

Joint Appraisal report 2019

Country	Cambodia
Full JA or JA update ¹	<input checked="" type="checkbox"/> full JA <input type="checkbox"/> JA update
Date and location of Joint Appraisal meeting	20 November 2019
Participants / affiliation ²	MOH, WHO, UNICEF
Reporting period	2018-2019
Fiscal period ³	2019
Comprehensive Multi Year Plan (cMYP) duration	2016-2020
Gavi transition / co-financing group	Preparatory transition phase

1. RENEWAL AND EXTENSION REQUESTS

Renewal requests were submitted on the country portal

Vaccine (NVS) renewal request (by 15 May)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Does the vaccine renewal request include a switch request?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>
HSS renewal request	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CCEOP renewal request	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>

2. GAVI GRANT PORTFOLIO

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

Introduced / Campaign	Date	2018 Coverage (WUENIC) by dose	2018 Target		Approx. Value \$ (2019)	Comment
			%	Children		
Penta	2010-19	94% dtp1; 92% dtp3	99%	356436	1,103,000	
PCV	2015-19	84% pcv3	99%	356436	4,731,000	
IPV	2015-19	84% ipv1	99%	356436	1,388,000	
HPV	2021	/	/	/	/	Intro planned for 2021

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

Grant	Channel	Period	First disbursement	Cumulative financing status @ June 2018				Compliance	
				Comm.	Appr.	Disb.	Util.	Fin.	Audit
HSS2	MOH	2016-2020	Jan 2016	21.5m	18m	16.3m (76%)	X		
Comments									
During the JA process, MOH decided to request to Gavi Secretariat for "no cost extension" for a year that is up to December 2021.									

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.

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

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

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

Intermediate results indicator	Target	Actual
Proportion of immunization visits conducted in high-risk communities as per annual micro plan targets	85%	100%
Percentage of quarterly meetings held between HC staff and VHSG in high risk locations	90%	100%
Percentage of quarterly data (including yellow card and TT card checks) submitted on time to NIP	85%	100%
Cold chain equipment inventories submitted to NIP are up to date and disaggregated by location and facility	80%	100%
Percentage of facilities with cold chain refrigerators >10 years old	30%	46%
Reported Acute Flaccid Paralysis cases with 2 specimens collected <14 days since onset	97%	100%
Proportion of subnational units reporting ≥2 cases of measles/rubella per 100,000	84%	88%
Proportion of suspected measles/rubella cases with adequate investigation	87%	83%
Proportion of ODs that report neonatal death cases on timely basis (even with zero cases)	80%	91%
Incidence of data errors in DQA reports	10%	7%
Incidence of issues of concern in audit reports	3%	
Percentage of staff reaching annual performance targets for incentive payments	90%	97%
Comments		
For “Proportion of suspected measles/rubella cases with adequate investigation” there were gaps of information of 10 core variables (which constitute “adequate investigation”) in some filled case investigation form of suspected measles case which made performance lower than target. The main reason of this low performance is because many new HCs or ODs had reported suspected measles cases first time in 2018 and changes of surveillance focal point in some major hospitals and PHDs who didn’t have awareness on this aspect.		

PEF Targeted Country Assistance: Core and Expanded Partners at August 2019

(to be pre-filled by Gavi Secretariat)

	Year	Funding (US\$m)			Staff in-post	Milestones met	Comments
		Appr.	Disb.	Util.			
TOTAL CORE	2017	0.44	0.44	0.42	2.5 out of 2.5	21 out of 21	Overall on track or completed.
	2018	0.47	0.47	0.47	2.5 out of 2.5	48 out of 48	
	2019	0.48	0.48	0.16	4.2 out of 5.2	8 out of 9	Milestone and financial reporting not yet available for 2019
UNICEF	2017	0.11	0.11	0.11	1.5 out of 1.5	8 out of 8	On track or completed.
	2018	0.11	0.11	0.11	1 out of 1	14 out of 14	On track or completed. 5

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.

