Joint Appraisal Update report 2019

Country	Liberia
Full JA or JA update[1]	☐ full JA ☑ **JA update**
Date and location of Joint Appraisal meeting	18-19 Sept 2019, Monrovia, Liberia
Participants / affiliation[2]	MOH, UNICEF, WHO, JHPEIGO, JSI, LMH, Roqcue Advisory, Gavi
Reporting period	2018
Fiscal period[3]	July-June
Comprehensive Multi Year Plan (cMYP) duration	2016-2020
Gavi transition / co-financing group	*Initial self-financing*

1. RENEWAL AND EXTENSION REQUESTS

Renewal requests were submitted on the country portal

Vaccine (NVS) renewal request (by 15 May)	Yes X	No ☐	
Does the vaccine renewal request include a switch request?	Yes ☐	No X	N/A ☐
HSS renewal request	Yes ☐	No X	N/A ☐
CCEOP renewal request	Yes ☐	No X	N/A ☐

2. GAVI GRANT PORTFOLIO

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

Introduced / Campaign	Date	2018 Coverage (WUENIC)	2019 Target		Approx. Value $	Comment
			%	Children		
YF	*January 2001*	*84*	*85*	*150736*	2 658 975	
Penta	*January 2007*	*84*	*88*	*156056*	12 106 630	
PCV-13	*January 2014*	*84*	*98*	*173789*	11 630 398	
Rota	*April 2016*	*74*	*88*	*156056*	2 737 333	
IPV	*July 2017*	*73*	*88*	*156056*	1 217 148	
MCV2	*September 2019*	*NA*	*50*	*88668*	41,985	

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

Grant	Channel	Period	Total Grant Amount	Cumulative financing status @ June 2019		Compliance	
				Disb.	Util.	Fin.	Audit
HSS 3	GOL	2017-2021	14 100 000	6,971,284	4,045,907.69	Due 30 Sept 2019	
IPV VIG	GOL	2015-2017	125 000	125 000	125,000.00	Due 30 Sept 2019	
MCV SIA OP COSTS	GOL	2018	501 000	501 000	498,117.00	Due 30 Sept 2019	
PCV PSG	GOL	2018	46 007	46 007	46,007.00	Due 30 Sept 2019	
PENTA PSG	GOL	2018	35 680	35 680	35,680.00	Due 30 Sept 2019	
MCV2 VIG	GOL	2019	150 400	150 400	21,395	Due 31 Mar 2020	Due 2020
IPV SIA OP COSTS	GOL	2019	120 900	120 900	0.00	Due 31 Mar 2020	Due 2020
HPV VIG	GOL	2019	152 870	152 870	0.00	Due 31 Mar 2020	Due 2020
TCV OP COSTS	GOL	2019-2020	1 235 650	1 235 650	0.00	Due 31 Mar 2020	Due 2020

[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.

TCV VIG	GOL	2020	155 710	Due end Oct 2019	0.00	Due 31 Mar 2020	Due 2020

Indicative interest to introduce new vaccines or request Health System Strengthening support from Gavi in the future[4]

Indicative interest to introduce new vaccines or request HSS support from Gavi	**Programme**	**Expected application year**	**Expected introduction year**
	MR catch-up campaign	2020	2021
	Introduction of MR	2020	2022

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

Intermediate results indicator	**Target**	**Actual**
Percent of targeted children immunized with Penta3 during outreach sessions	32	32
Percent of health facilities offering integrated outreach including immunization	65	100
Percent of facilities with trained staff (vaccinator and CM/OIC)	94	98
Percentage of immunization staff trained in Immunization in Practice	NA	NA
Percent of facilities that have a trained health committee in the 5 Southeastern Counties	100	100
Percent of defaulter children traced and referred by CHAs/CHVs in Rivercess and Grand Gedeh Counties	50	NA
Percent of districts that report DTP3 coverage >100%	27	40
Verification Factor	NA	1
Functional status of cold chain equipment at health facility level	87	78
Full stock availability at the health facility (CCEOP)	90	NA
Percentage of County Cold Chain Officers trained	100	100
Temperature alarm monitoring	NA	NA
Percent of facilities with adequate immunization staffing	100	100
Comments		
Almost all IR indicator targets were met for 2018 except three.		

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

	Year	**Funding (US$m)**			**Staff in-post**	**Milestones met**	**Comments**
		Appr.	**Disb.**	**Util.**			
TOTAL CORE	**2018**	**713.4K**	**713.4K**	**711K**	**4/4**	**12/12**	
	2019	**773.1K**	**617.4K**	**70K**	**0/1**	**7/11**	
UNICEF	2018	330K	330K	330K	1/1	5/5	
	2019	339.5K	254.6K	0	0/1	0/4	
WHO	2018	233.4K	233.4K	231K	3/3	5/5	
	2019	250K	187.5K	70K	0/0	5/5	
CDC	2018	--	--	--	--	--	
	2019	33.6K	25.2K	n/a	--	1/1	
World Bank	2018	150K	150K	150K	--	2/2	
	2019	150K	150K	n/a	--	1/1	
TOTAL EXPAND	**2018**	**245.2K**	**24.5K**	**24.5K**	**--**	**--**	
	2019	**534.7K**	**61.8K**	**61.8K**	**--**	**2/2**	
CRS	2018	207.3K					
	2019	--	--	--	--	--	
Jhpiego	2018	--	--	--	--	--	

[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.

	2019	287.5K	27.3K	27.3K	--	1/1	
JSI	2018	28.5K	15.5K	15.5K	--	0/0	
	2019	66.5K	15.5K	15.5K	--	1/1	
University of Oslo	2018	9.4K	9K	9K	--	Not due	
	2019	19K	19K	19K		Not due	
Rocque Advisory	2018	--	--	--	--	--	
	2019	161.7K	0	0	--	Not due	

~~3. RECENT CHANGES IN COUNTRY CONTEXT AND POTENTIAL RISKS FOR NEXT YEAR~~

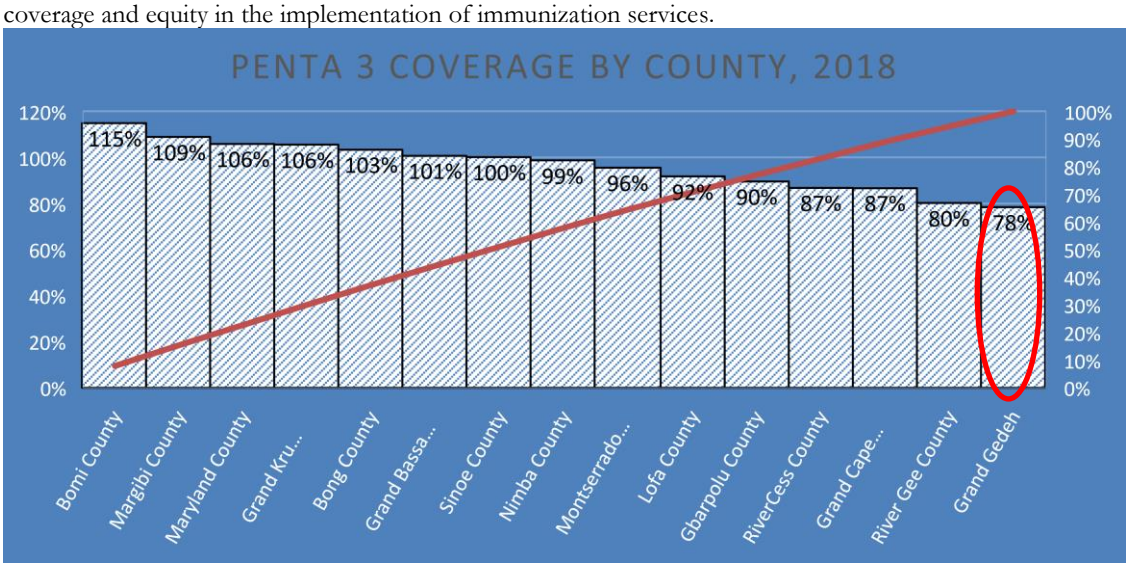
~~*The JA update does not include this section.*~~

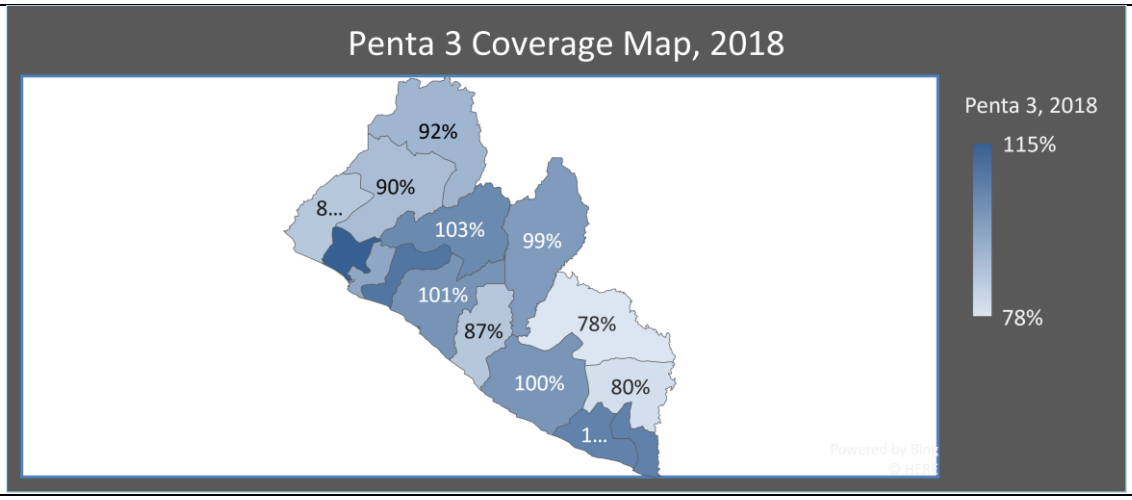
~~4. PERFORMANCE OF THE IMMUNISATION PROGRAMME~~

~~*The JA update does not include this section.*~~

5. PERFORMANCE OF GAVI SUPPORT

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

Objective 1: Increase access to quality EPI and other priority RMNCAH services (including ANC, PMTCT, FP, etc.) by target populations especially populations that are inadvertently deprived from immunization services so as to increase equitable coverage and uptake of EPI and other priority RMNCAH services by December 2021.	
Objective of the HSS grant (as per the HSS proposal or PSR)	- To strengthen outreach services in all counties with an initial emphasis on poor-performing districts and county (e.g. Grand Gedeh currently) below 80% Penta 3 coverage using three-pronged approach (fixed, outreach and mobile) so as to increase coverage and equitable access of target populations, including hard-to-reach communities for EPI and other RMNCAH services during the grant period. - Ensure equitable access to communities deprived from immunization such as urban poor and rural-remote communities - Address inequities due to geographic locations
Priority geographies / population groups or constraints to C&E addressed by the objective	Analysis of the coverage of Penta 3 in 2018 by county revealed significant coverage improvement by 14 counties out of the total of 15 with Penta 3 coverage of 80% and above. **Grand Gedeh** county is running for the second year as a poorly performing county with a coverage rate of 78%. This is 10% below the national target set at 88%, by this, this county is lagging behind and as such additional support will be provided to develop county-specific coverage and equity improvement plan plus the deployment of a national technical staff that will work with the Grand Gedeh CHT to address any health system barriers that are linked to coverage and equity in the implementation of immunization services. 



