Joint Appraisal Report 2019

Country	Lao PDR
Full JA or JA update[1]	☑ **full JA** ☐ JA update
Date and location of Joint Appraisal meeting	*12 November 2019, National Immunization Program (NIP), MCHC*
Participants / affiliation[2]	*NIP, GAVI, WHO, UNICEF, CHAI, WB, BMGF, GFA, USCDC*
Reporting period	*Calendar year 2018 and part of 2019*
Fiscal period[3]	*The country has been reporting for calendar years irrespective of fiscal period being different*
Comprehensive Multi Year Plan (cMYP) duration	*2018 - 2023*
Gavi transition / co-financing group	*Accelerated transition*

1. RENEWAL AND EXTENSION REQUESTS

Renewal requests were submitted on the country portal

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

2. GAVI GRANT PORTFOLIO

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

Introduced/ Campaign	Date	2018 Coverage (WUENIC) by dose	2019 Target		Approx. Value US$ *(commitments)*	Comments
			%	Children		
Penta	2009-2020	68% dtp3	93%	178,537	9,399,966	Lao's coverage data was revised downwards in 2018 due to the LSIS2 survey findings (MICS methodology). In 2017/2018 the DTP3 coverage was 82%/85% respectively, but the 2019 WUENIC data is revised down to 69%/68% respectively. Therefore, there was a drop in coverage due to the new survey, but

[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.

Introduced/ Campaign	Date	2018 Coverage (WUENIC) by dose	2019 Target		Approx. Value US$ *(commitments)*	Comments
			%	Children		
						also a drop in coverage between 2017 and 2018.
PCV	2013-2020	56% pcv3	93%	178,537	9,657,408	The PCV switch trainings and other activities were conducted at provincial level in 2019.
IPV	2015-2019	60% ipv1	93%	178,537	1,775,961	
MR 1st & 2nd dose	2018-2020	69% MCV1/ 57% MCV2	93%	178,537	477,000	As per the drop in coverage for DTP3 due to the LSIS findings, the MCV1 coverage was also revised down in 2018 from 82% to 69%. Currently the country uses a 10 dose vial, however to minimise the effects of not following the open vial policy and to avoid wastage when only one child is vaccinated, there is a plan to switch to the 5 dose vial. In addition, the country wants to improve their detection system/surveillance to ensure they sustain elimination post transition. Switch date is planned for late 2019.
HPV	2019-2022	/	/	/	2,361,500	HPV to be introduced in Feb 2020
HPV MAC	2019-2020	/	/	/	2,503,500	HPV to be introduced in Feb 2020
Comments						

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

Grant	Channel	Period	First disb-ursement	Cumulative financing status @ Oct 2019			
				Comm.	Appr.	Disb.	Util.
HSS3	MOH	2016-2020	12 May 2016	9m	5.4m	4,477,923	x
Transition Grant	WHO, UNICEF, CHAI	2017-2018	Jan/Feb 2018	1.53m	1.53m	1.45m; 94% expected as of end Jan 2019)	On track, completed. The official closure is to take place.
PCV PSG	Govt	2018	July 2018	45k	45k	45k	36,000 (80%) disbursed to the provincial level – rest of the funds under no objection basis.
HPV MAC	WHO	2019-2020	23 Aug 2019	134,667	134,667	134,667	
HPV VIG	Govt	2019-2020	/	185,911	185,911	/	Funds have not been disbursed yet – waiting for agreement on audit reimbursement plan

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

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

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

Indicator	Indicator #	2018 target	2018 actual	2019 target	2019 actual
Number of EPI/MCH managers trained on SS	IR-T-2	170	150	-	-
Number of health facilities where incinerator installed and functioning	IR-T-9	20	10	20	0

[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.

Number of planned periodic DQA conducted against plan	IR-T-10	3	3	3	0
Number of supportive supervision conducted by each level (National + Provinces + Districts)	IR-T-11	404	502	404	270
Percent of facilities offering immunization services as per the revised microplan guidelines	IR-T-5	90	75	90	0
Percent of facilities received MCH/EPI service delivery funds on time	IR-T-3	90	85	90	0
Percent of functional cold chain equipment in health facilities	IR-T-1	90	90	92	0
Percent of outreach immunization activities conducted in identified High risk areas	IR-T-6	80	85	80	0
Percent of social mobilisation activity per villages implemented	IR-T-7	90	85	90	0
Proportion of children fully immunised - % of children aged 12-23 months who receive all basic vaccinations in a country's routine immunisation schedule	OI-T-4	55	73	58	0

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	Milestone s met	Comments
		Appr.	Disb.	Util.			
TOTAL CORE	2017	678K	678K	678K	4	16 of 18	
	2018	200K	200K	200K	--	16 of 20	
	2019	1.48m	1.48m	161K	--	14 of 15	Milestone and financial reporting data not yet available for 2019
UNICEF	2017	333K	333K	333K	2	4 of 5	The implementation of the HPV comms plan had minor delays
	2019	611K	611K	7K	3	6 of 6	New support in 2019 shifting from TG (3 staff). The number of staff and individuals have been revised.
WHO	2017	293K	293K	293K	2	8 of 8	
	2019	614K	614K	154K	2.5	6 of 7	New support in 2019 shifting from TG (2.5 staff). The number of staff and individuals have been revised.

CDC	2017	52K	52K	52K	NA	4 of 4	HPV demo evaluation ran into 2018
	2019	56K	56K	--	--	1 of 1	Excellent support provided by CDC in complement to WHO to prepare for the HPV intro.
World Bank	2018	200K	200K	200K	NA	1 of 1	
	2019	200K	200K	--	--	1 of 1	
TOTAL EXPANDED	2017	103K	NA	NA	--	1 of 1	
	2018	237K	220K	220K	--	15 of 19	
	2019	163K	--	--	--	12 of 13	Milestone and financial reporting data not yet available for 2019
Sabin	2017	103K	NA	NA	NA	1 of 1	
	2018	103K	79K	79K	1	10 of 13	Minor delays due to time taken for Imm. Law to be passed – this pushed back some timings.
	2019	3K	3K	3K	--	4 of 4	Short term support to disseminate immunization law. Contract completed in early 2019.
CHAI	2019	287K	GAVI	GAVI	3	GAVI	Please refer to annex with consolidated partner updates presentation for detail
GFA	2018	134K	141K	141K	1	5 of 6	Financial management capacity building support.
	2019	250K	--	--	--	8 of 9	Current exhibit A-7 extended through August – then to be replaced by the new contract for fiscal agent to start mid Sept 2019.

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

At the Mother and Child Health Center (MCHC), new leadership has been put into place effective September 2019. Dr. Phonepaseurth (Deputy of DHHP) has been appointed acting Director of MCHC following Dr. Anonh's departure on medical leave. Dr. Panome is functioning in her capacity as Deputy Director of MCHC, responsible for NIP.

To strengthen the delivery of routine immunization, NIP in 2019 has (1) continued to roll-out its in-service training targeting EPI Managers, (2) supported the development of microplans to ensure all children are reached with integrated services including immunization, and (3) implemented quarterly community meetings (QCM) to empower local leaders and village health volunteers to identify missed children and children due for immunization.

With the support of partner, Sabin, the NIP was successful in developing and passing a new Law on Immunization, which is applicable to the entire country, and provides the legal framework for the principles, regulations, and measures on management, monitoring, and inspection of immunization activities against VPDs. work continues next year to disseminate and enforce the law at sub-national levels.

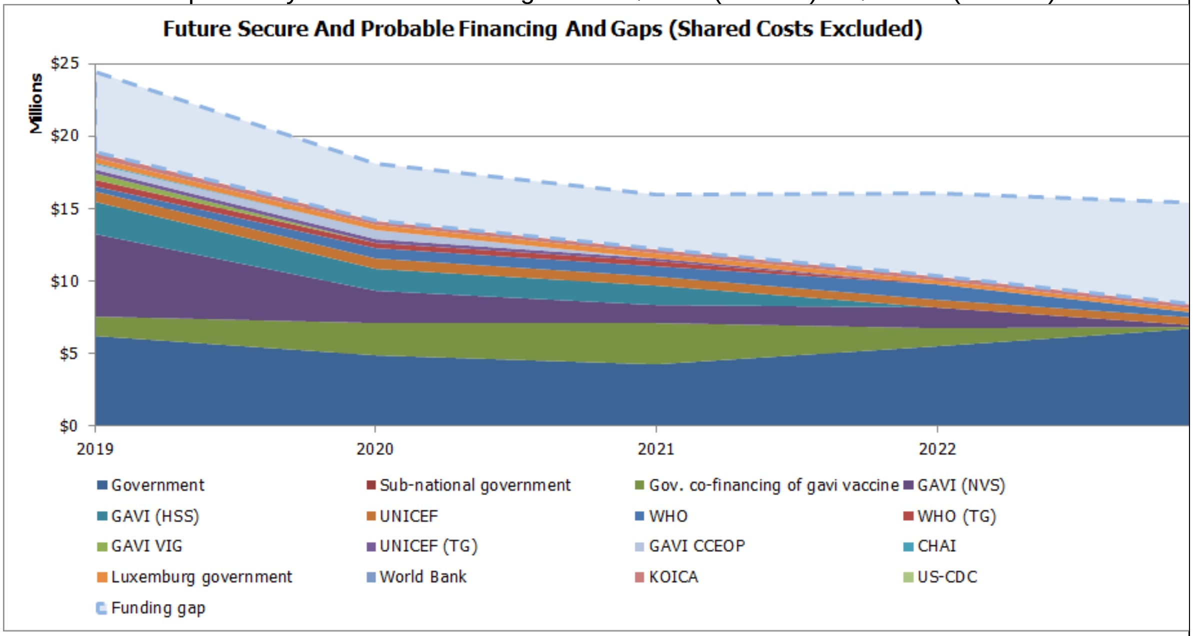
2018 immunization coverage showed a decline for the majority of antigens. Particularly, between 2017 and 2018, the coverage for DTP3 declined by 1% (from 85% to 84%). MCV1 coverage also declined from 82% in 2017 to 79% in 2018. The percent of districts achieving more than 80% DTP3 coverage was slightly decreased in 2018 (60%) compared to 63% in 2017 (89 of 148 districts). *(Source: DHIS2).*

Cold chain capacity has been reinforced following the training of 20 CCE maintenance technicians and 160 new CCE deployed to health centers. The expansion of mSupply to include vaccines is underway with two provincial pilots in Oudomxay and Champasak.

In 2019, Lao PDR faced a number of vaccine-preventable disease outbreaks. A large measles outbreak in Vientiane Capital started in February and since then, over 1,000 suspected cases have been reported from 14 Provinces. Also, there were 369 suspected pertussis cases reported from 4 Provinces, of which 8 cases were laboratory-confirmed. For Japanese encephalitis, 79 suspected cases including 2 deaths were reported from 8 Provinces, of which 26 cases have been confirmed.

Flooding in 6 southern provinces has also posed some risk to delivering routine immunization and in some places has left health facilities without power for cold chain equipment.

In 2019, the **cMYP for 2019-2023** was finalized and presented to the ICC. The funding gap to consider for Gavi Transition was captured by the cMYP and ranges from $5.3M (in 2021) to $11.4M (in 2023).



Following the Gavi audit report findings, financial management support has been provided to NIP including international (GFA) and national financial management resources. GFA has now been appointed to act as the local fiscal agent to authorise programmatic expenditures and build the capacity of the NIP to manage financial resources at the national and sub-national levels. GFA has conducted an initial review of NIP accounting and finance systems and has introduced controls governing payment preparation and approvals, cash management, bank reconciliations, the management of advances and assets and, the production of timely and accurate financial reports. GFA will assist NIP to follow up and address all outstanding issues produced by the audit report and NIP will report to Gavi regularly on progress made.

Potential future issues (risks)

1. **Sustainability** - as Laos is currently in the accelerated transition phase (transition is planned for the end of 2021), the next two years pose a key risk and opportunity for the program in terms of capitalizing on the remainder of Gavi investments to ensure programmatic success and sustainability in the long term. The country's understanding of transition and utilization of available transition plans will need further work, particularly in terms of building understanding of transition policies and implications within the context of broad and evolving health-sector reform activities such as those taking place for the EHSP/NHI, UHC/CHSS, HSDP 2021-2025, and so on. Further work will also need to be done to address continued challenges in the translation of data into policy/programmatic decisions, which hinder the country's ability to properly plan for and prioritize investments based on need and programmatic impact towards its long-term and holistic vision. There is additionally insufficient information with regard to other potentially concurrent donor transitions (e.g. for Global Fund, UNFPA) which may pose further financial sustainability risks for the immunization program if multiple national programs are vying for increased government financing.

2. **Financial management** - this year's audit report of Gavi investments identified budgetary and financial management as a critical risk to the immunization program, with high risks highlighted in all aspects including inadequate budget preparation and management processes, inadequate financial reporting, inadequate banking and accounting records, and questioned expenditure in the amount of $2.16m to be reimbursed. These risks, in addition to other risks in all programmatic domains identified in the audit, will need to be addressed in order to ensure programmatic success in the forthcoming period as they contribute to disbursement delays and low programmatic burn-rate, hindering program implementation. The program, with the support of partners and the fiscal agent services of GFA, will be working to mitigate these risks through improved financial controls and the implementation of rigorous financial management SOPs.

3. **Data and information system risks** – Laos experiences challenges with data quality and reliability at all levels (in 2018, government and WUENIC estimates for DTP3 coverage differed by 16% (84% vs. 68%, respectively), with denominator changes which may reflect inflated coverage rates compared to previous years. Data risks extend to LMIS data with risks for cold chain and stock management. In the next period, work will need to ensure stock indicators are reliably and/or consistently collected, and stock outs are noted in every provincial store. Stock levels for several antigens were noted above maximum levels in the central warehouse for extended periods (up to 8 months) over the past 2 years. Additionally, issues persist in the perpetuation of parallel paper-based and electronic reporting systems furthering data quality issues. These challenges, combined with work to address capacity gaps at central and subnational levels in the recording, reporting, and application of data to inform prioritization will need to be focal (particularly in the context of an increasingly resource-constrained environment) to gather and use quality data for program planning and management.

4. **Programmatic oversight and coordination** - In the context of ongoing restructures, limitations in quality and consistent programmatic supervision, and unclear/changing role definitions for MCHC/EPI staff, program oversight will be a key focus for improvement in the coming period. Specific work (see LMC section below) will focus on improvements to developing functioning and regular coordination mechanisms across government, partners, and other stakeholders. (This issue is evidenced by irregular/dysfunctional ICC sessions with no active TWGs to support its work.) In the context of ongoing HSDP development and RMNCH strategy review processes, (and with the LMC grant commencement in 2020), it is the optimal time to review all governance and coordination mechanisms to ensure the functionality and improvements.

5. **Service-delivery and equity** - with a highly geographically dispersed (67% living in rural areas and limited access to roads) and ethnically diverse (25-30% of the population are non-Lao ethnically) population, and with a year characterized by repeated outbreaks of VPDs and concentrated epidemics in the most vulnerable ethnic groups, programmatic risks to service delivery are exaggerated in the most vulnerable and difficult-to-reach populations. Despite much work and effort in this area, issues of vaccine hesitancy and the ability for the program to tailor vaccine-messages and service-delivery approaches to high-risks populations continue to be a central focus for programmatic improvement.

4. PERFORMANCE OF THE IMMUNISATION PROGRAMME

4.1. Coverage and equity of immunisation

Coverage: DTP3, MCV2, etc.