Joint Appraisal (full JA)

						19	milestones (namely SOP, capacity development for new staff, supply chain management data quality, communication) are ongoing activities
	2019	0.26	0.26	0.13	3 out of 4	3 out of 3	
WHO	2017	0.20	0.20	0.18	1 out of 1	10 out of 10	Completed.
	2018	0.31	0.31	0.31	1.5 out of 1.5	22 out of 22	Completed.
	2019	0.22	0.22	0.03	1.2 out of 1.2	5 out of 6	On track or completed
CDC	2017	0.13	0.13	0.13	--	3 out of 3	On track.
	2018	0.05	0.05	0.05	--	5 out of 7	CDC was due to support Cambodia with plans for HPV intro however the country delayed their application date, and only applied in Jan 2019. WHO provided support remotely for the development of the application, which was successful approved (with clarifications at the March 2019 IRC)

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

- Following general election held on 29 July 2018, a new government was formed.
- Royal Government of Cambodia conducted population census in early 2019 and a total of 15,288,489 people live in Cambodia in 2019 compared to 13,395,682 people in 2008 with the growth rate of 1.2%. As per census, 86 population density/square KM and 94.3 male- female sex ratio.
- The number of operational districts (ODs) and health centres (HCs) has increased from 100 to 101 and from 1200 to 1213 respectively until the JA report writing time as per government's commitment to extend the services close to people.
- Increasing trend of mobile population inside the country and migration to neighbouring or nearby countries.
- Due to sudden development and growth of business, some families of some settlements moved from urban to peri-urban area in one province.
- There was flood in five provinces in 3rd quarter of 2019.
- There are reports of 325 laboratories confirmed, and eight epidemiologically linked measles cases form 24 provinces from 1 January to 7 October 2019 which is much higher than 66 cases reported in 2016-2017. All the cases reported are mainly import-related and as of June 2019, 10 chains of transmission was found in Cambodia. It is worth mentioning that this put at risk the measles elimination certification status which the country obtained in 2015. The country needs to demonstrate to stop the transmission of virus by February 2020. Moreover, 16 pertussis cases report in Cambodia from 1 January to 4 October 2019. By reviewing the measles and pertussis cases, it is noted that there are pockets of unvaccinated children throughout the country.

Potential future issues (risks)

The country doesn't anticipate any potential issue or challenge in next one year. However, there is probability to have more people from other countries to Cambodia for business including more number of tourists. It is expected to have same level of domestic movement including short term migration in urban provinces. Because of global resurgence of measles cases and measles endemic neighbouring countries, it is likely to have more number of measles cases report in coming months. Measles outbreak can be unmanageable situation if there is no quality implementation of two rounds of catch-up and high-risk communities' outreach sessions in all the villages of country in remaining months of 2019 and/or unable to vaccinate unreached/missed children with MR vaccine along with stopping of nosocomial infection.

Pertussis is continuously reporting since 2016 and may report more cases in coming year because of pockets of unvaccinated children. As per the previous years, transfer of vaccine procurement funds from Government to UNICEF took time for process issue and hence some vaccines were stock-outs, similar may happen in 2020.

4. PERFORMANCE OF THE IMMUNISATION PROGRAMME

4.1. Coverage and equity of immunisation

NIP with the support from WHO under Gavi TCA had conducted four pilot studies (three separately and one combined with UNICEF) and finalized short guidelines including templates in early 2019. The pilot studies were on service delivery assessment, developing realistic sessions plan as per service delivery assessment, data accuracy check/audit and fixing denominator used at local level. For service delivery assessment, it is required that each health centre is to conduct annual data analysis of last year and use other key indicators in the developed format by village and local knowledge to decide service delivery strategy (into "High Risk", "Routine Outreach" and "Fixed site"). In this regard, session plan format was revised and made perfect to use as realistic way as needed. Data accuracy check/audit format was also developed and finalized to be used at HC by National, Provincial Health Department (PHD) and OD.