% activities conducted / budget utilisation	**Budget Utilization:** Service Delivery: Used approximately 94% of the approved amount and implemented 88% of agreed activities for the period January to August 2019.
Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption	The below listed activities have been implemented for the period 2018-2019: 1. **Development of health facilities immunization micro plans:** Routine immunization health facility microplans were updated using support from the vaccine introduction grant (VIG) for the introduction of MCV2 into routine immunization. During this time period, a total 624 health facility microplans across the 15 counties were reviewed and updated inclusive of projected operating cost. This exercise lasted for a period of two days. These micro-plans were developed based on RED/ REC approach and will guide program implementation and monitoring at health facility and county levels, ensuring that bottle necks relating to access, and equity are addressed and that the most at risk population and underserved areas are covered. We have another opportunity to review and update accordingly as we approach the introduction of TCV into routine immunization in February 2020. 2. **Provided support (financial and technical) for the conduct of monthly outreaches:** Health facilities outreach services as per the afore-mentioned period – Approximately 29% of the population live beyond 5 km from the health facilities; therefore, in order to ensure that distance is not a factor in reaching the un-reached population, six-monthly health facility outreach support was provided to conduct outreach services. For the period, January to June 2018, a total of 28,401 children received the third dose of Pentavalent vaccine (Penta 3) and 28,448 received MCV1 during the delivery of outreach services nationally. These numbers account for 35% and 36% respectively of the total children who received Penta 3 and Measles through during the reporting period (January to June 2018). Unfortunately, we couldn't continue this very key immunization service delivery intervention (health facility outreaches) due to delay in disbursement of the HSS3 support. Consequently, this had led to a 10% decline in outreach contributions for penta 3 to the overall penta 3 coverage from 32% in 2018 to 22% in 2019. 3. **Supportive Supervision:** A total of three quarterly supportive supervisions were conducted from 2018 to 2019. Two of which were conducted in 2018 with one being joint supportive supervision. However, though only one was done in 2019, every field opportunity was used to provide on-site mentorship/coaching. For instance, during the integrated polio campaign national technical teams used that opportunity to further strengthened the delivery of routine immunization services. Some of the overarching issues identified include but not limited to: a. **Unemployed Vaccinators** – To date, we have approximately 150 vaccinators that are not receiving any form of incentive and are volunteering daily. b. **Irregular Outreach** – Most vaccinators expressed fear of not reaching their targets if outreach support isn't provided to them regularly. c. **Logistics (Motorcycles, Fuel, Stroke Oil, Spark Plug, etc**.) – It was raised that given the distances they travel to reach the catchment population; it was becoming extremely difficult to travel on foot to get the people in time. They central EPI should consider the procurement of motorcycles for outreaches. 4. **Quarterly Review Meeting:** In 2018, two rounds of quarterly EPI review meetings were held while one was conducted in 2019. The purpose of these review meetings were stock taking, troubleshooting to identify shared problem and associated root cause but most importantly developing practical

solutions to address these immunization system bottlenecks that are basically linked to coverage and equity. This brought together scores of participants from both national government and MOH officials, county and partners. The last review meeting was held in Voinjama, Lofa County first week in August 2019.

5. **Periodic Intensification of Routine Immunization (PIRI):** Conducted one round of Periodic Intensification of Routine Immunization (PIRI) in all 15 counties targeting hard to reach communities and underserved population which helped in increasing the coverage rates for all antigens as demonstrated by April 2018 performance for measles vaccine coverage of 101% (14, 629) compared to March 2018 performance of 80% (11, 583) against a monthly target of 14,474. In addition, one round of PIRI was conducted in Kongbah, Gbarpolu county after analysis showed that this district was lagging behind due to its very rural geographical construct. However, we couldn't continue to other counties and/ or districts due to delay in the disbursement of HSS3 funds.

6. **Surveillance:** Surveillance visits to priority sites – From a total of 804 priority sites (high: 96 sites, medium: 162 sites and low: 546), 10% were selected for surveillance visits aimed at improving timely detection, reporting and completeness. The MOH continues to advocate and support efforts of the surveillance team within the IDSR framework to improve timeliness and completeness of report. Over 45 participants were trained on AEFI Surveillance and monitoring, the national AEFI surveillance committees was reactivated, national AEFI Surveillance guidelines and SOPs developed, and reporting channels established. Guideline, SOPs and reporting forms will be printed in the soonest possible time.

7. **Implementation of Urban Immunization Strategy:** In an effort to improve immunization coverage in Montserrado county and address immunization issues associated with equity, the EPI along with its partners developed an approach coined "Urban Immunization Strategy, UIS" after the conduct of the comprehensive EPI Review meeting February 2012. The evaluation of the Montserrado County UIS was conducted in line with best practices to understand inherent limitations of the project methodology and underlying assumptions. However, in order to scale-up the urban immunization strategy to other counties, it will be good to an internal review of the methodology and assumptions within the project document. Evaluation of the Montserrado County Urban Immunization Strategy has been concluded. Please see below findings and lessons learned:

Constraints

- Management functions are highly centralized which led to slow implementation of several activities at the county level limited availability and use of data, particularly at the community level.
- Difficulty of the vaccinator exercising autonomy over incentives received through the project; proprietors and administrators' desire to get a greater share of the incentives thereby de-motivating the vaccinators.
- Irregular conduct of health facility outreaches due to delay in outreach support. This led to some vaccinators using their incentive to cover the cost of transportation mostly.
- Lack of Motor bike for implementing facilities to ease transportation during outreach.
- Lack of fridges for some of the implementing facilities

Lesson learned

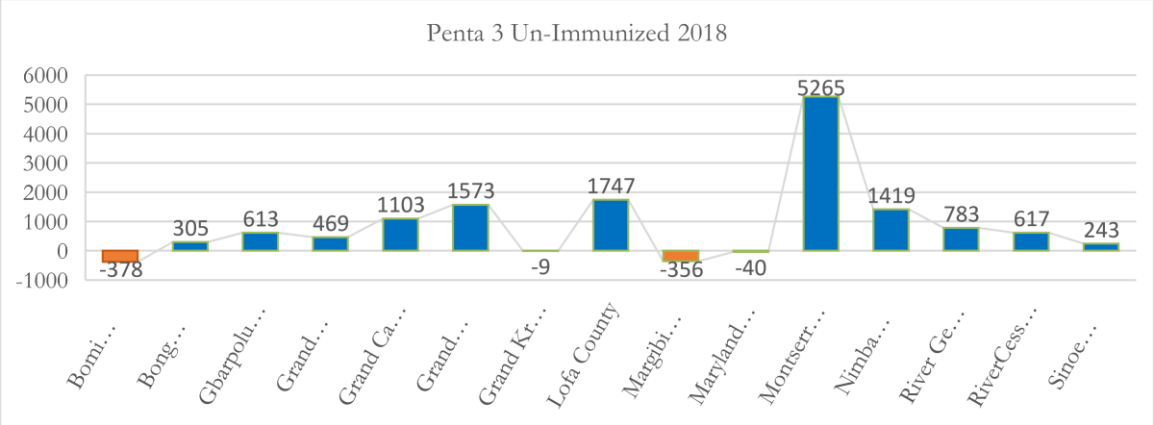
The evaluation team used findings from the evaluation criteria and achievement to draw or determine implications and lessons learned that could be applicable to future implementation of the project especially its scale-up. For instance, the establishment of vaccination posts/sites in big market Places to capture market women children whose schedule cannot allow them to go the health facility was the most flexible and effective strategy to reduce unvaccinated children. However, the key lesson learned is that future project should ensure that data on market vaccination service are captured in the Community Based Information System (CBIS).

The involvement of community members and project implementers in the planning process promoted ownership of the project.

Regular review of the project implementation served as a unique opportunity to address emerging problems and prevent stagnation.

Most of the health facilities in Montserrado County are privately own facilities many of whom are not providing immunization services. The implementation of the UIS project with the involvement of private facilities was an effective strategy to expand immunization to underserved/hard-to-reach/difficult/vulnerable population.

The EVD was a key impediment that contributed to the shortfall of the full achievement of the project planned objective. The outbreak stalled the project for two years and offset its focus from immunization to response.

	Outreach immunization service has unequivocally proven to be potential initiatives for capturing children missed at the facilities in fixed immunization. The design and planning of the project included supervision and structural monitoring that identified issues for improvement during the project implementation but monitoring cannot be narrowed to leave out evaluation. The lesson learned is to consider evaluation in the plan of project with clear theory of change and identified result frame work with indicators to measure outcome or performance. In view of the supra-mentioned, findings and lessons learned were used to select three counties (e.g. Grand Bassa, Margibi and Nimba) and decision for possible scale up. This is another perfect opportunity to address immunization system bottlenecks that are associated with coverage and equity. **Penta 3 Unimmunized:** The below chart indicates that in 2018 there were four counties (Montserrado, Nimba, Lofa and Grand Gedeh) having above 1000 children being un-immunized who didn't receive the third dose of pentavalent vaccine (Penta 3). 
Major activities planned for upcoming period (mention significant changes / budget reallocations and associated **changes in technical assistance**[5]	The below activities have been planned for implementation during the last quarters of 2019 up to 2020: ▪ Health facility outreach services Periodic Intensification of Routine Immunization to be more data driven and targeted toward lower performing districts. ▪ Quarterly supportive supervision ▪ Biannual EPI review meetings ▪ Surveillance visit to priority sites ▪ Scaling up of the Urban Immunization Strategy implementation to Grand Bassa, Margibi and Nimba counties to address immunization system issues associated with coverage and equity ▪ Institutionalizing AEFI monitoring system ▪ Implementation of recommendations from Missed opportunity for vaccination (MOV) assessment ▪ Reduction of Rota drop-out rate to at least 10%. The programme intends leverage on existing structures at the community level to increase uptake for routine immunization. For, instance, a systematic approach for defaulter tracking will be established, the use of CHAs for awareness creation and referring of defaulters, involvement of CSO in demand generation activities through community engagement, etc. ▪ Following donor coordination discussions MOH is reviewing opportunity to enhance donor funding/enhance savings for example through integrated training of health workers and supervision ▪ Enrolment of 150 vaccinators on incentive under HSS ▪ Increased HSS support for outreach logistics (eg motorbikes) ▪ Support for Equity Bottle Neck and Causality Analysis in 3 counties ▪ Continuation of piloting of Mobile Technology and innovations for defaulter tracking ▪ Develop a data improvement plan to increase availability of credible data to inform better policy making for targeted strategies
Objective 2:	
Objective of the HSS grant (as per the HSS proposal or PSR)	Enhance community demand for and uptake of quality EPI and other priority RMNCAH services so as to improve EPI and other health outcomes nationwide by December 2021.
Priority geographies / population groups or constraints to	Routine data analysis supported by the recently conducted KAP identified some challenges associated with low immunization uptake in 7 counties (Grand Bassa, Grand Cape Mount, Grand Gedeh, Maryland, Montserrado, River Gee and Sinoe). To address the identified challenges, with support from the GAVI HSS grant, the current immunization communication strategy is being updated and messages are being revised and will in addition target male parents who have been noted to play significant role in immunization uptake. In addition, community

