 8 woredas.
- Conducted project baseline assessment survey and report finalized and submitted to GAVI

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

From the RDQS findings, all of them are availability of monthly report, the total completeness and

timeliness of routine monthly immunization report on this assessment is 89% and 68% respectively. When you see baseline survey the completeness and timeliness the report is 65% and 7% respectively, this indicates that the Gavi project implementation is a great improvement on the availability of monthly report as well as completeness and timeliness the report. After launching on Gavi project the data quality of the project implementing areas has big improvement on accuracy and consistency of reported data.

Challenges in implementing the TA plan

- Budget delay
 - Most of the project implementing partners are local NGOs so it is difficult to implement projects without release of fund.
- Denominator problem, the population of one kebele gets immunization service from another kebele, which later affects the immunization coverage data,
- Absence of health care workers due to political meetings which affects visit of the health centers according to the plan,
- Delayed project Take off
 - Project agreement signing with partners and regions.

Amendments/ no-cost Extension to the TA currently planned for the remaining three month activity

As you may recall we have contract agreement signed on August 16, 2018 between CCRDA/CGPP Secretariat and GAVI Alliance to implement GAVI project in 4 zones and 8 woredas of Afar and Somali region. In this connection CCRD has requested the no-cost extension to complete the remaining activities. Accordingly, Gavi has approved the no cost extension for three months (September 1 - November, 30 2019).

6. UPDATE OF FINDINGS FROM PREVIOUS JOINT APPRAISAL

Provide the status of the prioritised strategic actions identified in the previous Joint Appraisal¹⁰ 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.	
2.	
3.	
4.	
5.	
Additional significant IRC / HLRP recommendations (if applicable)	Current status

Prioritised actions from previous Joint Appraisal	Current status
1. Planning, Management, Monitoring, Coordination	<ul style="list-style-type: none"> • 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 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

¹⁰ Refer to the section “Prioritised Country Needs” in last year’s Joint Appraisal report

	<p>the ICC. Implementation of the legacy plan is pending due to funding gap of USD 11,930,101.</p> <ul style="list-style-type: none"> • 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.
<p>2. Reduce immunization inequities and improve coverage</p>	<ul style="list-style-type: none"> • 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

	<p>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.</p>
<p>3. Data Quality Improvement</p>	<ul style="list-style-type: none"> • 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 • Aailed standardized immunization HMIS tools to include the new vaccine introductions (MCV2 and HPV)
<p>4. New Vaccine introductions</p>	<ul style="list-style-type: none"> • 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

	<p>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.</p> <ul style="list-style-type: none"> • 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

3. 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:

PATH:

- ✓ The national and regional PATH staffs will continue participating on regular national and regional level immunization communication CWG to assist in the planning, implementation and monitoring of national and regional communication plan and activities
- ✓ The national and regional PATH staffs will continue participating on regular national and regional level M&E WG to assist in the planning, implementation and monitoring of national and regional data and program quality improvement plan and activities
- ✓ Bi-annual supportive supervision and on job training for social mobilization committee members
- ✓ Support National level annual EPI bulletin preparation and printing
- ✓ Conduct bi-annual supportive supervision and mentorship on EPI data quality at WoHO and health facility levels

- ✓ Conduct annual EPI program and data quality improvement plan review
- ✓ Plan and organize the 2019 African Vaccination Week activities

Jhpiego:

- ✓ The national and regional Jhpiego staffs will strengthen the participation on regular national and regional level immunization M&E and communication working groups meeting to assist in the planning, implementation and monitoring of national and regional level communication, data and program quality improvement plan and activities
- ✓ Support the FMOH and Regional level joint supportive supervision visits as needed and provision of refresher training for vaccinators
- ✓ Support FMOH in planning and organizing the 2019 African Vaccination Week activities
- ✓ Work with FMOH to introduce an integrated health service provision to in school and out of school girls

The World Bank:

- 1) One joint field monitoring & supportive supervision visit to the pilot regions
- 2) End-line evaluation will be conducted

UNICEF:

I. Contribution on leadership, Management and Coordination (LMC)

- Actively engage and contribute on coordination forums ICC, different technical working groups and relevant forums
- Provide technical support through its staff and hiring competent consultants
- Provide trainings for EPI managers and focal persons to improve managerial and technical capacity