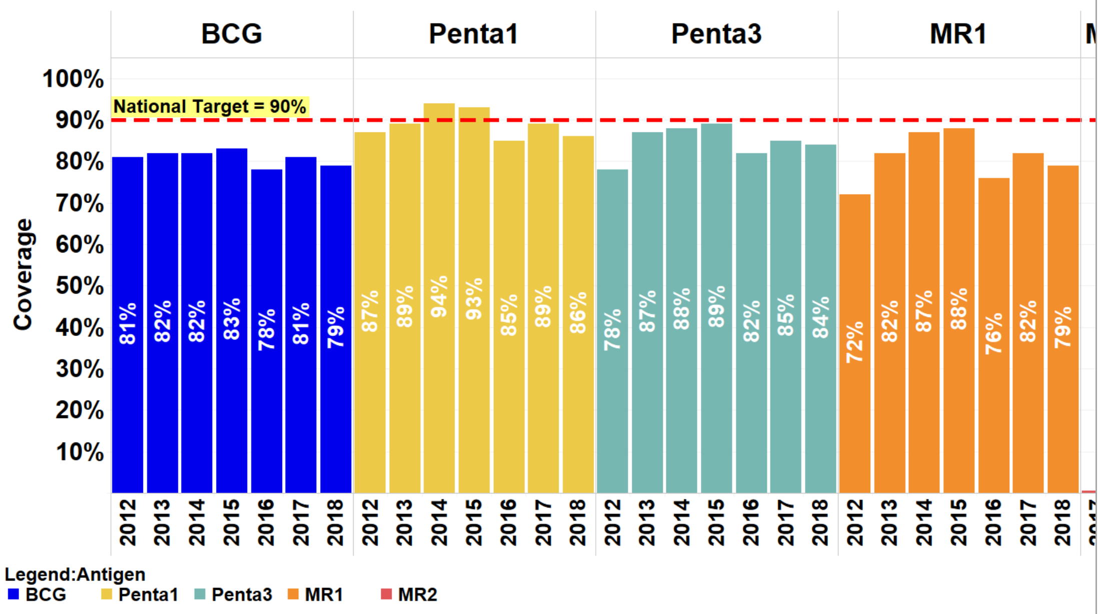


Figure_:- Administrative coverage for selected antigen by year

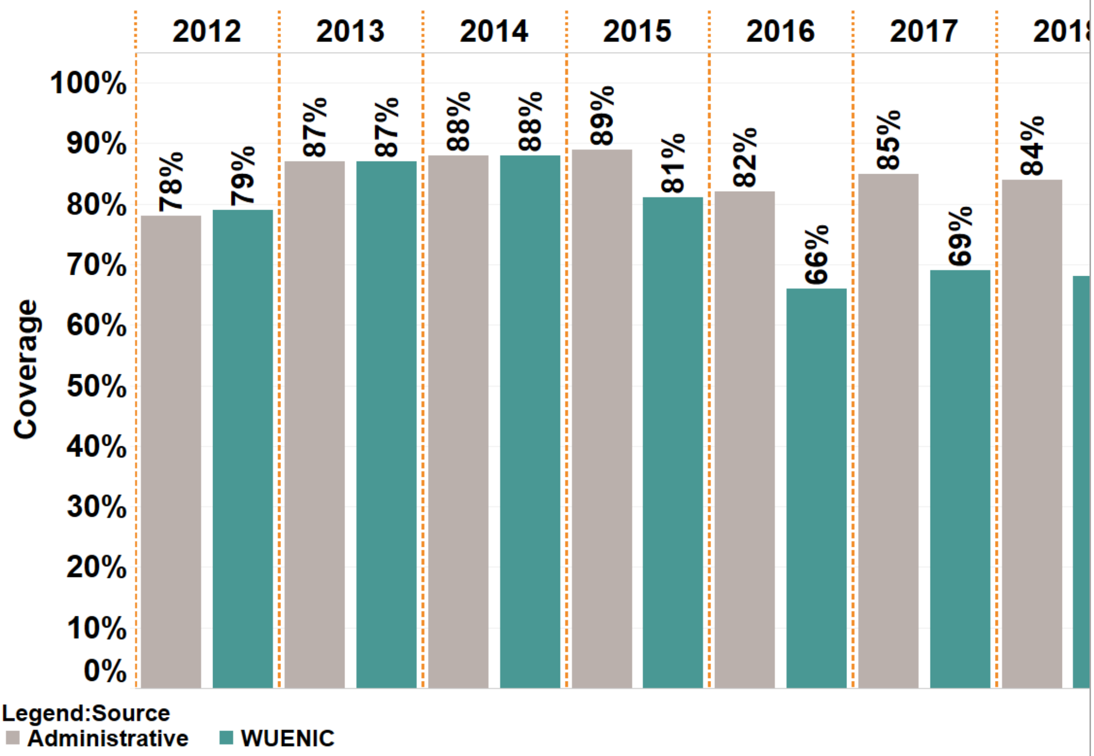


Figure__:- Administrative and WUENIC Penta3 coverage comparison by year

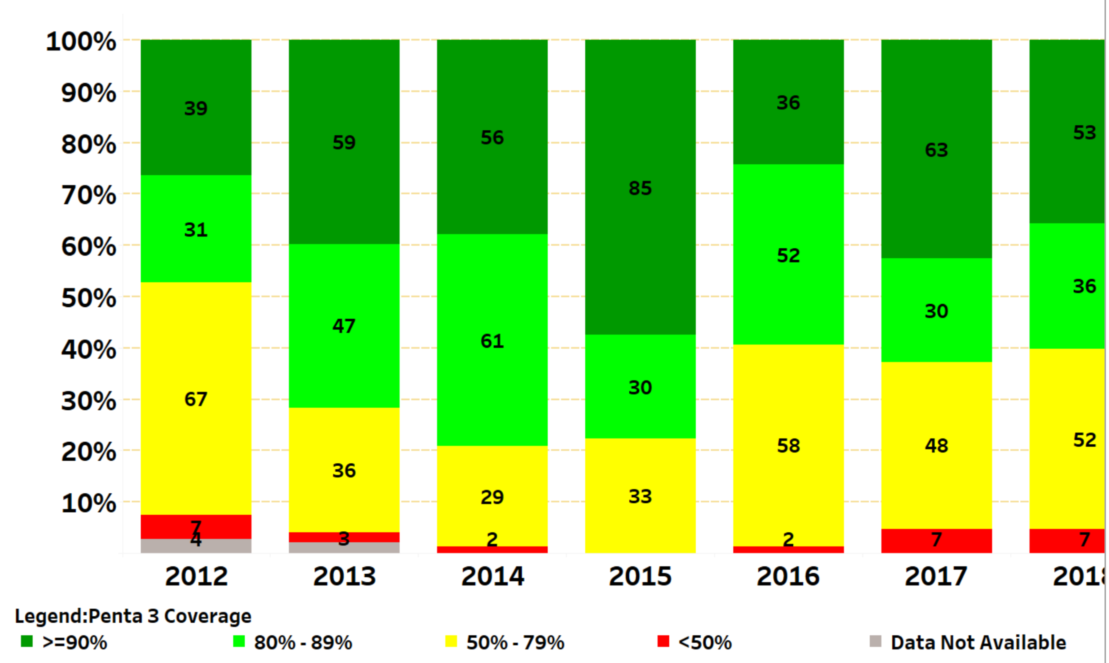


Figure___:- Number of districts by Penta 3 coverage and year

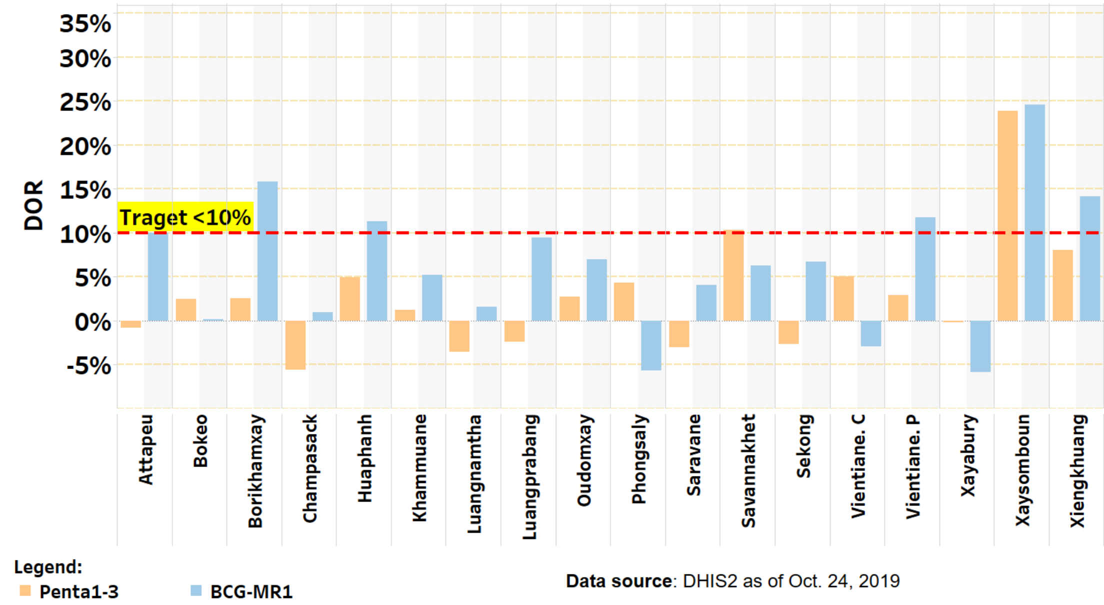
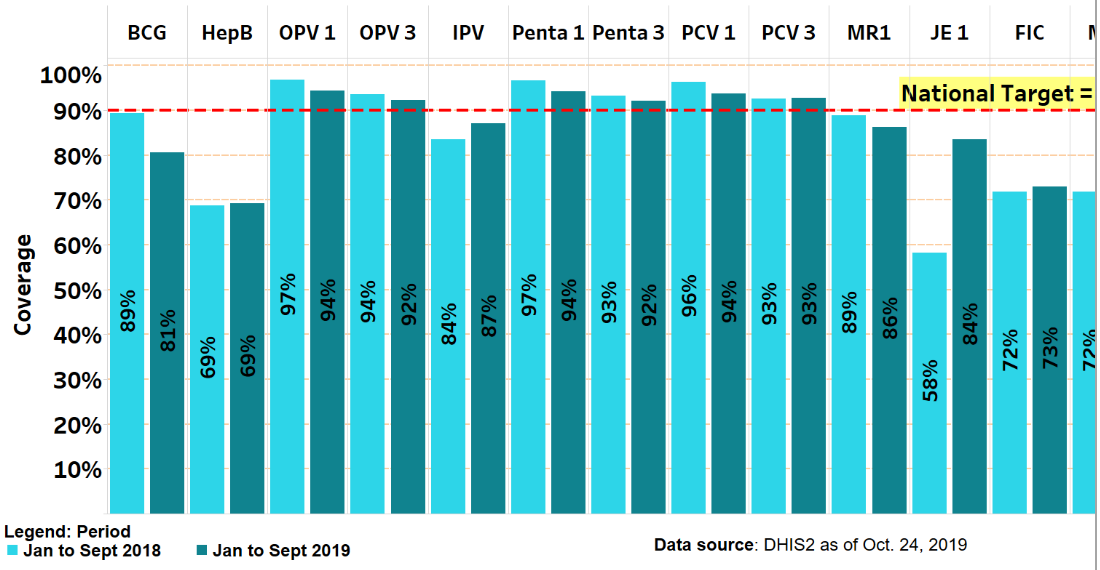
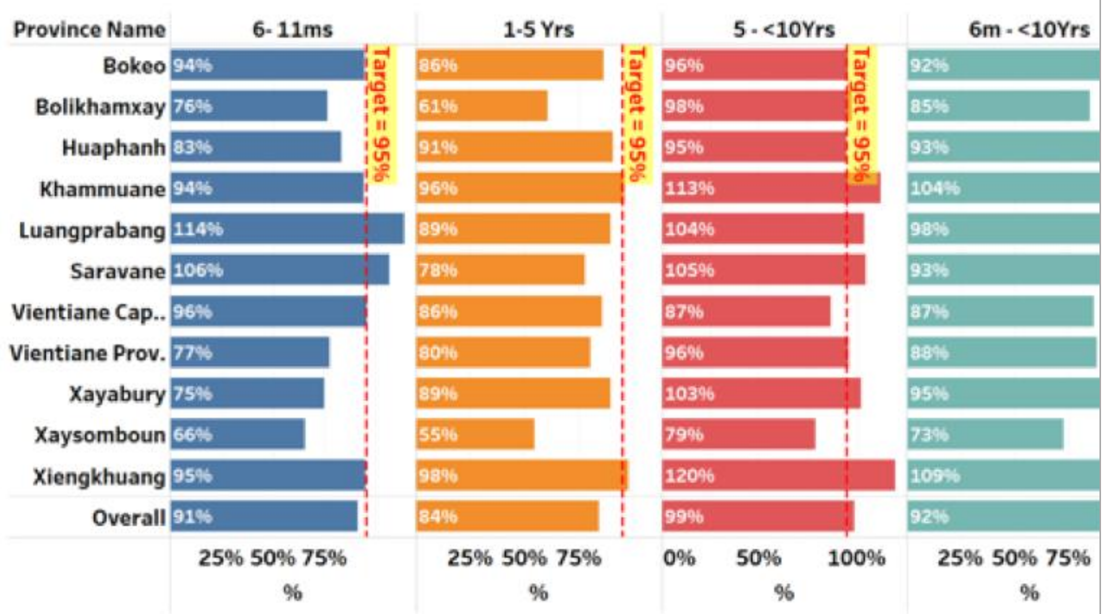
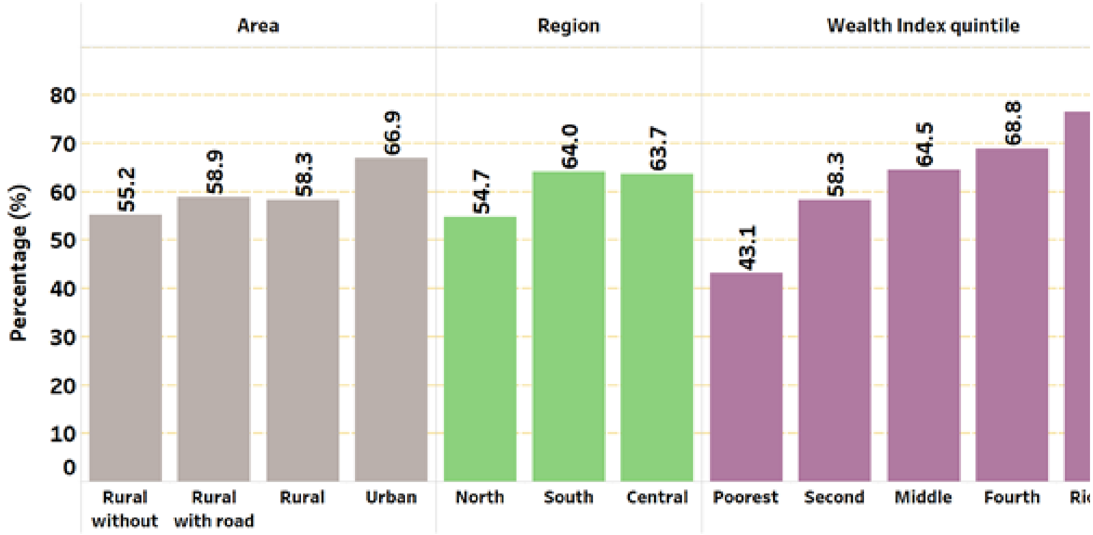
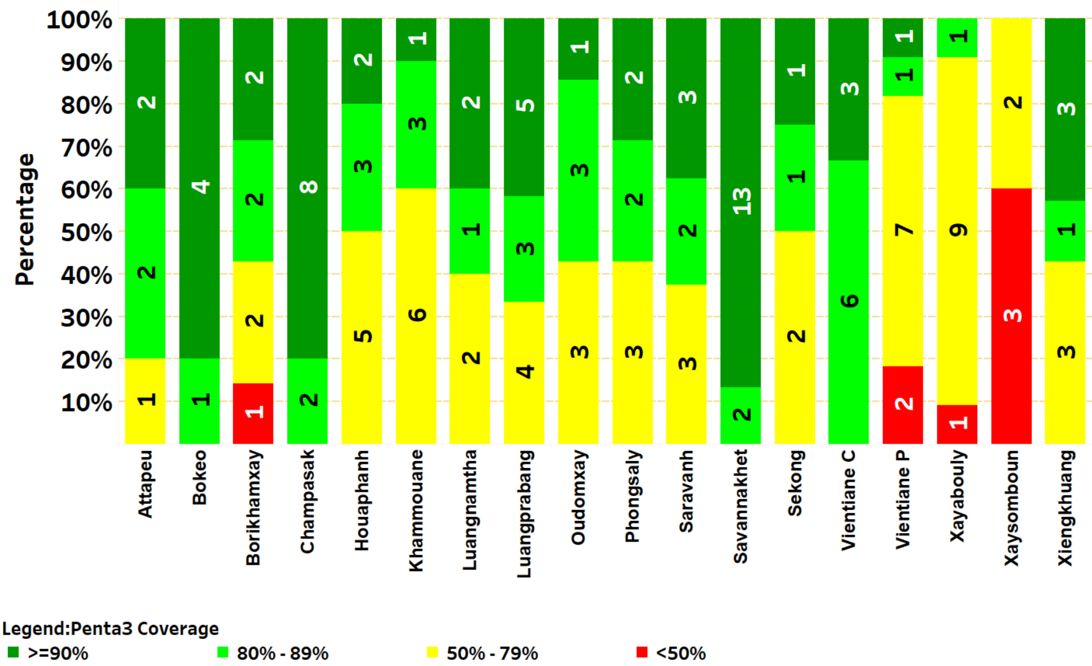


Figure_:- Penta 1-3 and BCG-MR1 DOR by province, 2018.