C&E addressed by the objective	structures (CHC and HFDC members) have been trained in 3 South Eastern counties Maryland, River Gee and Sinoe with a plan to continue to roll out trainings to the rest of the county. The main purpose, was to train on Interpersonal skills and the importance of community ownership relative to immunization. In preparation of the introduction of new vaccines (MCV2, HPV and TCV) a communication risk assessment was conducted. Findings from this risk assessment are being used to guide development of communication materials for the introduction of new vaccines.
% activities conducted / budget utilisation	**Budget Utilization:** Community System Strengthening: Used approximately 85% of the approved amount with 50% of CSS activities being implemented for the period January to August 2019. Balance funds under these areas were reprogrammed to support other health system strengthening activities.
Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption	▪ Trained Community Structures (CHC and HFDC) members in 3 South Eastern Counties- Maryland, River Gee and Sinoe. ▪ Conducted a Knowledge Attitude and Practice (KAP) study on immunization, debrief for MOH and partners conducted. Findings and recommendations from the KAP are being used to develop messages for immunization and updating of the immunization communication strategy. For instance, the findings revealed active interest and involvement of male parents in childhood immunization, to sustain and build upon this finding, messages are being developed to target the male parents. ▪ Developed an Immunization Communication Strategy that has been costed. The strategy was developed in line with findings and lessons learnt from communication assessments, other assessment and the KAP survey. Validation and dissemination slated for last quarter in 2019. ▪ Conducted communication risk assessment before the introduction of MCV2 into routine immunization. Findings were used to develop IEC/SBCC materials that were cultural, religious, target specific, etc. to generate positive behavior change and uptake. ▪ Developed/Revised, Printed and Disseminated Immunization Information Education and Communication Materials. ▪ Conducted Immunization Advocacy Meetings in all 15 counties and 91 Health districts in preparation for the May 2019 NIDs.
Major activities planned for upcoming period (mention significant changes / budget reallocations and associated **changes in technical assistance**[5]	▪ Implementation of Communication Activities in line with the Communication Strategy ▪ Airing of messages for improved uptake of routine immunization ▪ Conduct quarterly community engagement meetings in view of increasing community ownership for immunization with the community structures, CSOs and the National Community Health Assistance (NCHA) Programme Platform (Develop Standardized Defaulter Tracking Systems). In this context EPI and LMH are planning to pilot the inclusion of immunization services and monitoring under the NCHA programme in Rivercess County ▪ Conduct targeted outreach informed by county, health facility and community data
Objective 3:	
Objective of the HSS grant (as per the HSS proposal or PSR)	Strengthen the logistics and Supply Chain Management System of MOH/EPI in order to improve the efficiency of stock management and distribution of vaccines and other essential medical commodities at all levels of the health system in the 15 counties by December 2021
Priority geographies / population groups or constraints to C&E addressed by the objective	In an effort to improve immunization supply chain (iSC) and strengthen cold chain, archiving practices, vaccines management, etc. The below immunization supply chain activities are extremely critical: ▪ Availability of bundled vaccines and data tools at all point in time. ▪ Implementation of the EVM cIP at all levels with focus on south-eastern Liberia ▪ Operationalization of the EPI regional vaccines store in Zwedru, Grand Gedeh. ▪ Procurement of EPI logistics (e.g. Motorcycles, Vehicles, etc.) for the effective conduct of health facility outreaches ▪ Regular maintenance and repairs of all CCE and logistics to ensure effective operation ▪ Expansion of cold chain equipment through the installation of over 119 pieces of CCE (e.g. SDD and IRL) ▪ Solarization of EPI Regional Vaccines Store plus three county depots (e.g. Grand Kru, Grand Gedeh and Maryland) ▪ Relocation of the National Vaccines Store to the Central Medical Store on or before the first quarter 2020
% activities conducted / budget utilisation	**Budget Utilization:** Procurement and Supply Management: Used approximately 66% of the total amount of $1,214,776.44 with approximately 90% of all PSM activities being implemented for the period January to August 2019. In addition,

	the amount of US$ 590K was reprogrammed to support the procurement and installation of temperature control system; insurance, warehouse equipment, etc.
Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption	The proper functioning of the immunization supply chain system is a core function and the backbone of an immunization programme. Therefore, it is imperative to ensure that safe, efficacious and potent vaccines reach the last mile at all point in time. To actualize this, the below immunization supply chain activities were implemented. These activities include but not limited to the following: ▪ Routine distribution of bundled vaccines and EPI data tools. Due to delay in the disbursement of HSS3 funds we are experiencing stock-out of data tools in some health facilities. With the availability of HSS3 funds now, we hope to reverse this situation asap. ▪ Ongoing implementation of the EVM cIP at all levels with focus on south-eastern Liberia ▪ Internal EVMA was slated for August 2019 but had to be postponed to November 2019 due to the delay in disbursement of HSS3 funds ▪ Immunization Supply Chain (iSC) System Design workshop: In August 2018 Liberia's Expanded Programme on Immunization with support from Gavi, JSI, UNICEF, WHO and other partners (External and Internal) conducted an immunization supply chain system design workshop aimed at understanding Liberia's iSC and how system design can support countries to optimize their supply chains, provide practical alternatives to address bottlenecks identified including opportunistic resource sharing (or integration) options and agreed upon next steps for iSC analysis for improvements in public health commodity (including vaccines) availability, reach, and efficiencies across the public health supply chain and eventual contributions to health outcomes. Nine scenarios have been identified for modelling and the country results shared March 2019. This auspicious event brought together about 45 participants from all levels of the MOH Supply chain and partners(JSI, WHO and UNICEF were provided with a clear understanding of system design. Results from the immunization supply chain system design is yet to be implemented due to the huge costs associated. ▪ Conducted immunization county cold chain assessment to all 15 counties covering 599 health facilities offering immunization services ▪ Procurement, distribution and installation of CCE spare parts and devices from HSS3 funds ▪ As a way of improving the cold chain system, the following were done: B/w the period 2016 – 2018 a total of 248 pieces of solar direct drives have been installed and commissioned; 32 pieces of Ice-line refrigerators procured and installed; procurement of two cold vans and one truck that are in active operations relative to bundle vaccines distribution, construction of two (2) regional cold stores, contribution to the central medical store (CMS), etc. ▪ Submission of year 2 and 3 CCE OP ODP for procurement of additional CCE ▪ Conducted National Vaccines wastage study using three antigens as proxy (Measles, Penta and BCG). The study revealed the following: o *BCG wastage rate in country is 51.9% as opposed to WHO/UNICEF recommended of 50%* o *Measles wastage rate in country is 38.4% as opposed to WHO/UNICEF recommended of 40%* o *Pentavalent wastage rate in country is 7.5% as opposed to WHO/UNICEF recommended of 5%* ▪ NVS Transition plan has been developed and number of activities have been implemented except temperature mapping that is slated to begin September 20, 2019 and ends October 19, 2019. ▪ Relocation of the NVS to CMS is still pending due to the completion of the temperature mapping, electricity situation among other things. ▪ Gavi HSS funds in the amount of US$ 590K was reprogrammed to support the procurement and installation of temperature control system; insurance, warehouse equipment, etc. ▪ RVS in Bong is fully operational and Regional Vaccines Store (RVS) in Grand Gedeh is technically operational after temperature mapping. HSS purchased two generators for the regional store in Grand Gedeh ▪ Procured, distributed and installed 140 CCE (108 SDD and 32 ILR) under the CCEOP funding mechanism. Health workers have been trained including staff at the county depots and health facilities. Liberia is first country in WA region to complete the CCEOP as planned. ▪ The firefighting equipment have been installed in all EPI stores at national and regional depots. Staffs trained on fire safety. ▪ Supply movement to NVS is ongoing; improvement of facilities at existing store. ▪ Vaccine management guidelines, SOPs, data tools and supervisory operation guide have been developed and in use. ▪ Information sharing and coordination among MOHS and all partners has improved. Liberia has achieved 100% in reporting procedures for vaccines arrival. ▪ River Gee County vaccine depot has been Solarized to ensure sustainable power generation. ▪ CCE inventory assessment data collection has been completed. ▪ Procured rain gear for all health facilities (599) and 15 county cold chain officers and child survival focal persons outreach activities.

	▪ Fuel support for vaccine storage and distribution provided. However, this has been a challenging situation due to delay in disbursement of HSS3 funds.
Major activities planned for upcoming period (mention significant changes / budget reallocations and associated **changes in technical assistance**[5]	Immunization supply chain and logistics are critical coping mechanisms use to overcome endure challenges confronting vaccines storage, distribution, and management. To ensure that these foreseeable challenges and/or bottlenecks are fully address. The below activities are planned for the upcoming period. These activities include but not limited to: ▪ Continuation of timely last mile distribution of bundled vaccines ▪ Implementation of cIP at all levels ▪ Conduct an internal EVM Assessment to review progress against cIP in preparation for a full EVMA in 2020 Operationalization of the new vaccine store. ▪ Cold chain expansion through the implementation of CCEOP Yr. 2 and 3 ODP by January 2020 ▪ Operationalization of EPI Grand Gedeh Regional Vaccines Store by the end of 2019 ▪ Solarization of EPI Grand Gedeh Regional Vaccines Store plus 3 Counties (Grand Kru, Grand Gedeh and Maryland) county depots ▪ Possibility of implementing fragments of the Immunization System Design results nationally ▪ Procurement of Vehicles and 60 motorcycles for health facilities ▪ Conduct temperature mapping of the EPI cold rooms at the CMS beginning September 20, 2019 to October 19, 2019. This will inform the final relocation timeline of the NVS to the CMS. ▪ Replacement of aged CCE ▪ Regular maintenance and repairs of all CCE and logistics ▪ Conduct capacity building for County Cold Chain Officers, Child Survival Focus Persons and other county supervisors on DVDMT and other aspects of immunization supply chain. ▪ Conduct regular inventory at all levels ▪ Robust immunization supply chain supportive supervision to improve vaccines management, accountability, archiving practices among others.

During the first six months disbursement, two CSOs (e.g. Liberia Crusaders for Peace and Liberia Immunization Platform) were identified as potential CSOs to partner with. However, the contracting process to select one from the afore mentioned that reputable, has proven track records and expertise will be concluded before the end of 2019 to conduct demand creation activities. These activities are:

- Engagement with Media Houses: The selected CSO will work with radio stations in the capital that have better frequency modulation (FM) as well as local community language radio stations at county level to air routine immunization messages in English and local vernacular
- Talk Shows: Arrange Talk shows for immunization champions and influencers to create demand for immunization and subsequently increase uptake
- Community Engagement: Conduct house-to-house/door-to-door visitation using interpersonal communication (IPC) skills. In addition, they will work with CHA, gCHVs and social mobilizers to do immunization community profiling and appropriate referrals to the nearest health facilities.
- Visibility: Aid in the distribution of IEC/SBCC materials that are cultural, religious and audience sensitive. Also, help in the interpretation of the content.