II. Support evidence generation

- Conduct implementation research
- Conduct desk reviews and data analysis

III. Support program implementation

- Health system and Immunization Strengthen support through enhancing evidence based planning at health facility and community level
- Support new vaccine introduction

- Actively engage and contribute on program implementation, monitoring, review and evaluation

IV. Immunization Supply chain management

- Support CCEOP implementation
- Support planning, forecasting, procurement and distribution to end user level
- Capacity building and skill transfer
- Support cold chain inventory, EVMA and EVM improvement plan implementation

V. Data improvement

- Contribute for quality JRF reporting
- Promote HBR

VI. Demand

- Developing and implement specific and tailored community engagement strategies for and with high-risk communities
- Contributing to the improvement of quality of services through social accountability mechanisms (implementation of the community score cards)
- Shaping social norms and reinforcing awareness by engaging with community leaders, various and evidence-based relevant community platforms, contributing to the revitalization of the HEP
- Contributing to the decrease of the DOR by reinforcing HEW's IPC skills (operational research and capacity building) and introducing mobile phone reminders
- Reinforcing the monitoring and impact assessment of demand generation activities

WHO:

1. Support the 4 big agrarian regions to increase coverage focusing on zones with large number of unimmunized children

- ✓ RED training for 93 zonal EPI officers on the revised RED guide.
- ✓ Support training of health workers on the revised RED guide in 12 priority zones
- ✓ Support implementation of PIRI in the priority zones/Woredas
- ✓ Revision/updating of IIP guidelines and integration of RED principles and tools in to IRT, IIP and other guidelines. Print revised IIP training guide
- ✓ Provide IIP training for health workers in 12 priority zones
- ✓ Revision and printing of –Implementation guide for public and private use and

support distribution

- ✓ MLM training conducted for all zonal EPI officers using updated MLM modules
- ✓ Conduct quarterly supportive supervision in priority zones
- ✓ Develop innovative and easy to use defaulter tracking mechanism (design, pre-test, print and distribute)

2. **Vaccine Implementation:** (support planning, implementation and monitoring of MCV2 and HPV introduction and GAVI application proposal for Measles SIAs, Yellow Fever and other vaccines)

- ✓ Deploy TAs to support MCV2 introduction preparatory activities for dose 2 HPV introduction and EPI strengthening activities in priority regions and zones
- ✓ Conduct national review meeting after HPV1 introduction
- ✓ Explore feasibility of alternative HPV vaccination strategy
- ✓ Support Gavi application proposal submission for Measles SIAs, Yellow fever introduction and others as required

3. **Country Planning, Management and Monitoring:** strengthen planning, management and coordination

- ✓ Organize induction workshop for new decision makers and managers (MCH heads/process owners and EPI managers of FMoH and RHBs; as well as related agencies such as EPSA, EFDA and PHEM)
- ✓ Support NITAG activities (document preparation, printing and active participation)
- ✓ Conduct Quarterly Review Meeting with participation of Region, PHEM and EPI
- ✓ National Immunization review and planning meeting (all regions, zones, TAs, partners, stakeholders)

4. **Country Planning, Management and Monitoring:** Support evidence generation on VPDs

- ✓ Backstop and strengthen Rota, PBM and CRS Sentinel surveillance
- ✓ Strengthen case based surveillance for measles and rubella ...
- ✓ Establishment of taskforce for AEFI surveillance with ToR for reporting, monitoring and management of AEFI Surveillance; Drafting of AEFI Surveillance strengthening plan on AEFI surveillance
- ✓ Deploy 1 TA to support FMHACA on AEFI surveillance strengthening activities
- ✓ Support printing and duplication of AEFI formats

5. **Data:** Provide technical assistance on data management, data analysis and evidence generation
 - ✓ Conduct Data Quality Review workshop to enable national and Regional coverage estimates through triangulation of different sources
 - ✓ Conduct Data Quality Review workshop in 2 regions to provide sub-regional estimates through triangulation of different sources
 - ✓ regular data triangulation meeting: bimonthly
 - ✓ training on RDQA/DQS methodology for national and regional experts
 - ✓ Prioritize wordas on a quarterly basis using RED categorization and provide feedback
6. **Supply chain:** support implementation of EVMA and using the finding to improve supply chain management
 - ✓ Develop EVMA improvement road map and disseminate findings