	 *Figure__:-National Coverage by antigen Jan - Sept., 2018/2019*  **Figure** __. Administrative coverage of measles and rubella supplementary immunization activity, by province and age group, April -- May 2019
Equity:	**Geographical inequity:** The population and location characteristics of recent outbreaks has highlighted the persistent disparities in the service delivery and utilization in the country and outlined the need to strengthen routine immunization service delivery to these priority hard to reach and high risk population in the country. As can be seen from the chart below, 5 provinces in particular suffer from consistent poor performance – Bolikhamxay, Vientiane, Xayabouli, Xaysomboun and Xiengkhoung – and are therefore the priority for NIP to focus monitoring and supportive supervisory visits. In these settings, supply side issues including low capacity of HCW and hard-to-reach villages result in children being missed for timely immunization. Likewise demand side barriers including low awareness of immunization services (how to access and importance) contribute to chronic low coverage.



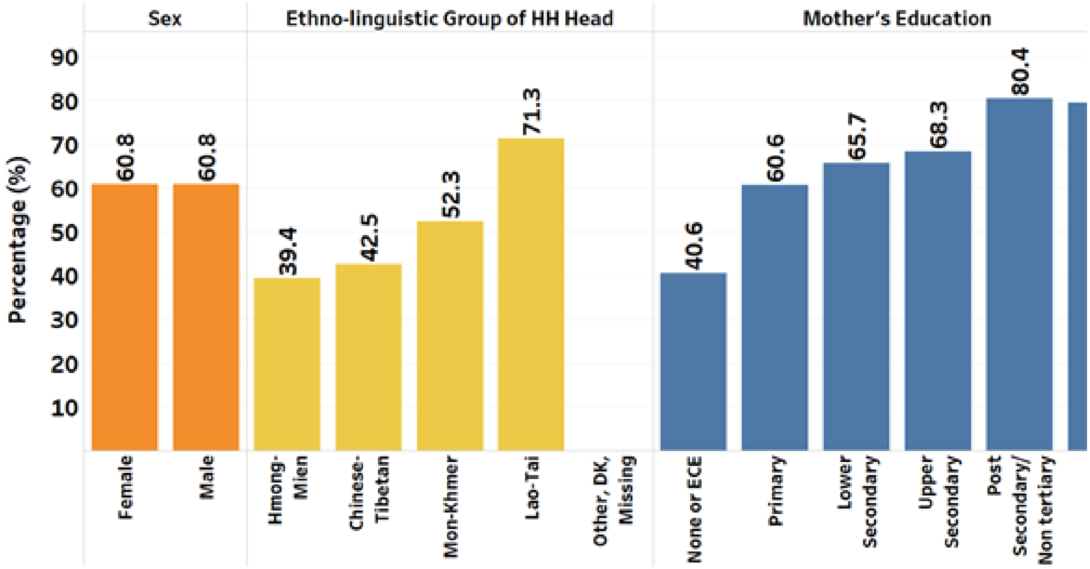
Percentage of children age 12-23 months and 24-35 months currently vaccinated for penta3 (Crude coverage) by Area, Region and Wealth, Lao PDR LSIS, 2017



Number of Districts in Province with DTP3 Coverage, Lao PDR 2018

Ethnic group inequity:

The 2017 LSIS revealed that households headed by Hmong men have significantly lower immunization coverage than households headed by Lao-Tai, followed by Chinese-Tibetan and Mon-Khmer.



Percentage of children age 12-23 months and 24-35 months currently vaccinated for penta3 (Crude coverage) by Sex, Ethno and Mother's Education, Lao PDR LSIS, 2017

Gender:

The 2011-2012 and 2017 LSIS found that immunization coverage did not vary by child's gender. No significant gender barriers to access, utilization or delivery of immunization services have been identified in the country. However, a recent study of four ethnic groups documenting the decision-making dynamic in these communities showed that women are not empowered to take children for immunization without the approval of husband/father/grandparent.

Socio-economic status:

The 2011-2012 and 2017 LSIS found that full vaccination coverage increased directly with increases in maternal education – a marker of family wealth / economic resources. While only 24% of children with mothers with no education were fully vaccinated, 73% of children with mothers with higher educational levels were vaccinated. Similarly, only 29% of children in the lowest wealth quintile were fully vaccinated, compared with 61% of children in the highest wealth quintile, even though vaccinations are provided free of charge.

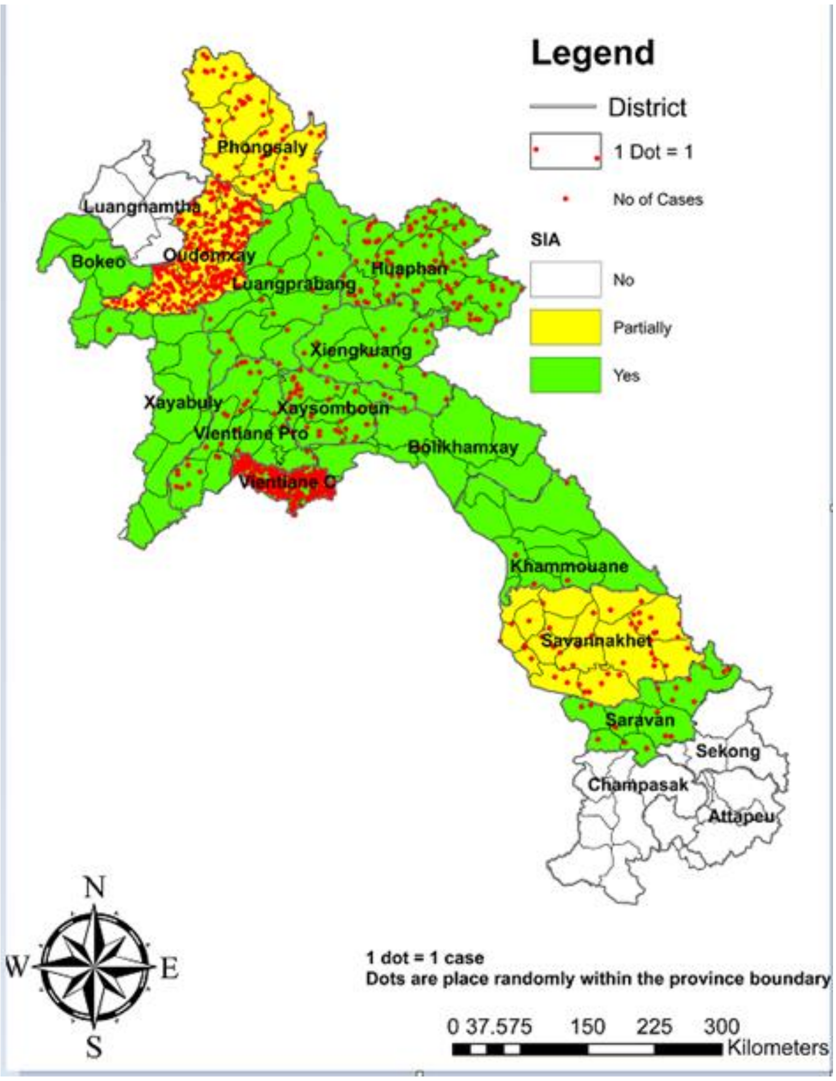


Figure __: Confirmed measles cases, Lao PDR (Data reported to NCLE from 1 January to Mid of November 2019)

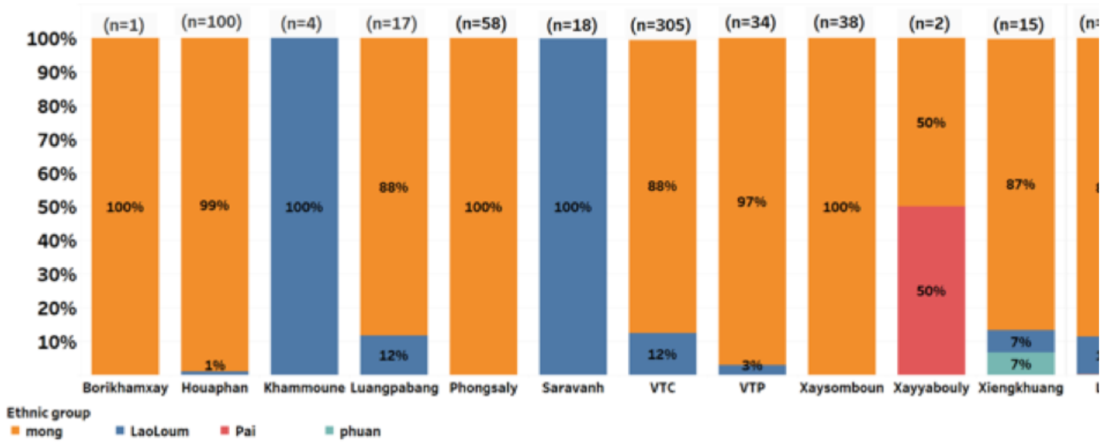
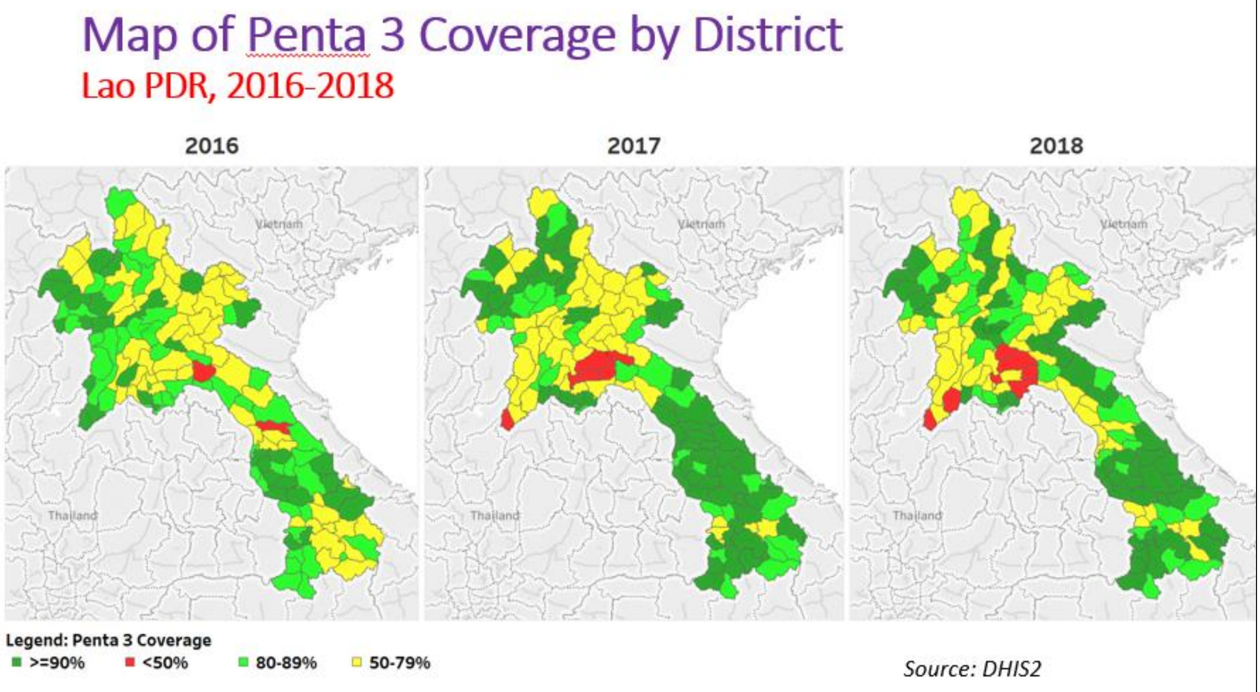
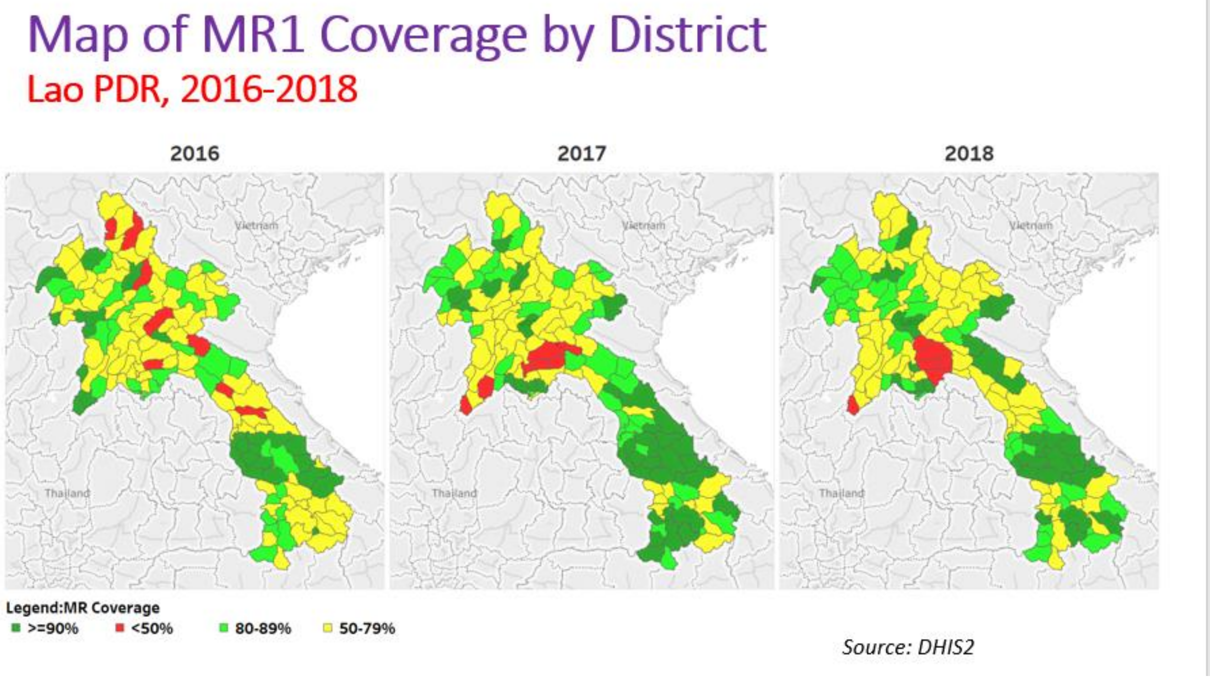


Figure. Confirmed and clinically compatible measles cases, by province and ethnicity, 2019 (Data reported to NCLE as of 30 June, 2019)


Map of Penta 3 Coverage by District
Lao PDR, 2016-2018
2016
2017
2018
Vietnam
Thailand
Legend: Penta 3 Coverage
>=90%
<50%
80-89%
50-79%
Source: DHIS2


Map of MR1 Coverage by District
Lao PDR, 2016-2018
2016
2017
2018
Vietnam
Thailand
Legend:MR Coverage
>=90%
<50%
80-89%
50-79%
Source: DHIS2

4.2. Key drivers of sustainable coverage and equity

Health Workforce

● *Staff*: In the past two years, despite significant increases in human resources for health before, the number of health workers and the number of dedicated government staff for immunization has stagnated. At subnational levels, there is great variation at all levels in terms of how staff and health workers are distributed and allocated. In reality, many health workers and government staff take on multiple functions across all programs within the health sector and work with constraints of low pay, very limited resources, and significant delays in funding on a regular basis. Often at HF levels, staff will personally supplement the costs of service delivery in order to carry out core activities.