With the support from WHO, NIP/MOH already conducted national training workshop for all provinces and ODs on these for national implementation from the end of January 2019 to early March 2019. NIP planned to conduct HC level training for service delivery assessment and others by April/May 2019, however because of delayed release of Gavi HSS funds it didn't work. WHO managed funds to start the implementation in four provinces and NIP implemented these activities from July 2019. Following are the activities are being implemented in four provinces

- Service delivery assessment and use
- Development of vaccination session plan as per service delivery assessment and use
- Review denominator used for immunization programme at local level and use of it.
- Review accuracy of routine immunization coverage data by using structured data verification format
- Development and use of microplan at HC
- Development and use of HC catchment area map
- Development and use of monitoring chart at HC
- HC staff meeting at OD
- VHSG meeting at HC
- PHD/OD staff supervision

Above will be enabling to increase coverage of all antigens of national schedule and reduce inequities.

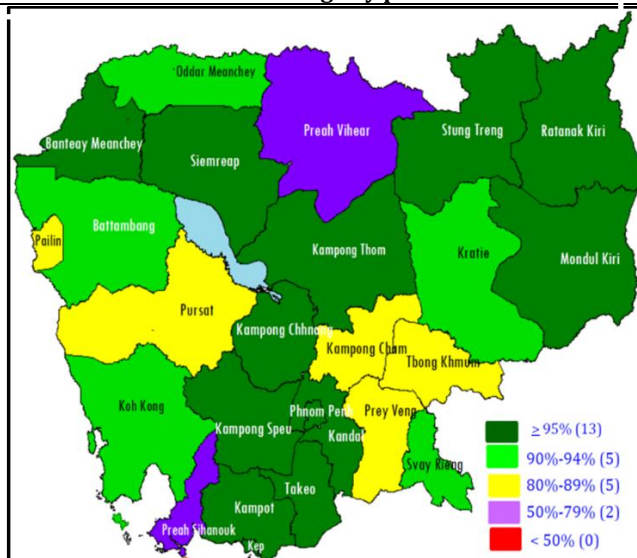
Multi-antigen catch-up and high-risk communities' (HRC) outreach session is part of routine immunization programme in Cambodia and coverage includes in routine immunization reporting system. With the support from Gavi HSS grant, NIP conducted three rounds of catch-up and four rounds high risk communities' vaccination outreach sessions in 2018 and two rounds of catch-up and HRC outreach sessions up to September/October 2019 and planned to conduct remaining two rounds from October/November to December 2019. It was observed that significant number of children was vaccinated with most vaccines in national schedule in 2018. Following table is the example of MR vaccination in four rounds of high risk communities in 2018.

No	Name of province	MR0	MR1	MR2	MR Extra
1	Banteay Meanchey	984	1579	1550	93
2	Battambang	270	1751	1690	43
3	Kampong Cham	47	259	236	0
4	Kampong Chhnang	475	1028	944	67
5	Kampong Speu	414	940	1096	7
6	Kampong Thom	227	418	356	56
7	Kampot	254	370	389	88
8	Kandal	299	440	498	26
9	Koh Kong	14	72	68	16
10	Kratie	384	663	656	45
11	Mondul Kiri	120	324	295	40
12	Phnom Penh	2677	4978	6363	3529
13	Preah Vihear	89	172	141	10
14	Prey Veng	155	326	183	20
15	Pursat	394	676	572	363
16	Ratanakiri	226	724	690	764
17	Siemreap	536	921	838	200
18	Preah Sihanouk	58	93	113	11
19	Stung Treng	95	172	151	0
20	Svay Rieng	286	500	520	359
21	Takeo	350	703	799	0
22	Oddar Meanchey	123	249	289	7
23	Kep	112	126	119	14
24	Pailin	25	70	95	34
25	Tbong Khmum	9	50	26	0
Total		8623	17604	18677	5792