5.2. Performance of vaccine support

IPV Vaccine Introduction Grant: IPV Vaccine Introduction Grant (VIG) has been fully utilized by end of August 2018. All planned activities have been fully implemented as outlined in the IPV introduction report. There was a very good absorption and utilization of the IPV VIG during the period under review. In addition, WHO conducted IPV PIE consistent with the guidelines. The below findings were identified:

Key Achievements

[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 extend known to date - the type of TA required (staff, consultants, training, etc.), the provider of TA (core/expanded partner) the quantity/duration required, modality (embedded; sub-national; coaching; etc.), and any timeframes/deadlines. JA teams are reminded to both look back (TA which was not completed/successful in the past) and forward (planned vaccine introductions, campaigns, major upcoming HSS activities, etc.) when specifying TA priorities for the coming year. The TA menu of support is available as reference guide.

- Good introduction plans at Central level for IPV
- Training was of good quality at Central level (all staff could answer questions on IPV)
- Smooth implementation of IPV

Key challenges

- Multi dose vial policy for IPV not adhered to by some health facilities
- Poor knowledge of IPV immunization schedule by some health facilities visited staff.
- Lack of AEFI protocol at all levels.
- Wrong information on immunization schedule on IPV FAQs brochure
- There were reports of stock out of IPV at some health facilities in 5 out of the 6 (Margibi, Montserrado, Nimba, Rivercess and Sinoe)

These findings were used to the introduction of the second dose of measles (MCV2) into routine immunization.

Measles SIA Grant: There has been a very good absorption and utilization rate of the measles SIA grant. By 27 August 2018, the utilization rate of the grant for the measles campaign stood at 99% after implementation of the campaign and the post measles SIA coverage survey.

Measles Vaccine Introduction Grant: VIG for MCV2 has 90% utilization rate as of August 31, 2019. Approximately 97% of all planned activities have been fully implemented with only the post-introduction monitoring field visit pending. Findings will be used to inform the introduction of HPV into routine immunization.

Product Switch Grant: The product switch grants were utilized fully for the official switching of pentavalent single to ten doses and pneumococcal conjugate vaccine (PCV-13) single dose to four doses in 2018.

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

Performance of CCEOP indicators: First phase (Year 1) CCEOP CCE installation has been completed as reported from the service providers. MoH and CCEOP Project Management Team (PMT) with final comprehensive report from the supplier available. The CCEOP indicators in GPF has been shared with Gavi to be agreed and finalized. The CCEOP indicator performance indicators have been report on through the GPF on the Gavi portal. It is worth mentioning that during year 1 implementation of the CCE OP project, a total of 26 deviations occurred. Reasons for those deviations include but not limited to:

- Geographical Access: Bad road, broken or difficult bridges were serious impediment during implementation. Hence, original health facilities had to be changed.
- Change of health facility – During the course of implementation some of the original health facilities selected within the ODP were replaced on the prevailing situation at hand.

Implementation status: The final operational deployment plan included 108 Solar Direct Drive (SDD) refrigerators and 32 Ice lined Refrigerators and Ice-pack freezers. The total of 140 units of CCE were received in country in March and installation completed within July. Project Management Team (MoH, UNICEF and WHO) also conducted post installation monitoring of CCE. Users were found with good knowledge of preventive maintenance of SDDs. The monitoring team has recommended for future the grid CCE also to have clear visible pictorial for preventive maintenance on top of the equipment. CCEOP Year 2 and 3 ODP have been completed and submitted for onward action.

Contribution: The distribution of the CCEOP CCE was developed considering access and equity as key immunization parameters for counties. The CCEs have been installed in the selected health facilities. The contribution of these CCE can only be determined in 2019 and onward.

Future needs for technical assistance: The implementation of first phase of CCEOP project has been successfully completed before the expected timeline. Liberia is first country in West Africa Region to complete the first phase of CCEOP project. For the smooth coordination of CCEOP projects for the years 2019-2020 no additional Technical Assistance will be needed going forward. This is intended to ensure that this process is fully country led. Currently, year 2 and 3 ODP have been developed and submitted and is eagerly awaiting CCE by the end of December 2019.

5.4. Financial management performance

HSS-3 Financial absorption and utilization rates

A total of US$ 4,223,584.00 was disbursed as first tranche of the HSS support with utilization rate at 96% (US$ 4,045,907.69) as at August 2019 with 69% implementation rate for planned activities which is far more impressive than the last year absorption of about 46%. The disbursement of the 2nd tranche of HSS funds was delayed by Gavi due to late reception of the annual external audit report. At the beginning of September 2019 Gavi transferred a further US$ 1,937,744 of HSS 3 funds to Liberia. Some factors responsible for the increase in the financial absorption and utilization rates include but are not limited to the following:

- **Hiring of dedicated project accountant:** Consistent with Annex 6 section by of the Grant Management Requirements governing the management and oversight of vaccines and related supplies and financial support provided by Gavi to the Government of Liberia, a dedicated accountant was recruited to focus specifically on all Gavi related transactions. This has been one of the game changers relative to increase in absorption and utilization rates.
- **Coordination and Collaboration:** Stronger coordination and collaboration between and among programmes of the Ministry of Health and partners. Regular coordination meeting with partners e.g. through the Technical Working Group meetings where activities implementation and timeline are discussed and follow-up actions initiated with regards to immunization and the HSS3 grant performances. There has been an improvement in collaboration between and among key units/division of the MoH. These include but not limited to:
    - M&E Unit - conducted biannual data verifications from central to county and quarterly from county to health facilities.
    - Research Unit - conducted immunization KAP study. Findings from the KAP have been used to informed the immunization communication strategy and the development of IEC/SBCC materials that are culturally appropriate and audience sensitive.
    - Community Health Services Division - Use of CHAs to conduct defaulters tracking, development of the vaccination tracking tool was jointly planned and implemented.
    - National Health Promotion Division - The NHPD closely collaborated with the EPI programme to develop culturally appropriate messages on immunization for the entire country. For instance, routine immunization messages in local vernacular.
- **Financial Supervision:** Ministry of Health's Office of financial management (OFM) initiated field supervision providing support (technical, monitoring, etc.) to counties' financial officers for the enhancement of timely utilization and liquidation of funds.
- Provision of targeted Gavi TA support (by Roque advisory) to enhance capacity within OFM and EPI to strengthen grant-management and oversight. TA has supported i.a the revision of OFM's manual on financial management, improve understanding of Gavi report and audit requirements; integrate gavi grants into NetSuite system; support MOH to switch to mobile payments and update Gavi HSS budget year 2.

IPV Vaccine Introduction Grant: IPV Vaccine Introduction Grant (VIG) has been fully utilized by end of August 2018. All planned activities have been fully implemented as outlined in the IPV introduction report. There was a very good absorption and utilization of the IPV VIG during the period under review. In addition, WHO conducted IPV PIE and findings were used to informed the introduction of the second dose of measles (MCV2) into routine immunization.

Measles SIA Grant: There has been a very good absorption and utilization rate of the measles SIA grant. By 27 August 2018, the utilization rate of the grant for the measles campaign stood at 99% after implementation of the campaign and the post measles SIA coverage survey.

Measles Vaccine Introduction Grant: VIG for MCV2 has 90% utilization rate as of August 31, 2019. Approximately 97% of all planned activities have been fully implemented with only the post-introduction monitoring field visit pending. Findings will be used to inform the introduction of HPV into routine immunization.

Product Switch Grant: The product switch grants were utilized fully for the official switching of pentavalent single to ten doses and pneumococcal conjugate vaccine (PCV-13) single dose to four doses in 2018.

Compliance: Financial audit is an integral part of the grant condition precedent for disbursement and annual audits have been conducted at the end of every fiscal period. In addition, in August 2017 Gavi, The Vaccines Alliance commissioned its own financial audit and investigation. For instance, the audit revealed the presence of an internal control structure at the MoH which ensures compliance to the MoH's financial management manual and the GOL's financial policies. The Ministry is currently implementing recommendations from the audit concerning financial management. Please see table below indicating status update on management responses form the audit:

SN	Audit Recommendations	Management Responses
5	The MOH should: i. Develop an Annual Work Programme and Budget jointly between the EPI and the OFM teams, prior to commencing of programme implementation for each grant; ii. Maintain an up-to-date approved Annual Work Programme and Budget in its NetSuite system; and iii. Prepare budget execution and budget variance analysis reports at specified intervals and submit them to the Gavi grant coordinator for review.	Ministry of Health agrees with the recommendations. Recommendation i: The annual work programme and budget has been developed and programme implementation has begun. Responsible unit: **OFM** ii: The HSS 3 budget was uploaded into the NetSuite system on January 26, 2018. Responsible unit: **OFM** iii: The Quarterly financial report and the budget execution and budget variance analysis reports for the first quarter will be submitted to GAVI, on May 15, 2018, 45 days after the end of the of the quarter. Responsible Unit: **OFM & EPI** Status: As of 27 August 2018, the draft quarterly financial report, the budget execution and budget variance analysis reports were finalized pending submission.
6	The MOH is recommended to: i. Institute a practice whether the OFM and EPI teams jointly review progress of implementation every 3 months, by reviewing the quarterly budget against expenditures incurred. ii. Consolidate the grant balances of HSS 1 and 2 and with the technical support of Alliance partners revise the HSS workplan which includes activities that accelerate programme implementation.	The Ministry of Health agrees with the recommendations. i. We have agreed that a joint review progress implementation meeting will be held the second Friday after the end of the quarter. That means, the meeting for the first quarter will be held on April 13, 2018. Responsible units: **EPI, OFM & Procurement** ii. The consolidation of the grant balances for HSS1 & 2 will be done on March 9, 2018. We will also recommend that the balance of the ISS funding in the pool account be transferred to the GAVI HSS account at the Central Bank of Liberia. Responsible Units: EPI, OFM & Procurement. This activity has been concluded
7	The MOH should improve its process of reviewing accountabilities, so as to ensure that supporting documentation submitted by the counties complies with national financial management requirements. Any issues or differences identified by this review should be promptly followed up with the counties. Unresolved issues or suspected anomalies should be referred to the internal audit and MOH management for further consideration.	The Ministry of Health agrees with the recommendations. Responsible units: **OFM, Internal Audit** Status: This activity is ongoing
8	The MOH should ensure that the all counties promptly account for their advances by submitting the required supporting documents in a timely manner. The review log and tracking of advances prepared by the Examiner should reviewed by his supervisor, and action taken to address any shortcomings identified.	The Ministry of Health agrees with the recommendations. A meeting was held with the counties reiterating the timely submission of liquidation to the OFM which has become a challenge for the MOH. However, as part of the OFM plan in terms of quarterly monitoring and supervision visits to the counties (to review their financial records and give support where necessary) have become irregular due to lack of funding. The financial support from GAVI will assist the OFM with the continuation of our quarterly visits to the counties thereby addressing