● *Lack of training for staff especially at lower level*: in 2019, efforts were made to improve the technical capacity of EPI staff through the launching of the EPI Manager Training based on the Thai MOH model. Job aides have been developed to support HCWs on VPDs, AEFI reporting, effectively microplanning, and more.

● *Lack of specified job descriptions*: Health facilities have an organigram showing responsibilities of the different staff. However, these do not include detailed descriptions of tasks and responsibilities. In 2020, it should be a priority to develop clear job descriptions for HCWs including their functions related to EPI

● *Lack of systematic and supportive supervision*: Immunization supervision forms and checklists have been developed and are available but not used systematically. Some donor-funded programs, like ISDS, have developed mobile tools for supervision visit reporting which are integrated directly into DHIS2. Work this year by NIP and WHO has focused on the development and endorsement of new supervision tools for roll-out in 2020.

● *Cultural adaptation of health staff*: Health facility staff often has a different ethnic/cultural background than the population of the community of the catchment area. Lack of knowledge of ethnic languages and customs limits communication with communities.

For this reason, NIP is ongoing implementing the NIP manager training (targeting provincial and district EPI managers) which should be cascaded down to frontline healthcare workers.

Supply chain

EVM assessment (DPs advise to conduct not sooner than 2021 to allow for continued implementation of EVMIP).

There are a total of 44 recommendations/activities in the EVM Improvement plan for Lao PDR. Country has shown a significant improvement in the past few years on the EVM Improvement plan implementation. Total 18 activities have been completed which is around 40% of the total recommendations whereas, 11 activities are partially implemented which is 25% of the recommendations and all these activities are on track and will be completed in future.

There are still 13 activities which is 30% of the total recommendations still planned to be initiated for the year 2020.Most of the activities falling under the category of Human resource capacity building on vaccine management.

There are 2 activities having constraints and falls under the category of vaccine logistics management information system and distribution. Though, both these recommendations can be considered as a long term recommendation as they do not directly impact the national immunization program of the country. The country's national immunization program has already adapted the online logistics system for essential drugs using the mSupply platform and vaccines are being integrated in that system too which will replace the need of VLMIS in the country

Meanwhile during the scale up of mSupply for the vaccine commodity,it is essential to introduce the UNICEF Supply division portal Viva (Visibility for Vaccines) as UNICEF SD and country works jointly for vaccine procurement and by introducing the Viva in the country with the support of UNICEF SD and CO it would enhance the capacity of the national staff to see the real pic of vaccine availability vs requirement (Ensuring no stock outs, no over stocks and timely indent for vaccines) to have a continuous and smooth supply chain of vaccines across the country's EPI programme.

See attached detailed annex for EVMIP update

a. Capacity Building of newly joined 18 provincial cold chain handlers to strengthen the immunization supply chain of the country.
To reinforce the Delinking modality for CCEOP implementation, there was a requirement to validate the human resource/ in country capacity to handle the installation and preventive maintenance of electrical cold chain equipment presently existing in the country's immunization program. Therefore, the post installation inspection (PII) was conducted for the recently procured electrical cold chain equipment.
The detail report is listed as under:

Training & installation

Three sets of training were conducted in groups of 6 participants for 2 days. The first day was classroom theory with practical demonstration and the second day was at least 2 practical installations at HFs to be carried out by the participants. The class room training required a whole day as there was a need to translate each explanation into Lao language. However, during the third batch of training, the EPI officer had fully mastered the contents and conducted the full training session all by himself, which then required only half a day.
Following their training, 20 participants were sent in teams of 2 to 3 selected provinces to carry out the installation of the 100 CCE already supplied to the defined HFs. A checklist was provided for the entire installation activity which also served the purpose of reporting. In addition, the participants were also given the Annex to be filled as an additional exercise required by an installer.

Methodology and tool used

The plan for inspection was to cover at least one installation carried out by a minimum of 6 teams out of a total of 9 teams in the 3 provinces.
The inspection basically used the same criteria as listed in UNICEF's Supply division PII form. The answers were collected using the Data4Action tool using the smart phone. The final results were consolidated The table below reflects the number of facilities inspected etc.

Activities / results	Vientiane Capital	Bolikhamxai	Xaiyabouli	Total
ILRs installed / total	30 / 35	21 / 25	35 / 41	**86 / 101**
Installations inspected	4	3	4	**11**
Teams covered	3	2	3	**8**
Teams met during PII	0	1	0	**1**
Deviation encountered	0	0	1	**1**
Incorrect distribution	1	1	0	**2**

a. *Immunization supply availability:* stock indicators are not reliably or consistently collected. The 2018 EPI review reported that stock outs had occurred in every provincial vaccine store in the previous year. Data collected by CHAI in partnership with MCHC and MPSC from the central warehouse for the period August 2017 – August 2019 further indicates stock for several antigens (BCG, bOPV, PCV, Penta) regularly exceeds established maximum levels, sometimes for as long as eight consecutive months. Similar trends were observed at one of two regional warehouses, with four antigens (IPV, MR, Td and JE) stocked above established maximum levels at the end of July 2019.

b. *eLMIS (mSupply) integration:* MCHC and MPSC, in partnership with CHAI, commenced its vaccines supply chain work in 2018 towards improved stock management and availability of all antigens at national, regional and target district levels. Assessment, design, and preliminary capacity building to support integration of vaccines into the centralized eLMIS used for other health commodities is ongoing and nearly complete. Initial use of the eLMIS by the central vaccines warehouse is expected to commence in Q4 2019 with expansion from regional stores in Champasak and Oudomxay to provincial and some district stores next year. With improvements in stock visibility and data management, work will continue to implement actions to address stock adequacy issues and monitor impact through regular data review.

Service delivery & demand generation

- **Quarterly Community Meetings (QCM)**
  The purpose of the work is to collaborate with MOH and partners in developing the capacity of health personnel, especially at the district and HC level to adequately manage microplans and QCM with the prioritization of minority communities. The work is based upon the recently developed microplanning and QCM guide which the NIP is using to train health centre initially in high risk districts, but eventually nationwide. Concurrently, the work requires collaboration on the collection and analysis of data at health centre level in order to track community progress as a result of QCMs. A specific indicator of progress is the uptake of the MR2 dose.
  As a means of building the relationship and level of trust between the health system and communities, NIP has been implementing QCM to empower local leaders and generate more demand for health services including immunization. Known high-risk villages have been targeted and community leaders and village health volunteers complete a house to house card check and engage mothers in an honest understanding of their personal views/potential hesitancy around immunization.

- Increased capacity of health staff, community volunteers in interpersonal communication on immunization
  - An IPC for EPI training module (developed in response to the Polio outbreak) for frontline health workers and community mobilizers has been implemented since 2016. Till date, 267 district and health facility level staff across 13 provinces and 50 districts have been trained on this module. In turn, they have trained community level mobilizers including village chiefs and traditional leaders in ethnic minority areas. It is planned to extend the training to the remaining 98 districts in the upcoming year, with a focus on poor performing districts.

- Increased participation of ethnic groups in immunization activities
  - Traditional leaders of ethnic groups and members of the Lao Front for National Development and which is mandated to interface with ethnic groups have been trained in IPC and community mobilization for immunization.

- Implementation of updated Communication for Immunization Strategic Plan 2015-2020,
  - The communication for immunization strategic plan (2015-2020) was updated and refined in 2019 to reflect new programmatic realities, including graduation from GAVI funding. The amended communication plan, extending until 2023.is is strongly evidence based and segments messaging, focus, channels, activities, materials and evaluation indicators for each audience group.

- Use of new communication platforms and innovations to deliver customized immunization messages to ethnic groups expanded and implemented
  - Animation films and video and radio dramas in the major ethnic languages that address communication for EPI have been developed and have been widely distributed in high-risk and ethnic minority areas, through inexpensive USB disks and micoro SD cards. The messages have been broadcast locally via low-cost projectors, megaphones, and also through mobile phones.

- Increased use of mobile as m-health medium
  - A successful pilot for IVR (Interactive Voice Recording) message on EPI outreach session was implemented in 2016-2017, in two provinces. Village chiefs reported via mobile phones to a centralized helpline number on whether outreach was held, the numbers immunised. This enabled community monitoring of outreach and ensuring high coverage through real-time, valid data community tracking of defaulters.
  - in one province, being scaled up to another

- Mass dispersion of immunization messages

- In addition to routine distribution of IEC materials for EPI and MCH, in 2019, health facility staff and village health volunteers have been involved in communicating immunization messages through the Quarterly Community Meeting (QCM) process in 21 districts across 7 provinces. These have shown increased uptake of immunization services in comparison to areas where QCM has not been implemented.

- **Gender-related barriers faced by caregivers**
  a. Check LSIS data for this section - there is no difference in coverage rate between men and women in Lao PDR
  b. MCH Center with financial support from WHO is running a project to increase coverage of hepatitis B birth dose (and other essential perinatal services) by promoting facility delivery through healthcare worker antenatal care counseling on birth complications and birth preparedness. The assumption is that improving ANC counseling and focusing on supporting women to understand birth complications and to develop birth plans that include delivering in health facilities will increase facility delivery and result in an increased coverage of essential services, including immunization. Birth plans will address common gender-related barriers to delivering in facilities including transportation and childcare logistics for older children.

- **Data/information systems**

DHIS2 Implementation

DHIS2 is the backbone of the HIMS in Lao PDR. It was initiated in Lao in 2015. Up to now 9 programs started using DHIS2 as main information system. EPI integrated into DHIS2 in 2016. However, up to 2018 EPI have been using Excel as a parallel system. Starting 2019 the program is using DHIS2 as main immunization information system.

There are two types of DHIS2 data capturing. The first one is aggregate data capturing; monthly health facilities compile immunization data and send by the 5th of the following month to the district using standardized immunization reporting form. At the district the statistician enter the data in to DHIS2 system by the 15th of the following month . The second one is event capturing; this system allows users at the HCs and Hospitals, to register health events that occurred at a particular time and place. Initially it was started only in provincial and district hospital in Luangprabang. But currently it is expanded to all central, provincial and district hospitals, and in all Health Centers in Luangprabang and Saravan provinces.

The use of DHIS2 system for data capturing is improving from time to time. Health facility reporting and timeliness rate was 97% and 79% respectively in 2018. This year the average monthly reporting and timeliness rate from January – September, 2019 reached 98% and 86%. However, the use of data for decision making is low mainly because of lack of technical skill to generate data from DHIS2 and limited access to the system.

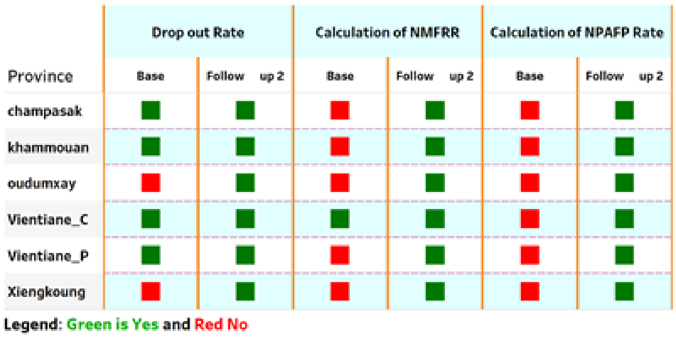
Immunization and Surveillance Data Specialist (ISDS) programme:

The STOP Immunization and Surveillance Data Specialists (ISDS) strategy was launched as a pilot in Lao PDR in July 2017. The overall aim of the project is to improve immunization and VPD surveillance data management, quality, and use across all levels of the health structure. Five STOP ISDS participants were deployed in six provinces (Champasak, Khammouan, Oudumxay, Vientiane capital, Vientiane province and Xiengkoung), where they provide support to the provinces, districts and HFs. In addition, five local immunization trainees (LPIT) were deployed to these provinces together with STOP ISDS participants. The project was running for the last two years and the first phase of the project ended mid of this year.

Results from final assessment and site visits showed that there is notable improvements in staff knowledge, skills and practices for immunization and VPD surveillance data management at province, district and HF level. Some of them are:

Province level

- Improvement in knowledge on calculations of surveillance and immunization indicators (dropout-rate, coverage, non-polio AFP (NPAFP) rate and non-measles fever and rash (NMFNR) rate).
- Improvement in regular data analysis, use, feedback to district and monitoring of target population.
- Improvement in recording and dissemination of lab results at the province.
- Staff able to describe a change they made informed by immunization and VPD surveillance data.



District level

- Improvements in immunization data archiving, correct calculation of coverage, correct calculation of drop-out rate, availability of up-to-date monitoring chart, and provision of feedback to health facilities on monthly reports. (see Table __)
- District staff able to describe a change they made using immunization data.
- Improvements in adequate archiving of VPD surveillance data, incorporating late weekly IBS report, knowledge in calculation of NPAFP rate and changes made informed by VPD surveillance data (see Table __)

Table 1: Immunization knowledge and practices at district level (n=24)

Indicator	Baseline	End of 2nd deployment
Archiving of immunization data	21 (88%)	24 (100%)
Calculate DOR correctly	0 (0%)	24 (100%)
Monitoring chart up-to-date	13 (54%)	22 (92%)
Feedback on monthly report	2 (8%)	18 (75%)
Describe a change using EPI data	19 (79%)	24 (100%)

Table 2: VPD surveillance knowledge and practices at district level (n=24)

Indicator	Baseline	End of 2nd deployment
Adequately archive VPD surveillance data	12 (50%)	24 (100%)
Knowledge in calculation of NPAFP rate	0 (0%)	16 (67%)
District send late weekly report to the province	15(62%)	24 (100%)
Describe a change using VPD surveillance data	9(38%)	21 (88%)

HF level

- Notable improvement in availability and use of standardized and latest immunization & surveillance recording and reporting tools.
- Improvements in correct calculation of drop-out rate, use of updated monitoring tools and adequate archiving of data (See Table 3).
- Improvement in congruence of under one year of age target population between the health facility and district level.
- Improvement in congruence between different data sources (doses of penta3 and MR1 recorded in the immunization

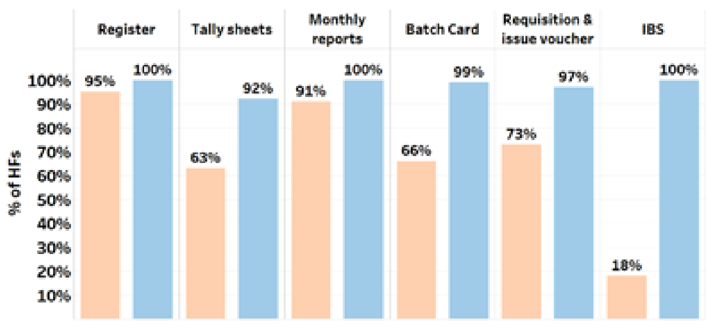


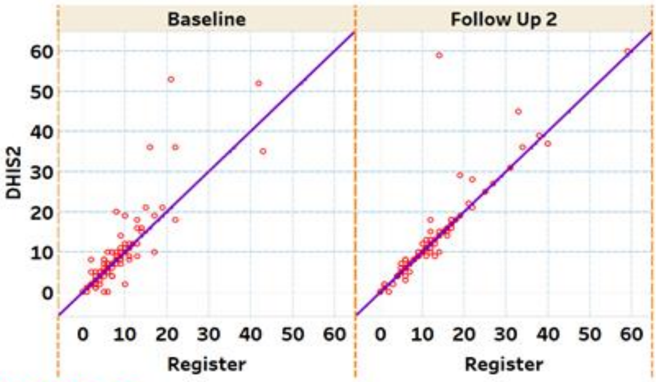
Table 3. VPD surveillance and Immunization knowledge and practices at the HF level (n=100)

Indicator	Baseline	End of 2nd deployment
Calculate DOR correctly	2 (2%)	89 (89%)
Monitoring chart up-to-date	54 (54%)	90 (90%)
Adequately archive EPI data	83 (83%)	100 (100%)
Adequately archive VPD surveillance data	17 (17%)	100 (100%)
Describe a change using EPI data	45 (45%)	96 (96%)

register, tally sheet, monthly report and DHIS2)
- Improvement in documentation of vaccine stock data

Though many notable improvements recorded in staff skills and knowledge, as well as immunization and VPD surveillance data management practices, there are also some challenges that threaten the sustained impact of the successes and gains observed.