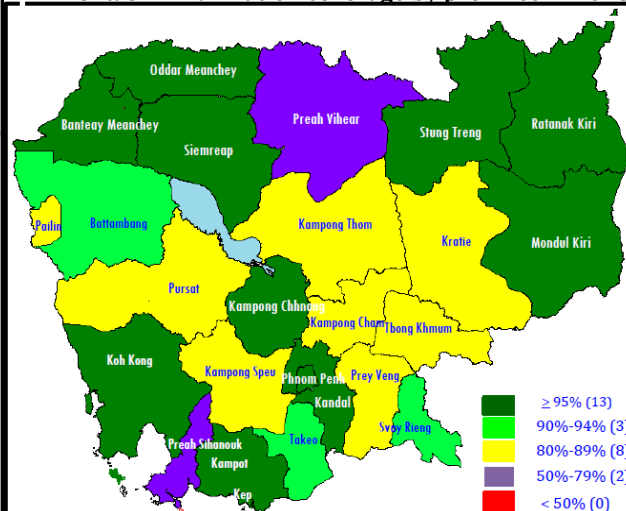
In 2018, NIP was able to sustain/increase coverage at national level for all antigens of national schedule, but coverage varies by provinces and ODs with various reasons. NIP and WHO regularly analyse the immunization and VPD surveillance data up to HC/OD level and provides feedback to provinces, ODs and hospitals.

As per the administrative data of 2018, a total 57 ODs and 595 HCs achieved the MR1 coverage $\geq 95\%$ and 59 ODs achieved pentavalent3 coverage $\geq 95\%$. A total of 12 and 19 ODs has found to be reported $< 80\%$ coverage for MR1 and pentavalent3 respectively. MR2 coverage found to be stagnant and it is 81% in 2018. Though national pentavalent3 vaccine coverage was 98% but due to stock management issue PCV3 vaccine found 93% coverage in 2018.

MR1 immunization coverage by province in 2018



Penta3 immunization coverage by province in 2018



As per the administrative data of 2018, a total 57 ODs and 595 HCs achieved the MR1 coverage $\geq 95\%$ and 59 ODs achieved pentavalent3 coverage $\geq 95\%$. A total of 12 and 19 ODs have found to be reported $< 80\%$ coverage for MR1 and pentavalent3 respectively. 41 ODs reported MR1, 17 ODs reported MR2 and 36 ODs reported Penta3 $\geq 100\%$ in 2018. MR2 coverage found to be stagnant and it is 81% in 2018. Though national pentavalent3 vaccine coverage was 98% but due to sub-national level stock management issue, PCV3 dose coverage found 93% in 2018.

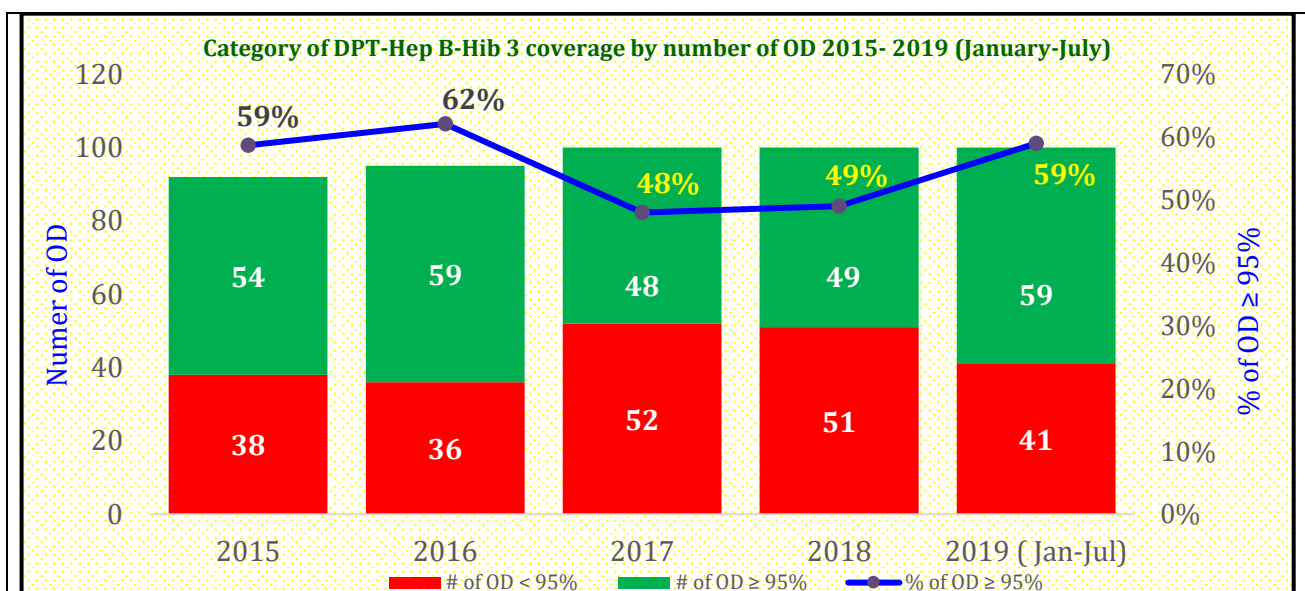
Penta3 coverage from 2015 to 2019 (up to July):