		the issues of liquidation and advances. Responsible Units: **EPI, OFM, Internal Audit** Status: Completed for two quarters in 2018
9	The MOH should: i) Finalise coding of expenditure for Gavi in NetSuite ERP financial system so that it is possible to generate Gavi- specific grant reports which are then submitted to Gavi every three months, as agreed; (revised) ii) Prepare interim and annual financial statements within the agreed deadlines as set down in the Aide Memoire and other Gavi agreements; and iii) Ensure that dedicated, ring-fenced bank account(s) are maintained for Gavi provided funds.	i. Partially disagreed with the first bullet recommendation. The OFM ERP/accounting system, Oracle NetSuite has the capacity to generate donor specific reports at any point in time. The system has unique codes and uses the Government of Liberia (GOL) for donors and projects that are distinct and can generate specific reports. The annual GAVI reports that are prepared by the OFM are generated from the system. (MOH to reconsider its response) ii. Recommendation accepted iii. Recommendation accepted, however the OFM wishes to recommend that the balance ISS funding in the pooled account at Ecobank be transferred to the HSS account at CBL thus making the CBL account the sole ring-fenced bank account. Responsible unit: **EPI & OFM** Status: GAVI expenditure in the NetSuite ERP Financial system have now being coded and can generate GAVI specific grant report. ii. Financial reports have been prepared and submitted iii.The Office of Financial Management wrote GAVI requesting approval requesting that ISS balance funds be transferred to HSS account at CBL. Approval pending
10	The MOH should ensure that in future: i) The audited financial statements are completed and submitted on time to Gavi, in compliance with the agreed requirements stipulated in the Aide Memoire and Partnership Framework Agreement, This includes that both the external auditor appointment and the conduct of the audit is done on time. ii) The audit firm selected is competitive and is able to conduct the audit in compliance with Gavi's guidelines on financial management and audit requirements.	a) The Ministry of Health agrees with the recommendation (i). Responsible Units: EPI & OFM. b) The Ministry of Health agrees with the recommendation (ii). Responsible Units: **EPI, OFM, Internal Audit, Compliance, & Procurement** Status: Request for the hiring of responsible auditing firm to conduct the upcoming FY17/18 audit is ongoing
11	It is recommended that: i. The EPI, OFM and Internal Audit teams should discuss the areas of high risk to be reviewed by internal audit with respect to the programme budget, workplan and activities funded by Gavi; ii. Each year, internal audit develops a risk-based internal audit plan identifying the key elements to be audited matched by the resources required to execute the plan; and iii. A discussion is held with Gavi's Country Programme team to explore the possibility of Gavi funding specific internal audit activities and components.	The Ministry agrees to the recommendation and will institute quarterly meeting moving forward. Status: This is ongoing

As part of compliance to the Grant Management Requirements (GMR), an external audit as well as all financial reports (HSS-3, IPV VIG and Measles SIA Grant) was conducted in 2018 and report submitted in 2019.

Financial Management: The Office of Financial Management (OFM) is responsible to provide oversight function on all health financial transactions at central and county levels. Its operations is in conformity with the Public Financial Management (PFM) Law of Liberia including other donor requirements and guidelines. In an effort to address Gavi's audit findings and in conformity with the public financial management (PFM) law and other donor guidelines, the Office of Financial Management (OFM). In order to improve timeliness in disbursement and execution of resources at the national

and sub-national levels, including internal controls, the Ministry through the Office of Financial Management (OFM) has commenced the usage of a web based financial reporting system (NetSuite) aim at improving the timeliness, completeness and absorption/utilization rate. This system is being implemented through a phase-wide approach beginning with six (6) big counties (Montserrado, Grand Bassa, Margibi, Bong, Lofa and Nimba). This will ensure timely and reliable financial transaction records for the immunization program. The MoH intends to roll-out NetSuite to the remaining nine (9) counties which are currently using Excel Software by December 2018.

Status of Gavi audit refund

In September 2019 MoH reimbursed US$ 42,178.29 to Gavi being the first tranche of the committed audit repayment (total $180K). The remaining funds will be refunded by end 2020 as agreed with Gavi.

~~5.5. Transition plan monitoring (applicable if country is in accelerated transition phase)~~

~~Not applicable~~

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

In order to optimize immunization services at all levels, for the purpose of this grant, technical assistance needs are categorized into two areas. Namely, short, medium and long term. However, UNICEF, WHO, CDC, World Bank and expanded partners (PATH, JHPIEGO, JSI, CHAL, LIP) will continue to provide both technical and financial support to the Expanded Programme on Immunization (EPI).

Technical support will be provided at national and subnational levels and will include capacity building through skills transfer as well gap filling and embedded support.

UNICEF has supported the ministry for the transition of the national vaccine store to the New Caldwell store. Temperature mappings completed in 2 regional stores with the central medical store (CMS) in Caldwell slated for September 20, 2019 to October 19, 2019 (once Caldwell is on the national electricity grid). UNICEF provided technical support for procurement, shipment and clearing of all CCEOP. A total of 140 additional cold chain equipment (108 SDDs, 32 ILRs), 900 fridge tags and 100 voltage regulators were procured and deployed as part of the CCEOP. System design workshop has been conducted, Options for modeling have been identified and next step will include the modeling of the options and selecting the best option. Appropriate resources are being mobilize for implementation. UNICEF also supported the capacity building for national and county health teams on the collection, analysis and interpretation of data for equity analysis using standard tools. WHO supported the conduct of the PIE for IPV, participated in development of Guidelines and tools for supportive supervision and also in the supportive supervision. They also convened and provided technical assistance for the conduct of the HPV stakeholders meeting while JHPIEGO is playing a lead technical role for the introduction of HPV nationwide into routine immunization. Partners also supported the ministry in the applications for new vaccine introduction as well as for the implementation of the Polio NIDs.

Challenges identified in the implementation of the One technical assistance plan included overlapping roles and responsibilities by TA institutions. There is need for further clarity in roles and responsibilities in the future. Time and competing priorities also resulted in some delays in implementation. The ministry needs to develop a targeted plan for TA from which UNICEF, WHO and other partners can identify areas to support based on their comparative advantage. Partners need to be more specific in their support and have clearly defined expected results and milestones. Limited participation and visibility of other partners benefitting from the one TA investment.

Following an amendment in the current TA, is that UNICEF wno longer supported the recruitment of an international consultant for the Equity assessment yet reprogrammed that funding to build national capacity on conducting equity assessments. Preliminary capacity building on the available tools for data collection and analysis had started. Data was collected and analyzed for 3 counties (Maryland, Grand Cape Mount and Grand Gedeh) however the bottle neck causality analysis could not be conducted at county level due to inability to transfer funds to the MOH due to low liquidity of UNICEF funds within MOH. This caused a blockage for 9 months. Hence, the 2018 PEF/TCA funds for this activity were returned to Gavi for use by another country. The blockage has since been resolved.

Technical support Needs:

Short term:

CCL Strengthening Platform for EVM IP implementation
Cold Chain Inventory and rehabilitation and expansion plan,
Cold Chain Equipment Maintenance Plan,
National, County-level capacitation exercises in cold chain and logistics

Management

- Strengthening of vaccines Management
- Planning for NUVI, MCV2 and HPV in 2019, TCV in 2020 and other new vaccines
- Advocacy, social mobilization and community engagement for new vaccine introduction
- External EPI review
- Capacity building for Mid-Level Managers (MLM)
- Deployment of fiscal agent to EPI & OFM

Medium Term:

- Development of immunization data improvement plan
- Scaling up of the Urban immunization strategy to additional three counties (Grand Bassa, Margibi and Nimba)
- Establishment of a NITAG with possibility of deconcentration of this body to the regional level.
- Operational Research to:
    - Understand drivers for the difference in coverage between Rota (complete) and DTP3/PCV3.
    - Understand drivers for high dropout rates between Penta1 and MCV1.

Long term: logistics and cold chain management, social mobilization and communication, program performance management.

- Immunization Supply Chain Management (iSCM) Strengthening
- Evidence-based equity approach for coverage improvement, -Use of findings and lessons learnt from equity assessment and Urban Strategy Evaluations to adjust and implement in three counties (Grand Bassa, Margibi and Nimba)
- Strengthening public private partnership for active inclusion of civil society organization into workings of immunization through community engagement at national and subnational levels

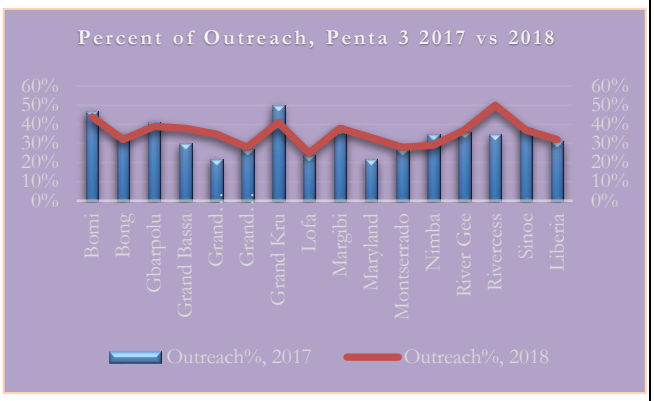
Technical Assistance will be provided by the partners based on their proven comparative advantages. For example, core partners will be supported to provide TA in:

- Data Quality Improvement, Surveillance and AEFI monitoring
- Demand Generation
- Immunization Supply Chain and logistics
- Coverage and Equity

Other Potential Partnerships identified include:

- Continued support by JHPIEGO for trainings and mentorship of health workers for HPV roll out in Q4 2019 (November 25, 2019) with a focus on school health programming and HPV community strategy. Also, provide TA for post HPV introductory activities (i.e. Formative research on knowledge, attitude and practice KAP in few counties) in 2020.
- PATH for TCV application, campaign and introduction into routine immunization (funded by BMGF)
- JSI for development of DIP, building upon their support for the vaccine wastage study
- Liberian Immunization Platform and Crusaders for Peace for advocacy and community engagement
- Continued support by Last mile Health to MOH in Rivercess to support the integration of immunization services into the community health platform including defaulter tracking, vaccine tracking system and the inclusion of vaccine related indicators in the CBIS, as well as pilot digital health.