STOP ISDS participants reported there is high turnover of staff at the district and HF level. In addition, they reported poor coordination and communication between EPI and surveillance team at province and district level. Above all, staff at the province and district level noted inadequate funds to conduct supportive supervision for immunization and VPD surveillance.



NB:- 1 dot = 1HF

Draft transition plan for the project prepared and shared with NIP and provincial team during the final review meeting. The plan was 1) To continue the work as usual in the six provinces by extending the support to new districts and HFs within these six provinces up to the end of 2019 2) To extend the reach of the project to new provinces by recruiting or identify new assistants to be mentored by the Lao ISDS counterparts by the end of 2020. In July 2019, two of the LPITs were resigned and the project activity in two of the provinces affected. The project continued in the remaining four provinces by extending to new districts and HFs. However, because of lack of funds to cover operational cost the support to lower level (districts and HFs) didn't go as planned.

As it is known, the main strategy of ISDS is building the capacity of province, district and HF staff through on job training and mentorship. To implement this strategy ISDS team together with province and district staff should conduct regular joint supportive supervision to districts and HFs. Without proper funding for supportive supervision, it is challenging to conduct this activity. Therefore, government and partners should find a way to fund this activity.

Target Population

Target population continues to be a challenge. This year MoH revised the target population based on the new Lao Statistics Bureau (LSB) estimate. There is a significant difference between the new estimate and the previous estimate. In the previous estimate the number of under 1 for 2018 was 181,665 and in the new estimate it is 153,799. This affected coverage monitoring greatly.

There are activities and opportunities to get a better estimate of target population; 1) there have been continuous communication and discussion with LSB to get better and detailed estimate of target population, up to now LSB provided detailed estimate (by year, district and single age) for one province and they promised to provide for the rest soon. 2) LSB conducted mid census population and right now they are compiling the data. From this exercise it is possible to get village level population. The problem with this data is that there is no age disaggregation, but it can be used in conjunction with other census data to get better target population. 3) Next year LBS and Lao bureau of agriculture planned to conduct household survey and initial discussion started with LBS to include and collect target population information.

NIP is currently undertaking some measures to improve the availability, quality and use of data. Some of these activities are:

- **EPI tools revision**: - This year EPI recording and reporting tools were revised. The purpose of the revision of the tools were to remove redundant and unnecessary information from the tool, clear ambiguity that was one of the sources of data quality problem, improve the availability of data and include planned new vaccines in the tools. In addition the new tools will have instructions on how to use the tools on the inside part of the cover page.
- **National and province level EPI dashboards on DHIS2**:- National and province level EPI dashboards were created in the DHIS2 system. The dashboards shows the performance at national, province and district level for selected indicators in table, graph and map forms. The main indicators included in the dashboards are reporting and timeliness rate, coverage of all antigens, dropout rate and percent of children reached by service delivery strategy. At this time, DHIS2 does not include indicators related to supply chain management because of unavailability of the data in the system.

- **EPI data management Standard Operating Procedure (SOP) Development**: One of the gaps identified during different assessments were inconsistent way of recording and reporting and lack of knowledge on how to use the tools. To address this problem in the past year EPI data management SOP was developed. The purpose of this SOP is to provide guidance to Health workers on how to record, report and use each EPI tools and immunization data. In addition, it helps to streamline and bring uniformity, improve accuracy and consistency to procedures for handling immunization data at health facility, district and province level. The SOP explains how the immunization recording and reporting tools should be completed, when the form should be filled, where data can be found to complete the form, responsible person and important points to consider during completion of the tools/forms.
- **Data Quality Improvement Plan (DQIP) revision**:- Based on the findings and recommendations from different assessments a comprehensive DQIP was developed in 2015. This DQIP covers for the period of 2016-2020. In the past years, some of the activities in the DQIP already implemented, some of them becomes irrelevant, and also new challenges and opportunities emerged. Because of these reasons the DQIP reviewed. The overall purpose of the draft DQIP is to improve availability, quality and use of immunization and surveillance data. In the DQIP there are three objectives to be achieved through main strategies and corresponding activities:
    a. Objective 1 - Strengthen the availability, quality and use of immunization coverage monitoring.
    b. Objective 2 - Strengthen the availability, quality and use of the supply management data.
    c. Objective 3 - Strengthen the availability, quality and use of VPDs and AEFI surveillance data.

  A number of activities in the DQIP already included in the GAVI HSS plan.

  Please see attached DQIP update in annex.

- **Data quality assessment:** - Data quality assessment conducted in five provinces. Based on the gap identified orientations were provided to the targeted province, districts and health facilities. For one of the provinces with serious data quality issues (Phongsaly) data quality improvement plan prepared and shared with the province. In addition, this year the data quality assessment tool reviewed and used in one of the provinces. The major data quality problems identified during the assessment listed in the challenge section below.
- **Electronic Immunization Registry (EIR) Situation Analysis and feasibility assessment**:- A significant proportion of children drop out from birth doses to subsequent doses of immunization and the current record keeping system does not facilitate the following up of dropouts with ease. As a result of this, the NIP has shown interest in exploring the implementation of an EIR in the country. As an initial move towards such an initiative, upon a request from NIP, WHO supported an EIR readiness assessment and situation analysis. This assessment was conducted from July-August 2019 and its main objectives were; to assess the level of readiness of the country for the implementation of an EIR, to provide recommendations for the country to make a decision regarding the implementation of an EIR, to identify critical areas that are necessary for the correct implementation of an EIR and to identify the key stakeholders that should be involved in the processes of developing functional and technical requirements and defining EIR governance and implementation.

  The country has made significant progress in terms of digital modernization, especially in the health sector. However, further significant improvements are required in critical areas such as IT infrastructure, training, and assurance of sustainability that must be addressed before initiating the implementation of an EIR. Therefore, the assessment strongly recommended NIP to redirect efforts towards achieving the necessary milestones to meet all critical indicators before proceeding with an EIR implementation.

  According to the assessment, the successful implementation of an EIR in the country would be reliant on a long-term planning and coordination with DPC, to address the different gaps identified in terms of governance and policy, standards and interoperability, investment and funding, processes, IT infrastructure, and human capacity. In addition, the assessment report identified critical activities for planning an EIR and provided recommendations for the EIR scope and requirements. The findings from this assessment were shared with NIP and DPC.

Challenges to data availability, quality and use

The main challenges to data availability, quality and use were limited staff capacity on EPI data management at all levels, lack of skill to generate and use data from DHIS2 system, inadequate supportive supervision by the province and districts, unavailability of updated EPI tools and use of outdated EPI tools, unreliable target population, poor coordination between NIP and other departments or ministries, parallel reporting system at district and HF level.

LMC

Recent reviews including the 2018 EPI review and the 2019 Gavi Programme Audit have highlighted areas in learning, management, and coordination (LMC) of the Lao NIP to benefit from additional support towards improved and sustained programmatic strength in the future. Starting in 2020, CHAI in continued partnership with MCHC will commence targeted Gavi-funded LMC work under a new 2-year LMC grant and as aligned to ongoing areas of TCA support related to transition.

Key aspects for targeting of additional support include:

- Strengthening of immunization governance, e.g. developing and maintaining a well-functioning mechanism which can ensure improved coordination and accountability between the NIP and partners in the delivery of immunization services;
- Program planning, management, and execution, e.g. to ensure plans and budgets are aligned with NIP priorities in the short and long term, and that the available data and evidence is fully utilized to prioritize and maximize effectiveness of the immunization program in achieving its' goals; and
- Building NIP staff capacity in areas of identified need to continue to deliver and improve the immunization program.

Complementary to ongoing work CHAI is conducting in partnership with MCHC nationally towards strengthening prioritization practices in budgeting and planning and strengthening NIP financial sustainability, and subnationally towards improvements to district-level immunization planning, management, and execution, work will commence in 2020 targeted to address key gaps across these three domains.

To improve coordination, TORs for the technical working groups have been drafted and are available. Some of the TWGs have met during the course of 2019. TWGs exist related to: (1) planning, budgeting, and finance, (2) communications, (3) -cold chain and logistics (CCL), and (4) M&E. Further LMC work in 2020 will include the strengthened functioning of the ICC and TWGs, the development, utilization, and monitoring of a joint NIP-DP AWP which has been costed and prioritized, the development of sustainable governance and coordination mechanisms, the development and use of program management dashboards from improved data-driven decision-making, implementation and support of regular program progress reviews, the development of clearly defined roles and responsibilities for NIP staff (particularly in view of evolving changes to the leadership composition and responsibilities of senior NIP/MCHC staff), and the development and implementation of plans to address priority capacity gaps, amongst others and in harmonization with other partner and programmatic activities.

This year, some other aspects of work which fall under the LMC domain have already begun, as NIP and partners have collaborated closely towards the development of revisions to the RMNCH strategy and the 9th HSDP for the 2021-2025 period, have worked collaboratively towards a successful mid-year EPI review process in which all provinces participated, and have established regular monthly coordination meetings to discuss key program implementation updates and issues towards a more coordinated response. All of this includes work to ensure greater consideration of priority programmatic recommendations in the development of strategies and plans, and the greater utilization of available data in setting targets for the forthcoming strategic period including that of transition. Work will continue on in the next period to ensure strategic plans are appropriately translated into operational plans, and as aligned to the above mentioned LMC priorities.

- **Other critical aspects**
  - WHO is conducting novel research on Immunization barriers and facilitators for people living in remote communities along border regions
  - The US CDC and WHO supported a root cause analysis for the measles outbreak (refer to charts in above programmatic data section) - 2020 interventions should reflect the learnings from the 2019 VPD outbreaks including (not exhaustive, refer to full presentation):
    a. Vaccinator belief in false contraindications to vaccination that result in missed opportunities
    b. Vaccinator does not open a MR vial unless a minimum number of children are present
    c. Communication efforts to inform the community about upcoming outreach sessions are limited to loudspeakers and village leaders

4.3. Immunisation financing[5]

The Laos PDR has consistently budgeted for vaccine co-financing and has met its obligations with regards to remittances in a timely manner.

However, planning and budgeting for Gavi in-country cash funding has historically produced low absorption rates, and significant delays which hinder program implementation. While the causes of these low absorption rates are varied, a key theme of activity planning in the absence of overall strategic direction appears consistently throughout the Gavi NIP cash funding streams. While government processes are provided with final plans and budgets for Gavi funding, there has not been a formal process of integrated planning and budgeting, especially at the development and review stages, across government and partners. These issues are now being considered with the support of UNICEF short term expertise and CHAI in order to realize optimization and sustainability in strategic and operational planning/budgeting processes.

All co-financing obligations are currently included in the National budget. There have been no co-financing defaults in the last three years (2017-2019).The Laos PDR is aware that with the withdrawal of Gavi cash support there will need to be additional and growing funding from the National budget and the Ministry will include the calculated amounts in the annual MoH budget proposals to the Parliament. In order to do so successfully, there will need to be more work (on the part of government and partners together), to better prioritize and plan for which activities absolutely must be funded with national finances, and to better understand and implement opportunities for integration within RMNCAH and the health sector more broadly.

While Gavi cash support is coordinated with vaccine distribution to ensure timeliness of release of funds and good activity execution, there has been some difficulty with the release of government funds needed to complement donor funding streams. For instance, the national budget for this year's immunization activities was formally approved in October 2019, and disbursements down to sub-national levels for implementation are still pending, representing a delay of nearly 1 full year, with significant impacts on programmatic implication. This in part has resulted from the government budget cycle not aligning with donor budget timing and some limitations with government cash release and has implications at the National and sub-National levels.

NIP now has accounting systems in place that produce accurate financial reports for Gavi and government according to policy and agreement. This includes all required Gavi reports and quarterly reports to the Department of Finance - MoH. Also, NIP is now producing budget vs actual reports on a weekly basis for program management needs and on a monthly basis for presentation at the regular EPI partner coordination meetings. NIP can produce ad hoc reports on a timely basis when requested to do so.

5. PERFORMANCE OF GAVI SUPPORT

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

The implementation of HSS3 in 2018 has a good start and numbers of activity has been conducted that therefore key progress achievements based on objectives are described in the table below.

In terms of the grant performance framework, 2018 performance shows progress from 2017 (positive trends) for most indicators, albeit few meeting original targets set. We do feel some of these are very ambitious and proposed chaining target may be required. The reason why targets were not met are explained as follows:

a. VPD outbreaks, so resource intensive distraction from delivering routine immunization (RI)
b. Difficult closing equity gaps, for instance access has improved however vaccine hesitancy persists among high-risk/ethnic groups
c. Data quality issues which sometimes are difficult to draw accurate conclusions
d. Capacity limitations for translating strategies and operation plans into implemented activities
e. Limitations on financial management and broader planning and budgeting.

[5] Additional information and guidance on immunisation financing is available on the Gavi website https://www.gavi.org/support/process/apply/additional-guidance/#financing

Joint Appraisal (full JA)

Objective 1	Actual 2017	Actual 2018	Target 2018	Status
Number of EPI/MCH managers trained on SS	NA	150	170	Although not reaching target, progress from 2017
Percent of facilities received MCH/EPI service delivery funds on time	80	85	90	Although not reaching target, progress from 2017
Objective 2		**Actual**	**Target**	**Status**
Proportion of children fully immunised - % of children aged 12-23 months who receive all basic vaccinations in a country's routine immunisation schedule	Blank	73	55	Met the target
Percent of facilities offering immunization services as per the revised microplan guidelines	50	75	90	Although not reaching target, progress from 2017
Percent of outreach immunization activities conducted in identified High risk areas	70	85	80	Target surpassed and growth from 2017
Objective 3	**Actual**	**Actual**	**Target**	**Status**
Percent of social mobilization activity per villages implemented	70	85	90	Although not reaching target, progress from 2017
Objective 4	**Actual**	**Actual**	**Target**	**Status**
Percent of functional cold chain equipment in health facilities	90	90	90	Met the target
Objective 5	**Actual**	**Actual**	**Target**	**Status**
Number of health facilities where incinerator installed and functioning	8	10	20	Although not reaching target, improved from 2017
Objective 6	**Actual**	**Actual**	**Target**	**Status**
Number of planned periodic DQA conducted against plan	5	3	3	Met the target
Number of supportive supervisions conducted by each level (National + Provinces + Districts)	150	502	404	Met the target

Objective 1: Strengthening management capacity of immunization programme at all levels	
Objective of the HSS grant (as per the HSS proposal or PSR)	This objective is focused on 1) programme management (planning and administration) and 2) support capacity building and retain skilled health and community workforce
Priority geographies / population groups or constraints to C&E addressed by the objective	The main priority areas are 12 districts of 5 provinces as identified in the proposal where issue on programme management, capacity of health workers, low performance on IR coverage exist and ethnic majority. It also provides the support to 26 hard to reach districts of other provinces.