	# of HC < 95%	# of HC $\geq 95\%$	% of HC $\geq 95\%$
2015	561	544	49%
2016	573	591	51%
2017	667	526	44%
2018	659	541	45%
2019 (Jan-Jul)	625	585	48%

MR1 Coverage 2015 to 2019 (up to July):

	# of HC < 95%	# of HC $\geq 95\%$	% of HC $\geq 95\%$
2015	575	530	52%
2016	517	647	56%
2017	676	517	43%
2018	605	595	50%
2019 (Jan-Jul)	701	509	42%

Administrative data of 2019 (up to July) also shows that 585 and 509 HCs out of 1200 achieved $\geq 56\%$ penta3 and MR1 coverage by July respectively. 59 ODs out of 100 found achieved $\geq 56\%$ penta3 coverage by July 2019.



Dropout rate at national level from Penta3 to MR1 was found -6% and MR1 to MR2 is 22% in 2018. However, dropout rate remains almost unchanged at various sub-national levels and varies by ODs/ HCs throughout the country.

There are multiple reasons found to be less or varied coverages for different vaccines in Cambodia which include stock-outs of some vaccines, stock management at sub-national levels, urbanization, domestic migration including transient migration for short time works in urban provinces, working parents, inadequate funds for routine outreach services, delayed release of Gavi HSS funds.

Moreover, due to fast growing economy, enormous opportunities, greater connectivity and expansion of transportation network in this Mekong sub-region, there are huge population movements. There are rapidly accelerating flows of people and goods across borders and bringing both vaccine preventable disease control benefits and consequences. At the same time, often there is limited infrastructure and/or weak health systems in border areas which make direct and indirect impact on health and wellbeing of people in all these countries. As per data, there is huge population movement from Cambodia to Thailand in daily basis or weekly. Measles outbreaks data from 2016 and 2019 shows that because of this cross border movement, cases were imported and then transmission occurred in most provinces in Cambodia. NIP with the support from WHO will conduct the assessment in international border province in November and will also work in future how to conduct synchronized activities with the neighbouring countries of Cambodia. However, this needs incredible support from donors.

Several IEC materials were developed, printed and distributed up to community level and hospitals for awareness and creating demand towards strengthening routine immunization, increasing coverage and surveillance performance indicators.