6. UPDATE OF FINDINGS FROM PREVIOUS JOINT APPRAISAL

Prioritised actions from previous Joint Appraisal	Current status
1. Immunization outreach services In order to ensure that each and every child has access to high quality immunization services irrespective of the geographical locale (hard to reach, difficult terrain, and/ or underserved communities), the program intends to continue providing support to facility based monthly outreach activities to under-served communities. In addition, robust defaulter tracking mechanism will be established to ensure that children entering the immunization programme complete the vaccination schedule fully. Support to Outreach activities will include the provision of technical support for facility level micro planning, motivational package, provision of motorcycles, bicycles, and profiling of catchment communities (e.g.; documentation of under one-yea, under-fives, pregnant women, and women of reproductive age)	**Microplans:** In order to address issues associated with coverage and equity, quality microplanning process is cardinal. To achieve this, the Expanded Programme on Immunization provided financial (e.g. Transportation reimbursement, feeding) and technical (e.g. Deployment of National Technical Staff) supports to all counties for and during the development of detailed health facility routine immunization microplans. At the end of this exercise, health facilities provide projected costs for the implementation of routine immunization health facility microplans as a means of tackling issues associated with immunization inequities and access. However, these micro plans costs are being reviewed to reflect the actual situation to prioritize allocation amid scarce financial resources. **Outreaches:** Currently, tranche 1 year 1 of the Health System Strengthening grant (HSS 3) was used to provide six months support for the conduct of health facilities outreaches as defined by the immunization coverage improvement plan (i.e. *Definition: The term "outreach services" is used to describe any type of health service that mobilizes health workers to provide services to the population away from the location where they usually work and live.* *Other definitions of outreach have attempted to put minimum distance that has to be traveled away from the health facility before the service is considered to be an "outreach service", no such attempt is consider for the purpose of this write-up and the broad definition given above will be used.)* This covers the period January to June 2018 by all 599 Health Facilities that were offering immunization with the conduct of at least one outreach session per month targeting hard to reach areas, supported by HSS 3 support. These outreaches accounted for approximately 33% of penta 3 routine coverage rate for January to June 2018 and 32% for January to December 2018. However, the outreach contribution experienced an 11% decrease in contribution to penta 3 routine immunization coverage for the period January to June 2019. This is due basically to delay in HSS3 year 1 tranche 2 disbursement.  **Defaulter Tracking System:** With support from immunization partners, there are efforts to establish a defaulter tracking system as a country. Currently, UNICEF, Last Mile Health EPI/MOH have initiated the defaulter tracking process using a phased approach with the intent of learning by doing in two counties (e.g. Grand Gedeh and Rivercess). Lessons learnt from both approaches will be documented to inform future scale up. **New Vaccines Introduction:** For the period under review, one new vaccine (Measles Second Dose, MCV2) was officially launched on September 9, 2019 and introduced into routine immunization. MCV2 is expected to be introduced in Oct 2019, to be administered at 15 months free of charge as other vaccines to all the immunization target age children (0-23 months) in Liberia irrespective of the religious, traditional, socio-economic, political, wealth, geography, gender, status.

	Liberia's introduction of IPV was initially planned in January 2015 yet delayed to 3 July 2017 causing around 240.000 children to have missed vaccination. As such additional IPV supplies and funds have been set aside for Liberia's IPV catch-up campaign, to be conducted in first week of October 2019. HPV introduction planned for 25 November 2019. The MAC TBC pending global vaccine availability **Product Switch:** Pentavalent Vaccine (Penta), Pneumococcal Conjugate Vaccine (PCV-13), and Tetanus Toxoid (TT) were switched. For instance, Penta single dose was switched to 10 doses; PCV-13 switched from single dose to 4 doses and TT switched to Td.
2. Periodic Intensification of Routine Immunization (PIRI) As a strategy to reduce the number of un-vaccinated children across the country and to increase immunization coverage, the program intends to conduct four rounds of PIRI in all counties.	**PIRI:** During the period under review, one round of nationwide periodic intensification of routine immunization (PIRI) exercise was conducted. In addition, Gbarpolu county was supported to conduct county specific PIRI in one of its districts (e.g.Kongbah) that was lagging behind in performance which demonstrates the use of data for decision making and/or action. This was made possible with support from Health System Strengthening (HSS 3) grant year 1 tranche 1 that was disbursed to the Ministry of Health. This exercise by and large contributed to approximately 32% increase in routine immunization coverage. The Expanded Program on Immunization (EPI) along with its partners will continuously review routine immunization data through structured processes (equity assessment, risk assessments, RED categorization etc.) and employ targeted approach to PIRI that will ensure maximum impact.
3. **Supportive supervision** Central level quarterly supportive supervision to counties and county level monthly supervision will continue as planned. However, financial and logistical support to county health teams is been actively reviewed for possible increase and to ensure sustained and efficient management of vaccine stock and distribution. The supportive supervision will also provide mentoring and capacity building of service providers.	**Supportive Supervision:** To ensure that outreach sessions are carried out as planned, clear justification for continued receipt of incentives, provide mentorship/coaching/on-site training and provide strategic directions for other immunization operations, two rounds of data driven EPI supportive supervision were conducted in quarter 2 and 3, 2018. The first targeted all 15 counties whilst the 2nd targeted 9 counties based on review of immunization coverages, cold chain availability, surveillance data and the RED categorization tool. The program updated Supportive Supervision guidelines and SOPs. Furthermore, an orientation session on all aspects of immunization in practice (IIP) modules was discussed during this exercise with all 30 national supervisors. Emphasis was placed on the use of quality and reliable data for decision making. In 2019, one round of supportive supervision was conducted in 7 counties based on the analysis and interpretation of routine immunization data. Unfortunately, the second-leg of this activity couldn't be carried out as scheduled due to delay in the disbursement of HSS3 funds.
4. Parenting of Poorly Performing Counties To ensure comparable performance across the country and to ensure that the last child is vaccinated, county (ies) that are lagging behind will received national technical assistant(s) to support them in all aspects of immunization activities until an appreciable level of capacity and performance is observed. However routine follow up and supportive supervision will continue to ensure sustained ability of gains.	**Parenting of Poorly Performing Counties:** In an effort to improve routine immunization coverage in poorly performing counties, a team was constituted to do root cause analysis to clearly determine what were the drivers responsible for low immunization coverage in these counties. The team focused on the below areas: - Highest number of unimmunized - High drop-out rates - Low coverage rates - Poor reports from previous supervision visits and - Other criteria This process involved granular analysis and review of past routine immunization performances (e.g.2017). Though the national coverage rates for MCV1 and Penta 3 (87% and 86% respectively) in 2017 showed significant progress, the analysis revealed 7 counties reaching MCV1 < 80% of which 4 (Grand Cape Mount, 62%; Maryland, 62%; Grand Gedeh, 66% and River Gee, 67%) had less than 70% and 2 counties with DPT3< 80%. In Q1, 2018, it was identified that Grand Gedeh county was still poorly performing for MCV1. Predicated upon this, a national technical staff was deployed to Grand Gedeh county for a period of 30 days to provide technical assistance. As a result of the national technical

	staff and the collaborative efforts of the CHT and in-county partner(s), MCV1 coverage increased by 20% in Q2, 2018 from 46% in Q1 2018 to 66% in Q2. Due to delay in HSS disbursement, we couldn't continue said activity aim at sustaining the gains made.
5. Communication for immunization In order to improve demand generation activities that will thereby lead to increase in immunization uptake, several activities are being suggested in three broad categories: A. Formative Research – Knowledge, Attitude and Practice (KAP) B. Updating of EPI Communication strategy a. Review and revise communication strategy based on KAP findings b. Media Promotion – Appearance of EPI Technical Staff on Health Talk, Airing of routine immunization messages on 7 FMs & 30 community radio stations c. Production and dissemination of IEC/BCC materials C. Communication Engagement & Ownership - Advocacy meetings - Focused Group Discussions - Training of CHC and HFDC members on Interpersonal Communication Strategy It is hoped that if the aforementioned activities are implemented, it will strengthen and intensified communication activities for immunization.	**Formative Research:** A knowledge, Attitude and Practice (KAP) study was conducted aimed at understanding client perception about vaccination. The study was both qualitative and quantitative. Findings from the KAP are now being used to increase uptake of immunization services at health facility and outreach levels. **EPI Communication Strategy:** A national immunization communication strategy has been developed and costed pending validation and dissemination. This strategy was informed by KAP findings, communication risk assessment, post-introduction-evaluation (PIE) and other related immunization assessments. **IEC/SBCC Materials:** During the period under review, over 15,000 pieces of IEC/BCC materials for routine immunization were developed, printed and distributed to all 15 counties and all 599 health facilities providing immunization services. These visibility materials considered cultural, social, religious and other audience specific content especially people physically challenge (e.g. Blind, Cripple, etc.). In addition, strong engagement with media institutions was conducted to ensure the airing of routine immunization messages and jingles. These were aired on 7 FM and 30 community radio stations. However, this cardinal activity couldn't continue due to delay in disbursement of HSS3 tranche 2 year 1. **Community Engagement & Advocacy:** During the period under review, community engagement and advocacy meetings were conducted in all counties. During these meetings, community leaders, mothers, parents and women groups were enlightened on the benefits associated with immunization and why it is important to complete the vaccination series. They were informed to always retain their vaccination card (child health passport) for future reference. In addition, the CHA platform was levered upon in some counties to do house-to-house visitation during which time the benefits of vaccination was highlighted, determination of under-five population through household registration as well as referrals. **Training of CHC & HFDC Members:** A total of 1,778 Community Health Structures (CHC and HFDC) Members have been trained on interpersonal communication skills, community action for immunization in 3 south eastern counties. We couldn't cover the remaining south-eastern counties due to delay in disbursement of tranche 2 year 1.
6. Health information systems and evaluation of immunization services Data are needed for evidence based immunization interventions and planning. Routine health information system is critical to EPI success and better health outcomes. Therefore, MOH plans to conduct quarterly data verification and validation exercises, train service providers and managers in the use of data for action and quality immunization service delivery, review of EPI performance, post vaccine (IPV) introduction evaluation, training of health workers in community based information system and external evaluation of EPI.	**Health Management Information System (HMIS) & Evaluation:** Data quality is a critical component in decision making process to increase immunization coverage and health outcomes. To actualize this, several data quality related activities were conducted in 2018. These activities include but not limited: I. Quarterly verification of information and bi- annual data harmonization exercises are conducted aimed at culturing the habit of data used for action. II. A Post-Introduction Evaluation (PIE) of Inactivated Polio Vaccine (IPV) was conducted in July, 2018. Findings from the IPV were used to informed MCV2 introduction into routine immunization. III. Due to competing priorities, the planned EPI In-depth Review & Coverage Survey were cancelled. Support from the HSS3 for these activities will be used to support the upcoming Liberia Demographic Health Survey (LDHS 2019) For 2019, we couldn't carry out most of these activities due to delay in HSS3 tranche 2 year 1 disbursement.