% activities conducted / budget utilisation	According to the 2018 financial report, total budget of this objective is $244,000. In 2018, budget utilization was $116,563, equal to 48% of the total budget for this objective.
Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption	1. Regular conduct supportive supervision from central to the provinces, from provinces to districts and from district level to the point of delivery at health centres. 2. Implement additional technical staff to support project implementation (project coordinator, financial Manager and 3 supporting staff). 3. Administrative support for central, province, district and health centre levels 4. Operational cost that covers outreach service and vaccine transport. Based on the above activities' implementation, key progress has been made as described following: ● Completed an updated guideline for EPI supportive supervision including simplified checklist tools and basic demographic, health and MCH, EPI information board including re-printing. ● On the job training on utilization of the above guideline for EPI activity supportive supervision and tools were conducted for provincial and district EPI staff focusing on new EPI managers and new technical staff to make sure that staff at each level are able to clearly understand and use the tools effectively to improve the quality of monitoring and supportive supervision. ● Supportive supervision: The activity has regularly conducted but not fully implemented as planned (4 times per year); it may be due to a number of factors such as availability of human resources and the decrease in programme performance is explained by the need to respond to the outbreak of cVDPV and flooding. The polio outbreak response requires 11 national and sub-national SIAs (it run till March 2018). ● Immunization in practice guideline for EPI managers: It is complete finalization (adapted from WHO immunization in practice 2015 and Udon Model, Thailand) and expect to complete by the end of 2018. ● Training on immunization for EPI managers: 18 EPI managers (central and provincial) have trained on immunization management in Thailand in 2018 and beginning of 2019. ● Implement additional technical staff (programme coordinator recruited with updated TORs) to support project implementation.
Major activities planned for upcoming period (mention significant changes / budget reallocations and associated **changes in technical assistance**[12]	Based on HSS reprogramme and new budget, the objective 1: **Information, Data and System for Decision making including surveillance.**The major activities planned for the upcoming period 2019 are as follows: ● EPI Tool Review and finalization workshop ● Review training module for data management (recording, reporting, data quality check, analysis, interpretation and use) ● Update supervision checklist ● Develop supervision schedule/plan & conduct supervision from provinces to district and HFs ● Conduct DQS/DQA in selected provinces, districts and HFs-National to provinces, district and HFs ● Conduct DQS/DQA in selected provinces, districts and HFs-Provinces to district and HFs ● Review DHIS2 system based on the change on EPI tools ● Incorporate Stock data from HFs in to DHIS2 & integrate SIA data reporting system into DHIS2 ● Provide salary & per diems for 5 national ISDS officers to be based at provinces. ● Provide TA for NIP data management at national level ● Establish 4 CRS Surveillance Sentinel Sites

Objective 2: Improve service delivery and coverage rate with current vaccines	
Objective of the HSS grant (as per the HSS proposal or PSR)	This objective is focus on scale-up and improve accessibility and quality of service delivery (including community level services and implementation support: outreach, access, social mobilization).
Priority geographies / population groups or constraints to C&E addressed by the objective	The main priority areas are 12 districts of 5 provinces as identified in the proposal where issue on programme management, capacity of health workers, low performance on IR coverage exist and ethnic's majority. It also provides the support to 26 hard to reach districts of other provinces.
% activities conducted / budget utilisation	Total budget for this objective is $393,100. In 2018, budget utilization was $196,336, equals to 50% of this objective.
Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption	1. Implement district and health centre micro planning 2. Periodic Intensification of routine immunization in identified Hard to Reach & High Risk Area Some major progress has been made and recent achievements include the following: ● The micro planning guideline was completely re-updated and currently served as an operational implementation guideline for healthcare workers on micro planning for delivery of integrated mother and child health and immunization services (fixed sites and outreach). Currently 54 districts, 400 health centers and 1000 district and health center staff of 12 provinces have been trained on micro planning using updated guidelines. The ongoing training on revised microplaning in 2018 to present is combined with community quarterly meeting (QCM) for high risk districts and health facilities. ● Two additional rounds of catch-up campaign on routine immunization session conducted in 12 provinces of identified hard to reach and high risk areas, where there may be challenges faced in reaching these populations through routine service delivery alone. This was in supplement to the normal 4 routine outreach activities for districts with low immunization coverage. ● There is a good set-up of fixed site delivery across the country with regular (usually 5 days/week) provision of routine immunization. ● Outreach is performed regularly at least 4 times/year (albeit not always as planned especially during the rainy season-Q3). ● The practice of vaccine administration is appropriate and in line with safe injection standards. ● Immunization waste management is generally respecting recommended practices. ● In several district hospitals, the delivery of hepatitis B birth dose within 24 hours is being achieved. ● A good integration of immunization with the MCH services has been observed in some health facilities and at district and province levels. ● Fund flows are still a significant issue with cash transfers from NIP to recipient provinces blocked smoothly due to issues related to provincial financial control and management. Strengthening financial management at sub-national level is an ongoing process with support from CHAI starting in the autumn of 2017 to present as part of the Lao Transition Plan. ● Fund flow and budget planning at all levels is highlighting areas of improvement, in particular around financial management and reporting detail and quality that impact on low budget absorption and expenditure entire the programme implementation.
Major activities planned for upcoming period	Based on HSS reprogramme and new budget, **the objective 2: Leadership and Governance (Political commitment, Legislation,**

(mention significant changes / budget reallocations and associated **changes in technical assistance**[12]	**Program management and Advisory bodies: NITAG, ICC).** The major activities planned for the upcoming period 2019 are as follows: ● International courses to further advance NITAG members expertise ● NITAG meetings - twice a year ● Follow up to visit by senior decision makers (doctors and nurses) coming from provincial and low-performing districts to see how vaccination service delivery has been organized in Thailand. ● Train the District Health Management Team (DHMT) on all governance issues including intensified training of provincial health offices and of DHMTs on budgeting and financing ● Appoint Village MCH Promoters and provide non-cash incentives and materials through community quarterly meeting. ● Mid-level manager training 5 day course split over 2 years ● Quarterly Community Meetings (QCM) extended to high risk districts with focus on high risk districts and HCs including health education. ● Conduct advocacy meetings with decision makers and media including printing and communication plan rollout. ● Conduct Training of Trainers (ToT) for the National MCH Intervention Board (MCHIB) and for Provincial MCHIBs in Thailand (through Pediatrics and Obs/Gynae associations).
Objective 3: To strengthen the community demand for MNCH and Immunization services	
Objective of the HSS grant (as per the HSS proposal or PSR)	This objective is focus on 1) Empower community and other local decision makers and actors; and 2) Improve and use area-specific IEC activities at the community level
Priority geographies / population groups or constraints to C&E addressed by the objective	The main priority areas are 12 districts of 5 provinces as identified in the proposal where issue on programme management, capacity of health workers, low performance on RI coverage exist and ethnic majority. It also provides the support to 26 hard to reach districts of other provinces.
% activities conducted / budget utilisation	Total budget for this objective is $ 875,306. In 2018, budget utilization was $867,479, equal to 99% of this objective
Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption	Demand creation intervention at community level for high risk areas with a focus on social mobilization for traditional leaders in ethnic minority areas; school teachers; development of IEC materials. Some major implementation progress has been made and recent achievements include the following: ● Major achievements have included strong coordination for immunization at all levels of the health system and creative and innovative use of new technologies to address communication challenges particularly with ethnic groups. ● Influential authoritative support from District Administrators or Governors and village leaders appears to have a significant impact on social mobilization for immunization activities as evident from routine immunization and catch up campaign. ● The use of information and communication technology and mobile technology in which USB cards were distributed to about 450 villages in 5 districts and about 120 villages in 4 districts. Portable liquid-crystal display (LCD) projectors and loud speakers were distributed in 200 villages with immunization audio-visual messages. ● Cartoons animation has been developed and distributed with messages translated from Lao language into five other minority languages to overcome the barrier of language and cultural differences. The content includes the vaccination calendar and common questions raised by parents or child care takers about

	vaccination. Districts and villages with low vaccination coverage were targeted with these cartoon animations.
Major activities planned for upcoming period (mention significant changes / budget reallocations and associated **changes in technical assistance**[6]	Based on HSS reprogramme and new budget, **the objective 3: Immunization performance and service delivery (coverage and equity).**The major activities planned for the upcoming period 2019 are as follows: ● Intensify Outreach Sessions 2 extra rounds in high risk districts per year ● Evaluate and revise supervision tools and processes to ensure high quality supportive supervision. Print and roll out. ● Microplanning and QCM ToT (i) provincial training - 18 provinces @ central level and (ii) district training @ provincial level; (iii) district to HC @ district level in high risk districts - 2 day training. ● Annual review meetings for 18 Provincial level review meetings. ● Communication materials and media coverage to have a resilient community health system. ● Supportive supervision and monitoring visits by NIP, province and districts (national level). ● Mid Media: development, production and distribution of multi-language videos on CHSS, focussing on EPI and parenting package. ● Mid Media: Miking, film shows (megaphone, LCD projectors, USB disk). 600 high risk villages identified by CHSS. ● Training of teachers on C4D for MCH/EPI, including on immunization law and new vaccines ● AEFI Investigation and response at all levels to include AEFI case investigation and meeting.
Objective 4: To maintain and improve the cold chain and logistic system including cold chain vaccine management	
Objective of the HSS grant (as per the HSS proposal or PSR)	This is mainly focus on strengthening procurement & supply chain management system (including access to essential commodities management)
Priority geographies / population groups or constraints to C&E addressed by the objective	The main priority areas are 12 districts of 5 provinces as identified in the proposal where issue on programme management, capacity of health workers, low performance on RI coverage exist and ethnic majority. It also provides the support to 26 hard to reach districts of other provinces.
% activities conducted / budget utilisation	Total budget for this objective is $ 510,000. In 2018, budget utilization was $63,340, equal to 12% of this objective
Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption	Major activities implemented as following: 1. Cold Chain Inventory update 2. Training on cold chain preventive maintenance and vaccine management at the district level 3. Cold Chain replacement plan (5 years) 4. Transportation (motorbikes) for the health center staff and district EPI managers, for outreach services and supervision 5. Improvement and branding of the vaccination room

[6] When specifying Technical Assistance (TA) needs, do not include elements of resource requirements. These will be discussed in the context of the Targeted Country Assistance (TCA) planning. The TCA planning will be informed by the needs indicated in the JA. TA needs should however describe - to the extent known to date - the type of TA required (staff, consultants, training, etc.), the provider of TA (core/expanded partner) the quantity/duration required, modality (embedded; sub-national; coaching; etc.), and any time frames/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 a reference guide.

	Some major implementation progress has been made and recent achievements include the following: ● The NIP implements a system of regular cold chain and logistics inventory management. This includes regular national and provincial level vaccine and logistics stock management data collection incorporated and analyzed at district levels for monitoring and decision making on stock management. ● Training: It is ongoing implemented and currently 54 districts, 400 health centers and 1000 district and health center staff of 12 provinces have been trained on cold chain preventive maintenance and vaccine management at the district level.
Major activities planned for upcoming period (mention significant changes / budget reallocations and associated **changes in technical assistance**[7]	Based on HSS reprogramme and new budget, **objective 4: Vaccine Supply (vaccine regulation, procurement and cold chain).**The major activities planned for the upcoming period 2019 are as follows: ● Train cold chain technicians for cold room maintenance in Laos by "Lao- German Vocational college" ● Skill based training for the 20 technicians to include electrical & solar components. ● Cold chain Tool kits for all 20 technicians ● Procurement of temperature monitoring (fridge tag-2) ● Supportive supervision on cold chain and vaccine management. ● Lao GVT Co-financing for CCEOP paid by HSS grant ● Transportation and installation of 160 ILR ● Improve and institutionalize regular inventory tracking system at national level and support inventory tracking at lower levels

The implementation of activity (HSS) has been conducted that key progress achievements based on objectives and agreed target are described as following.
Objectives 1 demonstrates that fund flow and management continue to be challenging in Laos. Objective 2 is also impacted as a result, with microplan implementation being impacted by unpredictable funding and delays in funds reaching all levels. Microplanning guidance is completely revised and ongoing training on revised guidelines will also help identify funding challenges and help lower levels on how and when to submit proposals / flag challenges. Objective 3 requires reconsideration and discussion during HSS budget review exercise in December 2019. Objectives 4 and 5 were discussed at length. While cold chain equipment replacement looks on-track and with more to come with CCEOP, issues with stock management and reporting were acknowledged and additional technical support in this area will be prioritised during the HSS budget review in December 2019. For objective 6, it is important to note that the supportive supervision guidance has recently been revised to align to a fully integrated approach (meaning supportive supervision visits and checklists now integrate all MCH programme components, not just EPI). While positive in terms of an overall approach, this has experienced some challenges in implementation (requiring further training and additional time to now perform supervision visits) particularly when there are also human resource constraints. Data continues to be an ongoing focus area in Laos and the reallocation discussions helped to re-prioritise activities, particularly in view of DHIS2 expansion and data analysis and use training. Additionally it summarized:

- Vaccination reaches almost of Lao children both in city, remote and hard to reach areas of the country;
- With support of Gavi and Government co-finance for vaccine procurement, country is secured for all vaccines – no vaccine stock out;
- Cold chain has an outstandingly improved, almost 90% of health facility has the vaccine refrigerators and functioning;

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[7] 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.

- Logistic has been improved – vaccine transport trucks, pick up cars and motorcycles has provided to support the outreach session;
- Country is able to introduce new vaccines (6 vaccines) in the national immunization program during the last 10 years;
- Microplan for immunization is well implemented nationwide;
- Data quality has been improved – DHIS2 is applied and used nationwide;
- More engagement on immunization from decision makers, local authority community participation has been proved; first immunization Law was approved, completely disseminated.

5.2. Performance of vaccine support

In line with the RMNCH Strategy, NIP and the Ministry have set targets for >90% coverage across all antigens 2019 onwards. Over the past decade, several new vaccines were introduced in National immunization program of Lao PDR, including the pentavalent vaccine, Japanese encephalitis (JE) vaccine, pneumococcal conjugate vaccine (PCV), inactivated polio vaccine (IPV), bivalent oral polio vaccine (bOPV), a 2nd dose of measles rubella (MR) vaccine and human papillomavirus vaccine (HPV) as a demonstration project.

Pentavalent
The implementation of the pentavalent vaccine and other vaccines in the national immunization schedule is on-going and is being used in all levels. However, the coverage performance of each of the vaccines used in the national immunization schedule especially PENTA3 has shown a decline in coverage in 2018 (PENTA3= 84%) compared to reported coverage of 2017 and the target of 90% for PENTA3. The NIP is considering switching from a single dose vial to a preserved low-multidose vial (ideally 5-dose vial) if available from UNICEF SD.

Pneumococcal conjugate vaccine
Lao PDR has introduced with Gavi support the PCV13 vaccination in to the program in 2013. PCV introduction in Lao PDR is a powerful example of the impact of new vaccine introductions. A recent impact study shows that, for childhood pneumonia, PCV has reduced the ‘carriage’ of PCV13 strains by 88%. Meningitis and sepsis caused by PCV13 strains declined by 30%. In the study, there was a 31% decline in toddlers and 24% decline infants too young to be vaccinated which is an exciting finding as this indicates the community is also benefiting from herd immunity. The study also found a 37% reduction in the need for oxygen treatment attributed to the pneumococcal conjugate vaccine. PCV13 is likely to make a substantial contribution to keeping children healthy and reducing child mortality in Lao PDR.
Despite the progress made, the challenges of implementation remain with poor acceptance of multiple injections at a single visit particularly amongst the ethnic community causing limited utilization in several communities in the country. Consequently the administrative coverage of PCV13 in 2017 was 83%; 7% lower than the target of 90%. Health workers need a better understanding that it is safe to give 3 injections simultaneously. Lao PDR has switched from the single dose vial PCV13 to the preserved 4-dose vial presentation in mid-2018. The training, social mobilization/communication and updating of various immunization forms regarding the switch in complete. This switch has two principal benefits: (1) it saves cold chain space and (2) saves the MOH ~$140,000/year as the 4 dose vial is $2.95/dose compared to $3.3/dose for the single dose vial. Of course, the program must keep open vial wastage to a minimum to realise this savings.