Centers for Disease Control and Prevention (CDC):

The following activities are suggested activities that CDC could provide technical assistance on with Gavi support if deemed appropriate by the FMOH and Gavi: a) In support the planned introduction of MCV2 in Ethiopia in 2018, operations research to identify and mitigate barriers to uptake of second year of life (2YL) services (e.g. MCV2), and recording/reporting of vaccines doses delivered in 2YL; development and roll-out of training materials for 2YL, with emphasis on use of MCV2 as an opportunity to catch-up children on vaccinations that were missed during the first year of life; communications messaging to increase awareness and demand for MCV2; b) Implementation of the measles 5-dose versus 10-dose vial project in Ethiopia; c) continued technical support for the revitalization of congenital rubella syndrome (CRS) surveillance in Ethiopia

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 7 below).

7. 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, etc.*

*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 (indicating the rationale and main changes), 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 and requested modifications to Gavi support:

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

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*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:

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and provision of refresher training for vaccinators

- ✓ Support FMOH in planning and organizing the 2019 African Vaccination Week activities
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The World Bank:

- 3) One joint field monitoring & supportive supervision visit to the pilot regions
- 4) End-line evaluation will be conducted

UNICEF:

VII. Contribution on leadership, Management and Coordination (LMC)

- Actively engage and contribute on coordination forums ICC, different technical working groups and relevant forums
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- Provide trainings for EPI managers and focal persons to improve managerial and technical capacity

VIII. Support evidence generation

- Conduct implementation research
- Conduct desk reviews and data analysis

IX. Support program implementation

- Health system and Immunization Strengthen support through enhancing evidence based planning at health facility and community level
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- ✓ Develop EVMA improvement road map and disseminate findings

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This table draws from the previous JA sections, summarizing key findings and agreed actions, as well as indicating required resources and support, such as associated needs for technical assistance¹¹.

Key finding / Action	
1	
Current response	
Agreed country	

¹¹ The needs indicated in the JA will inform the TCA planning. However, 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. TA needs should however describe - to the extent 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. The TA menu of support is available as reference guide.

actions	
Expected outputs / results	
Associated timeline	
Required resources / support and TA	
Key finding / Action 2	
Current response	
Agreed country actions	
Expected outputs / results	
Associated timeline	
Required resources / support and TA	
Key finding / Action 3	
Current response	
Agreed country actions	
Expected outputs / results	
Associated timeline	
Required resources / support and TA	
Key finding / Action 4	
Current response	
Agreed country actions	

Expected outputs / results	
Associated timeline	
Required resources / support and TA	
Key finding / Action 5	
Current response	
Agreed country actions	
Expected outputs / results	
Associated timeline	
Required resources / support and TA	

Based on the above action plan, please outline any specific technology or innovation demand that can be fulfilled by private sector entities or new innovative entrepreneurs.

8. 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.*

9. 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
End of year stock level report (due 31 March) *			
Grant Performance Framework (GPF) * reporting against all due indicators			
Financial Reports *			
Periodic financial reports			
Annual financial statement			
Annual financial audit report			
Campaign reports *			
Supplementary Immunisation Activity technical report			
Campaign coverage survey report			
Immunisation financing and expenditure information			
Data quality and survey reporting			
Annual data quality desk review			
Data improvement plan (DIP)			
Progress report on data improvement plan implementation			
In-depth data assessment (conducted in the last five years)			
Nationally representative coverage survey (conducted in the last five years)			
Annual progress update on the Effective Vaccine Management (EVM) improvement plan			
CCEOP: updated CCE inventory			

Post Introduction Evaluation (PIE) (specify vaccines):			
Measles & rubella situation analysis and 5 year plan			
Operational plan for the immunisation programme			
HSS end of grant evaluation report			
HPV demonstration programme evaluations			
Coverage Survey			
Costing analysis			
Adolescent Health Assessment report			
Reporting by partners on TCA			

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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