7. Immunization cold chain management

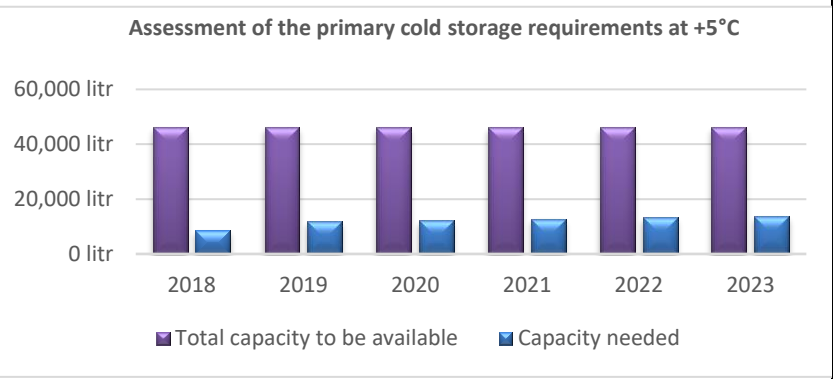
Cold chain management is at the center of the EPI program. Without effective and adequate cold chain facilities and management, the potency and timely distribution of vaccines will be compromised thus, the number of vaccine preventable disease outbreak will surge. The planned activities include:

- The conduct of Effective Vaccine Management (EVM) assessment
- Procure two 40m3 cold room and three 20m3 freezer room, training in cold chain management,
- Establish temperature monitoring system
- Conduct of cold chain assessment
- Procure 260 pieces of 6 volts' deep cycle batteries to replace faulty batteries
- Undertake regular maintenance of cold chain equipment.

Effective Vaccines Management Assessment (EVMA) August 2015, Liberia conducted an EVMA to determine the functionality of its Immunization Supply Chain (iSC). Findings from the EVMA was used to developed a five year EVM Improvement Plan (cIP) that the country has been implementing which ends in 2020. As per the guideline, the next EVMA is slated for 2021. However, the country intends to conduct an internal EVMA in November of 2019 using the same sites selected in 2015 to determine progress made overtime. The external EVMA will be supported under the current HSS3 grant.

Storage Capacity: (a) National Level - With support from Gavi, The Vaccines Alliance and other donors a National Central Medical Store, CMS was constructed with cold rooms. This has increased the EPI national vaccines storage volume of about 600m^3 cold room, 150m^3 freezer room. Amid this tremendous efforts, this facility is yet to be operationalized due to delay in the conduct of the temperature mapping. Please see below available storage levels per year:

Figure xxx: Primary Cold Storage Requirements at +5°C

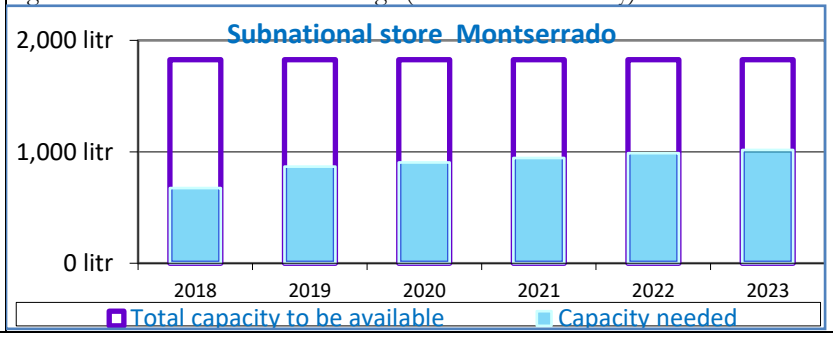


The above graph is extracted from the WHO EPI Logistics forecasting tool which clearly shows storage adequacy at the national level. This is primarily due to the additional storage volume created as a result of the products (e.g. Pentavalent and Pneumococcal vaccines) switched to multi-doses.

(b). Regional Level – Two regional stores with 40m^3 each have been constructed in Bong and Grand Gedeh counties. However, only Bong Regional Vaccines Store is being operationalized with Grand Gedeh Regional Store scheduled for last quarter 2019.

(C) County & Health Facility Levels: Continuation of Cold Chain Equipment (CCE) Expansion: Under the Cold Chain Equipment Optimization Platform (CCE OP), a total of 140 pieces of cold chain equipment (108 Solar Direct Drive & 32 Ice-Lined Refrigerators) have been installed in all counties. In addition, 900 pieces of fridge tag version 2 was procured, distributed and activated for continuous temperature monitoring.

Figure xxx: Sub-national Cold Storage (Montserrado County)



	The above graph clearly shows the cold storage at Montserrado county cold chain depot. Montserrado county was selected here since approximately 33% of the country's population reside in Montserrado county. In addition, the largest number of health facilities providing routine immunization services is also located within this county. **Cold Chain Assessment:** A nationwide cold chain assessment was conducted assessing 75% of the total health facilities providing immunization services. This was intended to further verify inventory information regarding the functionality of cold chain equipment in Liberia. In addition, routine maintenance services were conducted.
8. Capacity development Reports from several assessments done have revealed several critical capacity gaps ranging from human resource, logistical and infrastructure at all levels of the program. The program has finalized plans to bridge these gaps through the following intervention: • Insurance of vehicles, motorcycles and EPI vaccine warehouse • Rehabilitation/Refurbishments of EPI warehouses • Routine maintenance of EPI central and county vehicles • Procure additional EPI equipment including 12 sets of Eurobond monoblock refrigeration unit and rain gears • Provide leadership and management training to EPI managers at all levels to include, M&E, financial management, etc.	**Insurance:** All vehicles and motorcycles assigned to the Expanded Programme on Immunization are insured. However, for the warehouse, given the overall cost for insurance, US 25K was secured under the reprogrammed HSS3 grant as complimentary support. To date, said amount is unspent due to the delay in the transition to the new national warehouse. **Procurement:** Rain gears, CCE spare parts (e.g. euromon), etc. were procured. In addition, US19.8K was secured to procure warehouse materials including clothing for the National Vaccines Cold Rooms and staff. Said amount is unspent to date because EPI hasn't move in fully yet. **Capacity Building:** Several EPI staff have benefited from external capacity building activities in various areas ranging from Leadership, Financial Management, M&E, Project Management and Surveillance aimed at enhancing their capacity and improving the quality of their work.
Additional significant IRC / HLRP recommendations (if applicable)	**Current status**
Not applicable	

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

Overview of key activities planned for the next year and requested modifications to Gavi support:

1. New Vaccine Introduction/application/Campaign	Priority Level (H/M/L)		
	High	Medium	Low
1.a. HPV Vaccine introduction November 25, 2019	H		
1.b. TCV nationwide campaign & introduction January and February 2020	H		

1.1 Immunization Services, Coverage and Equity	Priority Level (H/M/L)		
	High	Medium	Low
1.1.a. Implementation of the Urban Immunization Strategy (UIS) – In an effort to increase coverage and address challenges associated with coverage and equity, the UIS will be implemented in Montserrado plus three counties (Grand Bassa, Margibi and Nimba). Lessons learned from Montserrado county will be used to guide the implementation in these new counties.	H		
1.1.b. Leveraging on the National Community Health Assistance Program - Integration of Immunization Services into Community Health Assistants (CHA) Programme to increase coverage and address any gap associated with equity and access relating to immunization service delivery, improve real-time vaccine tracking system through digitalization using tablets	H		
1.1.c. Defaulter Tracking - Development and roll-out of a national defaulter tracking strategy using community health platform. There are several different defaulters tracking systems being piloted across the country and there is a need to develop at the national level, a defaulter tracking strategy that will be rolled out nationwide	H		
1.1.d. Establishment of a Vaccine Tracking System (VTS) – This is intended to improve immunization supply chain workflow, guide decision making process, track in real-time vaccination status, among other things.	H		
1.1.e. Conduct of special and regular Immunization outreach services	H		
1.1.f. Conduct two rounds of targeted PIRI in underserved and poorly performing areas following mapping exercise	H		
1.1.g. Implementation of Missed Opportunities for Vaccination (MoV). This is an effort to increase immunization coverage but also improve second year of life indicators. e.g. Increasing YF, MCV2 uptake during campaigns or other health interventions	H		
1.1.h. Conduct quarterly supportive supervision from national to county level and monthly from County to health facility with emphasis on vaccine management	H		
1.1.i. Conduct county engagement activities to counties that are lagging behind	H		
1.1.j. Evaluation of Child Friendly Communities (CFC) pilot in Grand Gedeh and Last Mile Health (LMH) pilot in River Cess to develop a harmonized approach to immunization in community health (Low Priority for next year)			L
1.1.k. Partner with Community Health to update Community Based Information System (CBIS) tool to include immunization indicators		M	
1.1.l.Continuetheparentingofpoorlyperformingcounties(deploymentoftechnicalassistancefrom the national level to support poorly-performing counties over a period of time		M	
1.1.m. Develop county-specific equity plans following equity analysis		M	

2.0 Surveillance Activities	Priority Level (H/M/L)		
	High	Medium	Low
2.1. Institutionalize AEFI surveillance at all levels	H		
2.2. Strengthen MNTE surveillance activities e.g. Case investigation of suspected NNT	H		
2.3.Training of Child Survival Focal Persons in basic VPD surveillance	H		
2.4. Improve VPD reporting through collaboration with National Public Health Institute of Liberia		M	
2.5. Management of rumour/crisis related AEFI	H		
. Conduct surveillance visits to priority sites (high, low, medium)	H		
6.Provide financial and clinical support to patient presenting with serious AEFI	H		
7. Respond to vaccine preventable diseases outbreaks e.g. Measles, pertussis, etc.			
8. detailed investigation and reporting of all cases of VPD, provide technical support to counties to plan and implement outbreak response activities (circumscribed campaigns)	H		
9. treatment and vaccination	H		

3. Cold Chain and Logistics	Priority Level (H/M/L)		
	High	Medium	Low
3.1. CCEOP phase 2 implementation and phase 3 development	H		
3.2. National Cold chain inventory	H		
3.3. Improvement of immunization supply chain data quality and reporting	H		
3.4. Print additional Job aids and SOPs and ensure that they are posted in every health facility	H		
3.5. Routine maintenance of all immunization vehicles, generators, motorcycles and other logistics	H		
3.6. **Finalization of a country decommissioning policy**	H		
3.7. Procure 60 motorcycles for health facilities to support the conduct of outreaches	H		
3.8. Implementation of findings from the Immunization Supply Chain modelling exercise		M	
3.9. Implement Corrective Actions, Preventive Actions (CAPA):		M	

The National Logistics team is expected develop a system for equipment maintenance and to build the capacity of county teams to develop preventive maintenance plans that will be regularly updated to reflect history of servicing and planned service dates.

4. Human Resource for Immunization (HR4I)

	High	Medium	Low
4.1 Enrol 150 vaccinators on incentive by the end of 2019	H		
4.2.Continual advocacy for the enrolment of vaccinators on the GOL payroll		H	

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 assistance[6].