Inactivated Polio Vaccine
As part of the national polio-endgame plan, Lao PDR has introduced IPV & bOPV in to the program in October 2015. The administrative coverage of IPV in 2018 is 77%. However, the overall coverage of IPV is low at the national level (90%) and variable across the country; according to the NIP administrative coverage in 2018, the IPV coverage ranged from 32% to 88% at the provincial level and only one district performed below 50%.
The implementation of the IPV vaccination has been continuously challenging throughout the country. The utilization is limited in several communities as evidenced from monthly reports and in field supportive supervision. The issues include hesitancy and misinformation for both providers and recipients of vaccination services about the risks and benefits of multiple injections at one point of care. More than two multiple injections during the same immunization session are not well accepted by many recipients, and health staff are not well-informed so do not counsel caregivers on real risks. While this evidence is anecdotal, the government, within their 2021-2025 Well Child Action Plan (as part of RMNCAH Strategy Review) has committed to work to understand and address the root causes of vaccine hesitancy in affected communities. Multiple injections occur mainly in outreach situations, when only quarterly visits are implemented and therefore more than two (delayed) injectable vaccines would need to be provided to the same child at a given

session. However, it appears as if caregivers may have fewer problems with this issue compared to health care workers, since 72% of mothers show good acceptance of multiple injections (EPI review 2018). IPV coverage could potentially be in danger due to this issue, since IPV injections are often not being administered if already two multiple injections have been given. Measures taken to ensure improvement of IPV coverage include increased supervision; trainings on IPC for the health workers and community volunteers rolled out and social mobilization at local level in the community on issue of multiple injection use has been strengthened. However, communications and social mobilization activities need to be strengthened particularly more practical activities such as role playing is needed in IPC training for health workers; training on purpose and use of IEC materials needs to be consistently delivered and updated, in-depth understanding of attitudes toward vaccination among health workers and families in persistently low coverage communities is needed.

Measles rubella vaccine
Lao PDR will also continue to use the MR vaccine in its national immunization schedule. The coverage performance of MR has shown a decline in coverage in 2018 (MR1= 80%) compared to reported coverage of 2017 and the target of 90% for MR1. In line with the measles elimination as agreed by the NITAG, the Lao PDR has introduced Measles second dose and the launch in October 2017. This is particularly important to ensure a higher immunity towards the measles virus. The challenges remain which involved poor knowledge of parents about measles immunization and difficulties in accessing vaccination centres because of distance, scattered populations and lack of mobility/transportation as evidenced from an assessment by the University of Health Science and field monitoring and supervision. The implementation of MR2 faced some challenges such as– not well oriented at different levels causing health care workers' confusion on age group and schedule. Consequently affected on performance - low performance coverage and inconsistency of data recording/reporting as well as accuracy of data.

MR missed opportunities
The unsatisfactory MR1&2 vaccine coverage nationwide (2018), is likely related to issues related to vaccine management and the fact that MR vials are not opened at the delivery site if fewer than 3 to 5 children are present. In order to reduce vaccine wastage, an 'informal' practice has been established of instituting specific 'high wastage days' once per month, during which MR vaccines are offered only. Obtaining an effective MR coverage requires strengthening capacity of the EPI staff, programme review support and a reinforcement of health education on dangers of measles and safety of immunization for target populations in all provinces. NIP will switch from the 10-dose vial to a lower multidose vial (5-dose vial) in 2020; this will hopefully reduce missed opportunities for immunization as HCWs will be encouraged to open a vial for any child under 5 years of ago who has not received a full course of MR vaccine.
In accordance with the global and regional initiatives to achieve measles and rubella elimination, the Government of Lao PDR, along with partners, developed a National Plan of Action for Achieving and Sustaining Measles and Rubella Elimination, 2018—2022 in November 2018. It is a comprehensive plan to strengthen the current immunization program and strengthen surveillance activities. Its activities range from strengthening the National Adverse Events Following Immunization Commission to establishing congenital rubella syndrome (CRS) surveillance, taking a tailored approach using the programmatic risk assessment tool and convening high-level advocacy meeting.
MR1 coverage has largely stalled since 2013 and never reached 90% yet in Lao PDR. Considering the high transmissibility of measles, over 95% coverage of two-dose measles-containing vaccines should be achieved and sustained to eliminate measles across the country. In this regard, the Plan of Action will provide an opportunity to enable the country to maximise the MR2 coverage.

Japanese encephalitis
NIP has introduced the JE vaccine in the national immunization schedule in 2015, implementation is ongoing at all levels with steadily increasing coverage from 20% in 2015 to 56% in 2018 that is lagging behind the national target coverage. The main challenges involved a shortage in supply of JE vaccine due to supply issues.

New Vaccine Introduction

Human papillomavirus (HPV) vaccine
The Government of Lao PDR decided to introduce an HPV vaccine to reduce the disease burden of cervical cancer. The number of new cervical cancer in the country is estimated to be 320 annually and 182 women die from it in 2018. In countries with limited access to screening and treatment, like Lao PDR, HPV vaccine is the most important measure to reduce the burden of cervical cancer. The HPV vaccine demonstration

project in 2013–2015 showed potential that the roll-out to the nationwide vaccination programme can be successfully implemented in the country.

Lao HPV vaccination programme is going to target girls aged 10–14 years old at school from 2020 in all 18 Provinces—routine cohort of 10-year-old girls and multi-age cohort of 11–14-year-old girls for the first year. Given the new target population and new delivery platform for routine immunization, successful introduction of the HPV vaccine requires close collaboration of the NIP with a variety of stakeholders within and across the health, education, and other sectors including at different levels of government. To support this, the Lao National Immunization Program (NIP) established a HPV Vaccine Introduction Task Team (HPV-TT) in April 2019. This HPV-TT, comprised of focal points and different stakeholders, has contributed to the planning and coordination of the national HPV vaccine introduction in Lao PDR.
International development partners are supporting the Government of Lao PDR to prepare the HPV vaccine introduction. MCH/NIP is planning HPV-related activities and budget, preparing an AEFI and risk community contingency plans and providing training with support from WHO. Approximately 383,000 doses of HPV vaccines are available in the country as of 1 November 2019, and their supply, cold chain, distribution to the health facility level are managed by NIP with support from UNICEF. Social mobilisation and communication materials and plans are being developed with UNICEF/Girl Effect, the Centre for Communication and Education on Health (CCEH) and WHO. Monitoring and assessment of the preparation of the HPV vaccine introduction will be supported by WHO and the US CDC.

Two major preparation activities have been completed successfully—the kick-off meeting with key stakeholders (1 Feb 2019) and National Training of Trainers (24–25 Oct 2019). HPV Operational Guidelines for Health Workers and Facilitators' Guide have been finalised. Information, education and communication materials (e.g., posters, leaflets, banners, school job aides) are being reviewed. Budget and operational plans were finalised. At the International Girl Child Day event, HPV vaccination was featured and advocacy meetings with mass organisations and media are planned in January 2020. HPV preparation activities have been regularly coordinated at NIP coordination meetings with international development partners and at the HPV-TT meetings. The planned dates for the 2020 vaccination is 10–21 February 2020.
Key remaining issues are (1) to identify all out-of-school girls and hard-to-reach girls with support from village heads, community and mass organisations, (2) to provide training to the health facility level on time, (3) to engage different sectors, especially the educational sector, and (4) to prepare and implement a functional AEFI and risk communication contingency plans.
As of 1 November, the plans for the key activities until the introduction are as follows:

- Demonstration training: 21–29 Nov 2019 (D-3 months)
- District training: 2–13 Dec 2019 (D-2 months)
- District readiness assessment: 13–17 Jan 2020 (D-1 month)
- Central mass organisation advocacy & media sensitization meeting: 28 Jan 2020 (D-2 weeks)
- National launch ceremony: 4 Feb 2020 (D-1 week)
- Vaccination & Rapid Convenience Monitoring: 10–21 Feb 2020

Rotavirus vaccine (RVV)
NIP's original plan was to introduce RVV in 2019; however international supply availability has delayed introduction into 2020 at the earliest. In October and November 2018, the NITAG considered switching from the GSK rotarix to another supplier but decided to wait for their original choice after carefully considering the programmatic characterics of the alternative RVVs. Forms and other materials will be updated in 2019 at the same time as HPV is reflected.
WHO is currently working with two Lao hospitals to develop a baseline of rotavirus diarrhea burden. This data was also available to inform the NITAG recommendation to introduce RVV. In 2018, a second sentinel site was added in southern Lao PDR (Champasak Provincial Hospital). This data will allow MOH to assess the impact of the RVV introduction. In 2019, this surveillance will be expanded to include intussusception surveillance as well.

Typhoid Conjugate Vaccine (TCV) -
Use of the newly available typhoid conjugate vaccine (TCV) has recently been discussed at a 'National Stakeholder Consultation Meeting on Typhoid Fever Prevention and Control'. The meeting was organized in October 2019 by PATH with technical input on global, regional, and Lao PDR-specific disease burden estimates as well as the WHO recommendation for the vaccine's use in settings of medium and high burden. After initial disease burden estimates were presented on typhoid in Lao PDR, it was proposed to (1) continue consultations on possible risk-based TCV use in epidemic settings as new data becomes available and (2) engage with Lao PDR's NITAG on its recommendation for possible TCV use. The NITAG will discuss and make a recommendation on TCV use at its meeting on 18 December 2019.

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

Cold chain equipment optimization platform proposal was approved for Lao-PDR in Jan 2018 with approved amount of USD $2,523,102 covering 1,222 cold chain equipment. Further the country has developed the operational deployment plan in which the revision of total requirement of the cold chain equipment is now reduced to 967 cold chain equipment.
The proposal was approved considering the cost with the service bundle option however now the country wants to change the modality of CCEOP implementation from Bundling to De-linking considering two main reasons.

1. By adopting the De-linking modality, the country would be able to save USD 302,736.
2. Country would also develop its Human resource capacity for a sustainable system in future.

Following the above said development, now the country is undergoing with development of De-linking proposal which will be submitted to GAVI for their approval to further implement the CCEOP activity.

5.4. Financial management performance

Gavi HSS cash support utilisation rates for Q1, Q2 & Q3 are available for review and have been submitted to Gavi.

All grants are now fully compliant with financial reporting and audit requirements.

The Gavi audit report for 2014 to 2017 has now been finalised and the Minister of Health is in negotiations with Gavi to arrange for a mutually acceptable solution to all outstanding financial matters. All findings relating to the EPI control environment have been mapped and where necessary, emergency controls have been put in place. A schedule of actions addressing all other audit findings has been developed and submitted to Gavi.

EPI has now set in place a financial management system capable of managing all aspects of Gavi funding. The EPI financial management system is currently being developed further to promote accountability at the sub-National levels and to ensure alignment with National Government systems and policies.

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

Background and Context

In 2017, to prepare for transition, the government of Lao PDR in collaboration with partners developed an initial five-year Transition Plan for 2017-2021. This plan was endorsed in 2017, and it included plans for the 2018 Transition Grants, describing the role of NIP and technical support from development partners aimed at achieving financial and programmatic sustainability during and after the accelerated transition period. In 2019, Transition Grants have been closed and consolidated into TCA funding, and the Transition Plan as an operational tool has not been adequately deployed, although many activities have been implemented via the various grants/operational budgets included. With the opportunity of this year's Joint Appraisal, and in the context of ongoing work to revise the RMNCAH and HSDP strategies for the 2021-2025 period, there is an urgent opportunity to revisit the strengths and weaknesses of the Transition Plan towards a revised and more effective approach.

While the first Transition Plan lays out clearly an emphasis on six workstreams for the MOH and development partners to implement during the accelerated transition phase, it has not been adequately taken up by the government or partners as an actively managed tool to guide operations. There are a few factors to highlight in the development, content, and oversight of the plan which will need to be considered and addressed in this phase of revision.

Transition Plan Development

The current Transition Plan will necessarily need to be developed with the government's own vision, goals, and strategy as a basis for planning, rather than based on recommendations for actions to take during the period based on EPI review and various ongoing initiatives. Additionally, the context since the Transition Plan's development has evolved towards a much more integrated approach for the delivery of immunization services as part of a holistic well child service delivery model. The RMNCH and HSDP strategies are being updated accordingly and in line with other broad health sector reform efforts around UHC, and thus, the contextual basis for this Transition Plan's origins is no longer applicable. Future revisions will need to ensure adequate consideration of contextual evolution since initial drafting took place.

Transition Plan Content

Any future Transition Plan will need to present a holistic vision or strategy for how Laos will achieve its objectives for financial and programmatic sustainability during and after the transition period, particularly with respect to the objectives and vision of the broader health system or the implications of other potential concurrent transitions. Currently, the content doesn't clearly define a step-based approach for increased domestic funding of critical Gavi-funded activities that the government will need to absorb or for building increased capacity on critical Gavi-supported activities that will be transitioned after 2021. Further, prioritization of these components based on and aligned to government vision and priorities is critical for defining the most effective and efficient way of incrementally increasing the government's financial and programmatic responsibilities in the face of transition. Future revisions/iteration of the plan must include work to address these aspects of content.

Transition Plan Costing and Funding

While the Transition Plan alone does not include its own funding source, the plan was designed to integrate activities across a number of funding sources (e.g. government funded activities, Gavi HSS and TCA, former transition grants, etc.). This approach works only when all activities are mapped to clear operational budgets/plans and is monitored/maintained effectively. Future revision to the Transition Plan will need to clearly map its activities with sufficient detail to accurate and up-to-date references to the respective funding source, so as not to limit its ability to be sufficiently implemented, managed, or monitored for accountability, and to ensure all included activities have a dedicated funding source. Additionally, the future Transition Plan's costings/assumptions will need to be sufficiently detailed and reflective of actual implementation rates and more realistic program needs in order to be used as the actual cost basis to inform planning on an annual and operational basis. Current cost assumptions appear to be based on simple assumptions about the program continuing business as usual post transition, and with the need to fill a large funding gap left by the withdrawal of Gavi funding. Thus, future costings will need to consider opportunities for the integration or savings which may be necessary for sustainable financing as well as aligned to an integrated vision for service delivery.

Transition Plan Oversight

Perhaps most significant to the success of any future revisions to the Transition Plan is the need to define and clarify processes, roles, and responsibilities for monitoring and evaluating progress. Without inclusion of clear instructions and commitments for how it will be implemented, maintained, and monitored and the inclusion of designated responsibility centers to assure accountability and coordination, any revised plan risks not being put to sufficient use. A primary objective of this year's JA and of subsequent work will need to be clarifying and endorsing such processes and mechanisms to assure this gap is filled.

Conclusions and Recommendations

Ultimately, it is difficult to present a cohesive update on the current status of the Transition Plan, due to its sub-optimal use and limitations, reducing its effectiveness as a meaningful tool. Moving forward, and building off both the momentum of this year's JA and the significant work and achievements towards revising the RMNCAH and HSDP strategies (in addition to other programmatic milestones), current revision of the Transition Plan must reflect and be designed to the above recommendations based on challenges observed in the plan's development, content, and financing. This approach will ensure that the revised Transition Plan is a more comprehensive, realistic, and meaningful tool towards assuring programmatic and financial sustainability of the Immunization Program.

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

TA for 2019 for Lao PDR was delivered by WHO, UNICEF, World Bank, US-CDC, Sabin, CHAI, and GFA, and was designed to strengthen the NIP across a number of core programmatic domains including: improvements in the quality of and access to routine immunization services; the reinforcement of cold and supply chain systems and capacity; progress towards integrated and more transparent supply chain information; support to program management and coordination in the context of leadership transition and immunization policy formation; improvements to government capacity for the collection, recording, use, and reporting of higher quality programmatic data; the establishment of more accurate understanding of the costs to deliver immunization services; and the establishment of rigorous accounting and financial management systems including capacity building for strengthened public financial management. Additional TA resources were deployed this year to support the NIP's response to a series of VPD outbreaks (226 laboratory-confirmed cases & 1 death of measles, 369 reported cases of pertussis, 79 reported cases & 2 deaths of JE) and to support the planning and preparations for the forthcoming HPV national scale up in 2020.

Accordingly, the program saw significant activity and progress made in across these domains throughout 2019 - as has been detailed above, and in the attached JA presentation consolidating partner-specific TCA updates.

Leading up to this year's Joint Appraisal, and in the context of both recently reviewed HSDP/RMNCAH strategies and Gavi Transition at the end of 2021, significant work has been done to understand how best to build off the progress and work of the NIP and partners towards a harmonized approach to TA for 2020. Such support has been conceived and designed to catalyze the available technical and financial resources in service of the government's vision and goals for immunization, and in particular, to focus on the priorities identified across the various programmatic domains throughout the Joint Appraisal workshop. These priorities were grounded in direct participation from multiple provinces (in addition to central NIP, other government units, and partners) during the JA, and were also the result of preparatory work to frame prioritization discussions within a comprehensive technical review and analysis to identify the most pressing gaps for focused support. Priorities have thus been identified across programmatic domains of (1) service delivery and immunization performance, (2) vaccine supply, (3) data, surveillance, and immunization safety, (4) LMC and governance, and (5) immunization financing and financial management.

The enclosed 2020 TCA submission was designed with these considerations in mind, and will be closely aligned to other relevant Gavi investments including HSS3 funding (alignment ensured through routine programmatic review in December 2019 and throughout implementation), the new 2020 CHAI LMC grant focusing on immunization governance and coordination, program planning, management, and execution, and staff capacity (with government and partners jointly contributing), investments in NVS for HPV and Rota in 2020, investments towards continued reinforcement of CCEOP, and with close collaboration with GFA as the newly installed fiscal agent, authorizing programmatic expenditures and building government financial management systems and capacity. Joint monitoring and accountability for the enclosed submission will be the responsibility of both partners and government, and will be carried out through the operationalization of one consolidated operational plan for NIP-partner activities (and via the continuation of routine monthly coordination and planning meetings). The 2020 AOP is under development (with Gavi TCA as one input) and includes mechanisms to ensure ease of monitoring and realistic understanding of resources required to implement across activities from multiple funding sources. LMC work will include direct TA support to capacitate government on the use and oversight of this tool.

6. UPDATE OF FINDINGS FROM PREVIOUS JOINT APPRAISAL

Prioritised actions from previous Joint Appraisal	Current status
1. Strengthen the programme management capacity (including financial management) at all levels - national, provincial and district	Ongoing
2. Preparation for new vaccine introduction in 2019 (HPV RI and MAC)	Complete for HPV
3. Monitor introduction of new presentations (2018 PCV switch and 2019 MR switch)	Ongoing for PCV
4. MR-OPV campaign (Q4)	Complete MR campaign in 11 provinces
5. Implement intensification of routine immunization in hard-to-reach and high-risk areas	Underway
6. Improving cold chain and logistics management at province, district, and facility levels	Ongoing
7. Continue to implement microplan training at district and health center levels, monitor quality and adherence to microplan	Ongoing. Combined with QCM.
8. Implement supportive supervision using improved tools	Ongoing. Revised tools design completed.

9. Implementation of measles-rubella elimination plan of action	Ongoing
10. Continue to implement DQIP plan, with priority placed on: 1. LMIS - expansion of mSupply to include vaccines 2. CCE management, maintenance, and efficient/timely deployment 3. EPI data management SOP development 4. Feasibility study related to electronic immunization/health registry Strengthen AEFI reporting and management including re-establishment of AEFI committee	Ongoing
11. Implement communication immunization activities based on communication plan 2016-2020, including KAP case study	Ongoing
12. Development and sign-off of strategic communication plan	Complete

The National Immunization Technical Advisory Group (NITAG) was reformed in 2017 under a special decree of the Minister of Health. Expertises from a wide range of disciplines represented in the elected permanent and temporary membership, including epidemiology, paediatric, vaccinology, laboratory/surveillance, health economics, public health and more. The NITAG mission aims on best practices, including the importance of objectivity, autonomy, and evidence-based recommendations to MOH.

As planned of NITAG framework agenda, we conducted annual meetings, several meetings, and activities regarding the request from NIP as follows: (1) Supported HPV introduction, complete evaluation of the HPV immunity among vaccinated girls from demonstration program, joined HPV Kick-off Meeting between MOH and MoE, supported training of trainer program from central to the provincial levels, and reviewed HPV guidelines; (2) Joined regional north and south Immunization law dissemination; (3) MR outbreak response team (NIP, WHO, WPRO); (4) Joined the investigation of AEFI and carried out the cases investigation and surveillance monitoring of JE adverse events; (5) Joined reviewing measles elimination plan and also attended the immunization meeting in the topics of vaccine vial change (from 10 doses to 5 doses vial); (6) Provides technical support in the midterm review of EPI program 2019.

A group of core member experts in the area of pediatric attended Third Global National Immunization Technical Advisory Group (NITAG) network meeting on 6-7 December 2018 in the Shaw Center in Ottawa, Canada. A group of core member experts in the utilization of vaccine attended the meeting of NITAG for ASEAN countries and fourth bioregional cross border meeting on polio, measles, rubella and other vaccine preventable diseases during 23-27 September, 2019. We have had knowledge sharing in the WhatsApp group.

During the annual meeting, technical points and situation of vaccination works in Lao PDR have been updated. Strengthening of NITAG members, NIP staff on immunization and concern of GAVI transition have been monitored. How the financial plan works for co-financing and self-sustainability? Currently, co-financing is a huge challenge. We agreed on the ICC meeting for what is a new ways or innovative solution to generate sustainable funding for vaccination in the future? Fund raising or other new ideas and experience sharing from others on a sustainable financing model has to be generated. NITAG has been working in collaboration with the Institute of Public Health partnership with HITAP and NUS to provide training of in-depth assessment on cost effectiveness using typhoid as a model. The further discussion and its mechanism of implementation will be developed. The training will be conducted in either Thailand or Laos.

7. 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. Programmatic capacity building across multiple domains and at all levels, including:
    a. Program management, governance, and coordination strengthening
    b. EPI service delivery improvement
    c. Data quality, recording, reporting, and use
    d. CCE management, maintenance, and efficient/timely deployment
    e. Strengthened VPD surveillance and AEFI reporting
    f. Financial management
2. Preparation for new vaccine introduction in 2020 (HPV and Rotavirus)
3. Preparation for MR switch - from 10 doses vial to 5 doses vial)
4. Implement intensification of routine immunization in hard to reach and high risk areas
5. Implementation of targeted campaigns for certain antigens (e.g. continued MR campaign for 7 provinces not included in 2019)
6. Continued implementation of CCEOP
7. Implement supportive supervision using improved tools and checklist
8. Integration and national scale-up of eLMIS/mSupply for vaccines towards supply chain systems strengthening
9. Implement communication immunization activities based on communication plan 2016-2020.
10. Continue to develop NIP finance administration system to ensure compliance with Gavi grant conditions and Lao PDR policy.

Key finding / Action 1	**Immunization service delivery**
Current response	This is currently implemented: ● NIP used domestic and HSS grant to support 2 rounds of outreach as well as routine supervision visits covered 13 provinces and 50 high risk districts ● District EPI managers have been trained using EPI manager training modules covered 10 provinces (approximately 170 people) ● 80 motorcycles have been procured and distributed to health facilities to perform immunization outreach sessions ● NIP is working with WHO to implement quarterly community meetings (QCM) including microplaning to strengthen the linkages between the health system and community leaders.
Agreed country actions / expected results	Priorities Identified during JA under this thematic domain: 1. Improve the service delivery more effectively a. Fixed site: expand fixed village, capacity building, conduct health promotion day and offer information of vaccine benefits for community b. Outreach team: support the full integration service 2. Improve outreach micro-planning for high risk areas and increase catch up campaign 3. Conduct quarterly meeting with community in order for updating target population data 4. Roll-out of specific ethnics targeted strategy (communication and delivery) JA priorities are being further defined, detailed, and incorporated into both a joint NIP-DP operational plan for 2020 and a detailed RMNCAH Action Plan for 2021-2025. During the JA, participants committed to further work to ensure priorities within each domain will be incorporated into the planning and programming of

	detailed activities and harmonized across multiple funding sources including Lao government, Gavi (multiple sources), and partner operational budgets.
Associated timeline	Throughout the year
Required resources / support and TA	Yes - Please refer to TCA Plan 2020
Key finding / Action 2	**Vaccine supply - forecasting and procurement**
Current response	● In 2018-2019, the CCE inventory was updated to reflect current functional status ● 160 vaccine fridges procured, distributed and installed to target districts and health facilities ● 20 cold chain technicians have been trained on fridge installation and maintenance ● On vaccine management, CHAI is ongoing to expand the implementation of mSupply to include vaccine and immunization products
Agreed country actions / expected results	Priorities Identified during JA under this thematic domain: ● Develop SOPs for distribution planning from Central to Province and Province to Districts, accounting for seasonality ● Increase transparency of stock at HC level for better distribution planning and forecasting (mSupply) ● Develop clear plans for stock-out reporting in order to replenish stocks as soon as possible ● Train procurement team on planning, budgeting, engaging with UNICEF procurement teams and finance teams, etc ● Train immunization staff (central level) on forecasting process – a team of 4-5 people ● Train Central and Provincial staff on developing accurate distribution plans ● Assign roles and responsibilities to current staff to perform procurement tasks: planning, budgeting, engaging with UNICEF procurement teams and finance teams, etc. ● Increase knowledge vaccine prices after transition JA priorities are being further defined, detailed, and incorporated into both a joint NIP-DP operational plan for 2020 and a detailed RMNCAH Action Plan for 2021-2025. During the JA, participants committed to further work to ensure priorities within each domain will be incorporated into the planning and programming of detailed activities and harmonized across multiple funding sources including Lao government, Gavi (multiple sources), and partner operational budgets.
Associated timeline	Throughout the year and beyond
Required resources / support and TA	Yes - Please refer to TCA 2020 Plan
Key finding / Action 3	**Data, Surveillance, and Immunization Safety**
Current response	NIP is currently undertaking some measures to improve the availability, quality and use of data. Some of these activities are: ● EPI tools revision ● National and province level EPI dashboards on DHIS2 ● EPI data management Standard Operating Procedure (SOP) Development ● Data Quality Improvement Plan (DQIP) revision ● Data quality assessment

	• Capacity building on EPI and surveillance data management in selected 4 provinces through ISDS strategy • Electronic Immunization Registry (EIR) Situation Analysis and feasibility assessment

Agreed country actions / expected results	Priorities Identified during JA under this thematic domain:
	
	• Align on a common definition for a high-quality target population estimate to receive immunization services, could include:
	    ○ Linkages with DPC family folder to help validate coverage estimates towards improved quality (e.g. local estimate vs. population estimate)
	    ○ Short term – fund another coverage survey for more reliable estimate
	• Standardized, streamlined, and implemented national recording and reporting tools and guidelines to all provinces down to HC level
	• Improve functionality and use of DHIS2 – e.g. validation function for DHIS2 quality, inclusion of stock data, and user-friendliness of interface, etc.
	• Empower staff at all levels through training in case management (PDM) (reporting, inquiry, follow-up, case management and risk reduction communication)
	• Make a poster on how to manage a simple, easy-to-use CSO in all stages
	• Provides emergency preparedness kit or PDU and how to use it (for a team that provides the vaccine)
	
	JA priorities are being further defined, detailed, and incorporated into both a joint NIP-DP operational plan for 2020 and a detailed RMNCAH Action Plan for 2021-2025. During the JA, participants committed to further work to ensure priorities within each domain will be incorporated into the planning and programming of detailed activities and harmonized across multiple funding sources including Lao government, Gavi (multiple sources), and partner operational budgets.

Associated timeline	Throughout the year and beyond
Required resources / support and TA	Yes - Please refer to TCA 2020 Plan
Key finding / Action 4	**LMC and Governance**
Current response	• TORs for the 4 technical working groups have been drafted and are available • Further work to establish and improve functionality of TWGs and ICC • Revisions to RMNCAH Strategy 2021-2025 • Gov and partner contributions to 9th HSDP 2021-2025 • Gov and partner contributions to mid-year EPI review
Agreed country actions / expected results	Priorities Identified during JA under this thematic domain: • One NIP-DP annual operational plan (starting 2020) (linked to HSDP etc) • Further training in planning and management down to health center level • Integrated planning, budgeting and monitoring at national and sub-national levels: EPI with MCH and other as feasible e.g. WASH JA priorities are being further defined, detailed, and incorporated into both a joint NIP-DP operational plan for 2020 and a detailed RMNCAH Action Plan for 2021-2025. During the JA, participants committed to further work to ensure priorities within each domain will be incorporated into the planning and programming of

	detailed activities and harmonized across multiple funding sources including Lao government, Gavi (multiple sources), and partner operational budgets.
Associated timeline	Throughout the year and beyond
Required resources / support and TA	Yes - Please refer to TCA 2020 Plan

Immunization Financing and Financial Management
● Country is committed to all co-financing obligations for vaccines which are currently included in the National budget. There have been no co-financing defaults in the last three years (2017-2019) ● Operational cost for routine/outreach immunization is increasing over the past five years ● Design, document & embed financial processes in accordance with Gavi requirements and aligned to MoH procedures & protocols; ● Ensure all current and ongoing transactions are eligible as per Gavi requirements ● Ensure all transactions are accounted for on QuickBooks accounting platform ● Ensure QuickBooks data set is consistently reconciled to external data points and in particular bank statements; ● Ensure assets purchased with Gavi funds are recorded in compliance with Gavi requirements and with Laos PDR procedures and protocols ● Identify and record in QuickBooks all 2018/2019 accounts receivable; ● Review and update as possible all supporting documentation on 2018/2019 transactions to ensure Gavi audit requirements are met; ● Ensure all Gavi & MoH reporting requirements are met with respect to timeliness and content; ● Identify and address policy issues where MoH/Laos PDR policy is inadequate or does not otherwise meet Gavi expectations. ● Financial Management Oversight ● Financial Management for provincial governments ● Finance Capacity Building ● Budgeting and planning ● Books and Records ● Reporting
Priorities Identified during JA under this thematic domain: ● Integrated planning and budgeting ● Improve financial management to be more effective by: ○ Establish one donor per budget line ○ PHDs to demonstrate ownership in budgeting, planning, disbursement, following up, and reporting ● Strengthen financial skills for staff at HC level JA priorities are being further defined, detailed, and incorporated into both a joint NIP-DP operational plan for 2020 and a detailed RMNCAH Action Plan for 2021-2025. During the JA, participants committed to further work to ensure priorities within each domain will be incorporated into the planning and programming of detailed activities and harmonized across multiple funding sources including Lao government, Gavi (multiple sources), and partner operational budgets.
Throughout the year and beyond
Yes - Please refer to TCA 2020 Plan

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.

Not applicable for Lao PDR

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

The joint appraisal was conducted during November 11-15 and combined with the new vaccine renewal request that was conducted prior and independent of the in-country JA process. The renewal process consisted of completion of grant performance and targets through Gavi country portal.

The dedicated JA related discussions focused on progress with New Vaccine Support, HSS grants, review of current transition plan and challenges in implementation within the context of overall immunization program.

The JA report was drafted by NIP with input from partners. The JA findings and recommendations were shared with ICC members, NITAG and presented to the monthly coordination meeting between NIP and partners on November for in-principle endorsement.

9. ANNEX: Compliance with Gavi reporting requirements

	Yes	No	Not applicable
End of year stock level report (due 31 March) *****	Yes		
Grant Performance Framework (GPF) * reporting against all due indicators	Yes		
Financial Reports *			
Periodic financial reports	Yes		
Annual financial statement	Yes		
Annual financial audit report		No	
Campaign reports *			
Supplementary Immunisation Activity technical report	Yes		
Campaign coverage survey report		No	
Immunisation financing and expenditure information			
Data quality and survey reporting			
Annual data quality desk review			
Data improvement plan (DIP)	Yes		
Progress report on data improvement plan implementation	Yes?		
In-depth data assessment (conducted in the last five years)		No	
Nationally representative coverage survey (conducted in the last five years)		No	
Annual progress update on the Effective Vaccine Management (EVM) improvement plan			
CCEOP: updated CCE inventory	Yes		
Post Introduction Evaluation (PIE) (specify vaccines):		No	
Measles & rubella situation analysis and 5 year plan	Yes		
Operational plan for the immunisation programme	Yes		
HSS end of grant evaluation report		No	
HPV demonstration programme evaluations	Yes		
Coverage Survey		No	
Costing analysis	Yes		
Adolescent Health Assessment report	?		
Reporting by partners on TCA	Yes		