Key finding / Action 1	Immunization Supply Chain (iSC)
Current response	1. Frequent breakdown of aged (>9 years) cold chain equipment 2. Challenging supply chain system especially in south-eastern Liberia 3. Poor archiving practices 4. Irregular maintenance and repair of cold chain equipment 5. Logistical challenges for the conduct of health facility outreaches
Agreed country actions	In order to address the supra-mentioned immunization supply chain issues identified from the Gavi Audit, cold chain equipment assessment and other supervisory visits, the country team has agreed to use a phase-wide approach using the HSS and CCEOP funding mechanisms. The follow actions have been agreed: - Decommissioning and replacement of all aged cold chain equipment. This will begin during the implementation of CCEOP year 2 consistent with the ODP for year 2 and 3. - Operationalization of EPI Regional Store in Zwedru, Grand Gedeh County - Solarization of Grand Gedeh, Grand Kru and Maryland immunization county depots - Assess remaining CCE expansion needs beyond CCEOP ceiling, to be included under HSS3 - Ensure that immunization supply chain (including clearance systems) trainings (e.g. DVDMT) highlight the importance of archiving, use supportive supervision to provide mentorship/coaching and develop succinct SOP on archiving. - Ensure that routine maintenance and repair of all EPI logistics are intensify and strengthened. - Procure additional motorcycles to conduct health facility outreaches under HSS - Conclude transition of national vaccine store from JFK to CMS
Expected outputs / results	- increase cold-chain capacity and national and sub-national level. - Reduction of fuel dependency for national and regional vaccine Stores in Grand Gedeh and Maryland and Grand Kru due to solarisation and transition to CMS on the national grid.. Fuel savings will be reinvested in HSS activities (eg contribution to CMS management) - Improved vaccine accountability at county level through DVDMT training. - updated CCE inventory to identify gaps beyond CCEOP - Reduction of CCE breakdown thanks to Regularized CCE maintenance. - Monthly regular outreach targets met thanks to the procurement of additional motorcycles and distributed to identified health facilities
Associated timeline	One Year
Required resources / support and TA	Financial and TA support for CCE inventory assessment; TA support clearance process. Detail resource will be fully fleshed and share after the EPI/Partners retreat.

[6] 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 extend known to date - the type of TA required (staff, consultants, training, etc.), the provider of TA (core/expanded partner) the quantity/duration required, modality (embedded; sub-national; coaching; etc.), and any timeframes/deadlines. The TA menu of support is available as reference guide.

Key finding / Action 2	Service Delivery: successful introduction of New Vaccines (**HPV, TCV and Product Switch**) and campaigns
Current response	1. Liberia's application for the introduction of MCV 2, HPV and TCV into routine immunization have been approved. 2. Switching of Penta, PCV-13 and TT products 2018 and 2019 respectively. 3. Conducted one round of integrated nationwide polio campaign May 2019 targeting 945,464 children less than five years (0-59 months). Catch-up IPV campaign for missed 240,000 children between the ages of 27 – 41 months planned for Oct 11-14, 2019.
Agreed country actions	1. Introduction of HPV and TCV into routine immunization November 25, 2019 and February 2020 respectively. TCV campaign planned for January 2020 2. Conduct Post-Introduction Evaluation (PIE) for MCV2, HPV and TCV 2020 in accordance with WHO guidelines in Q3/4 2020. PIE meetings could be used to review strategy to enhance 2nd dose coverage. 3. Conduct one round of sub-NIDs (SNIDs) targeting fifty percent of the less than five years (0-59 months) population. 4. Assess potential to YF switch from 10 -5MDV (request Gavi feedback, and EPI to assess storage capacity).
Expected outputs / results	1. The second dose of measles containing vaccine (MCV2) was introduced into routine immunization September 9, 2019 and HPV by 25 Nov against 50% target of MVC2 Y1, HPV 85% D1 and 80% D2. 2. MCV 2, TCV and HPV PIE final reports completed within 6-12 months of introduction, 3. 100% of counties achieving 95% OPV coverage
Associated timeline	One Year
Required resources / support and TA	1. VIG support 2. Polio campaign operation cost 3. Technical Assistant for the conduct of MCV 2 and HPV PIE
Key finding / Action 3	Service Delivery Cont'd: sustained high immunisation coverage and targeting of poorly performing counties
Current response	Access and equity are two critical components in improving immunization outcomes. Therefore, the EPI Division along with its partners have agreed on the below cardinal actions aimed at addressing issues associated with low immunization coverage rates that are linked to access and equity.
Agreed country actions	1. Implementation of the Urban Immunization Strategy (UIS) – In an effort to increase coverage and address challenges associated with coverage and equity, the Montserrado UIS will be expanded to three counties (Grand Bassa, Margibi and Nimba). Lessons learned from Montserrado county will be developed and used to guide the implementation in these new counties. 2. Intensification of monthly health facility outreach services in underserved /vulnerable / hard-to-reach population. 3. Implement pioneering child survival activities to address issues associated with low coverage 4. Conduct focused data driven periodic intensification of routine immunization (PIRI) 5. Conduct equity and bottleneck analysis 6. Analysis of causes of lower rotavirus coverage compared to penta3 & PCV3. 7. Strengthening of financial management and reporting to address financial bottlenecks/delays eg through utilization of mobile payments
Expected outputs / results	▪ Increased DTP3 immunisation coverage Number of counties that conducted the data driven PIRI plus number of children vaccinated. ▪ Rota coverage on par with PCV3 and DTP3 ▪ Reduced drop-out rates
Associated timeline	1-3 years (2019-2021)
Required resources / support and TA	Financial and logistical resources will be needed to successfully implement these critical actions TA support for analysis
Key finding / Action 4	Monitoring & Evaluation: EPI In-depth Review, Assessments and Immunization Data Quality Improvement

Current response	Monitoring is a core function in any program/project implementation. This is intended to measure the level of progress against agreed goals, objectives and targets. It guides real-time decision making during and after implementation. Therefore, quarterly monitoring visits, in-depth review of the immunization program and continual efforts to improve immunization data quality will be conducted.
Agreed country actions	▪ Conduct EPI In-depth Review ▪ Conduct national-wide data assessment (Data Quality Self-Assessment) ▪ Develop and implement Immunization Data Quality Improvement Plan
Expected outputs / results	▪ More accurate population targets- denominator/ reduction of facilities reporting above 100% (multi-year timeline) ▪ Improved data quality and data systems supported by evidence reflected in DQS ▪ 100% of counties have reported on the implemented the findings of the EPI In-depth review conducted ▪ National data assessment (DHS) conducted and findings use to develop immunization data quality improvement plan ▪ Immunization Data Quality Improvement Plan finalised and IP in progress.
Associated timeline	One year. Implementation of the iDQIP will be annualized.
Required resources / support and TA	▪ Financial Resource ▪ Technical Resource (i.e. Recruit TA to support the conduct of EPI In-depth Review and DIP development)
Key finding / Action 5	Improved Surveillance & AEFI Monitoring
Current response	Surveillance and AEFI monitoring are two critical aspects of the immunization program that needs to be strengthened. This allows us to do timely monitoring, detecting and responding to outbreaks and adverse events following immunization (AEFI); Implementing appropriate and immediate action to control outbreaks and correct any unsafe practices detected through the surveillance and AEFI monitoring system, in order to lessen the negative impact on the health of individuals and the reputation of the immunization programme.
Agreed country actions	▪ Institutionalize AEFI surveillance at all levels ▪ Strengthen VPD and MNTE surveillance activities at all levels ▪ Conduct surveillance visits to priority sites ▪ Develop outbreak response and preparedness plan ▪ Respond to VPD outbreak(s) ▪ Provide financial and clinical support to patient presenting with serious AEFI ▪ Management of rumour/crisis related AEFI
Expected outputs / results	▪ AEFI monitoring system institutionalized ▪ VPD and MNTE surveillance systems strengthened ▪ 75% of Surveillance visits to priority sites conducted (already identified) ▪ Outbreaks preparedness and response plan developed and costed ▪ All outbreaks responded to in time in line with WHO guidelines on outbreaks response ▪ Completion of national policy/system and budget for AEFI compensation system before documentation to trace whether patient has been compensated with the AEFI financial support ▪ All rumour/crisis relating to outbreaks that are vaccines related should be logged and timely managed.
Associated timeline	1-3 years
Required resources / support and TA	Financial and technical resources needed Partners & CSOs to support EPI in conducting additional surveillance and monitoring visits (first assess across TWG if feasible/discuss approach eg Community Health Structure and CSO approach)

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.

Use of smartphone for real-time monitoring (please assess if sustainable). Initiate Mobile Payments

To organise a partner retreat to discuss annual plan and concrete TA support against comparative advantages to inform final country decision.

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

- The Joint Appraisal (JA) process started with a discussion on the JA Review Meeting dates with key stakeholders during the weekly EPI Technical Working Group (EPI TWG) meeting. The EPI TWG members agreed that the JA be held from September 17-18, 2019 which led to the sending of official communication to relevant MOH programs, partners and GAVI secretariat through an invitation letter signed by the Deputy Minister of Health Services / Chief Medical Officer-Republic of Liberia. The team requested the revised JA template from GAVI and established a core team, comprising of MOH, WHO, and UNICEF to draft the JA report and circulate same before the scheduled workshop. The core team worked for two weeks and developed the draft JA report that formed the basis for the Joint Appraisal Review Meeting that ran for two consecutive days (September 17-18, 2019) at Ministry of Health main conference room on the second floor of the J.N. Togba Memorial Building, Congo Town, Liberia. The Review Meeting brought together over 20 participants from in and out of country, particularly GAVI Alliance partners, MOH staff, EPI Partners and other stakeholders. Members of the GAVI secretariat graced the Review Meeting and provided technical support. The Report was reviewed by stakeholders in groups and plenary and was refined during the process. At the end of the two days JA Review Meeting, HSCC members will be expected to endorse the JA Report for onward submission to GAVI.
- Additional information contained in the report include but not limited to Administrative Data (2017- present); Liberia Demographic and Health Survey (2013) and WHO/UNICEF estimates of 2018.

4. 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	Comments
End of year stock level report (due 31 March) *	X			
Grant Performance Framework (GPF) * reporting against all due indicators	X			
Financial Reports *				
Periodic financial reports	X			
Annual financial statement	X			
Annual financial audit report	X (2017/18 sent) with FY18/19 being plan for.			
Campaign reports *				
Supplementary Immunisation Activity technical report	X			
Campaign coverage survey report	X			
Immunisation financing and expenditure information				
Data quality and survey reporting				
Annual data quality desk review		X		Discussions ongoing and is expected to begin Q4 in 2019
Data improvement plan (DIP)		X		Discussions ongoing and is expected to begin Q4 2019
Progress report on data improvement plan implementation		X		Not yet. Implementation will begin 2020
In-depth data assessment (conducted in the last five years)		X		
Nationally representative coverage survey (conducted in the last five years)		X		DHS process has begun with training of enumerators/surveyors. Data collection is expected to begin October 2019 up to January 2020
Annual progress update on the Effective Vaccine Management (EVM) improvement plan				
CCEOP: updated CCE inventory	X			
Post Introduction Evaluation (PIE) (specify vaccines):	X			IPV
Measles & rubella situation analysis and 5 year plan	X			
Operational plan for the immunisation programme	X			
HSS end of grant evaluation report			X	
HPV demonstration programme evaluations			X	
Coverage Survey	X			
Costing analysis	X			
Adolescent Health Assessment report		X		
Reporting by partners on TCA	X			

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.

n/a