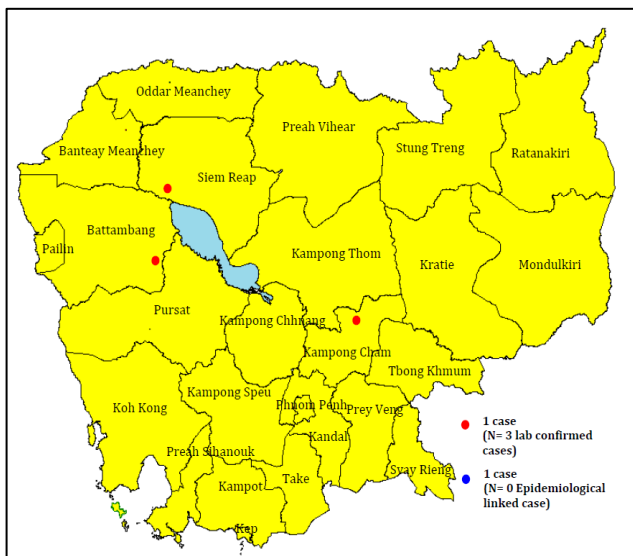
There are report of 325 lab confirmed and eight epidemiologically linked measles cases form 24 provinces from 1 January to 7 October 2019, country is expecting more cases because of global resurgence and endemic neighbouring countries. Investigation revealed that there are ten chains of transmission as of June 2019 and all cases are import-related.

Laboratory confirmed measles cases by province (as of 7 October 2019):

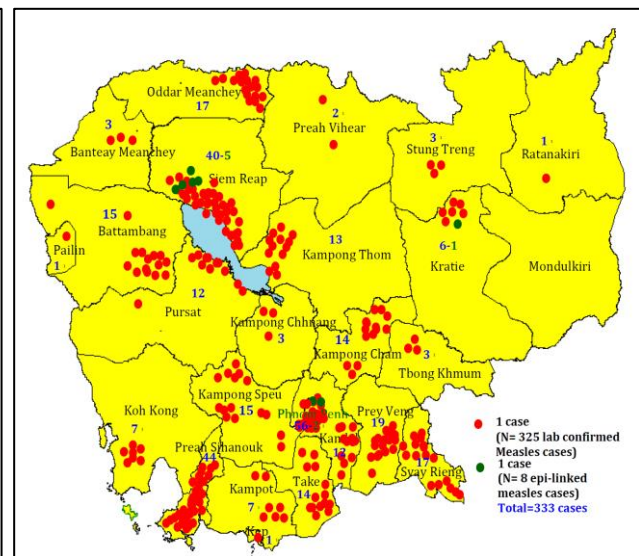
No	Province	No of lab confirmed Measles cases	No of epi-linked measles cases	Total OD (HIS)	No of OD affected	Total HC (HIS)	No of HC affected
1	Banteay Meanchey	3		4	2	67	3
2	Battambang	15		5	3	77	7
3	Kampong Cham	14		9	7	89	12
4	Kampong Chhnang	3		3	2	42	3
5	Kampong Speu	15		4	4	55	13

6	Kampong Thom	13		3	2	53	8
7	Kampot	7		4	3	64	5
8	Kandal	12		10	9	101	10
9	Koh Kong	7		2	1	13	1
10	Kratie	6	1	2	1	30	1
11	Mondul Kiri	0		1	0	11	0
12	Phnom Penh	56	2	7	6	43	17
13	Preah Vihear	2		1	1	29	2
14	Prey Veng	19		12	10	113	17
15	Pursat	12		4	4	40	4
16	Ratanakiri	1		2	1	25	1
17	Siem Reap	40	5	4	2	92	17
18	Preah Sihanouk	44		1	1	15	8
19	Stung Treng	3		1	1	14	1
20	Svay Rieng	17		4	3	44	10
21	Takeo	14		6	5	80	11
22	Oddar Meanchey	17		2	1	37	4
23	Kep	1		1	1	5	1
24	Pailin	1		1	1	6	1
25	Tbong Khmum	3		7	2	68	2
	Total	325	8	100	73	1 213	159

Map of Measles case by province in 2018



Map of Measles case by province in 2019 (Jan-7)



In response to the ongoing measles outbreak, NIP and WHO has been conducting re-investigation of each case and local immunization responses in case's village or neighbouring villages or whole catchment of health centres. However, because of sudden increase of measles cases in March, with the support from WHO (for operational cost) and MRI (for vaccine and ancillaries), conducted SIAs in whole Siem Reap OD for the children aged 6 months to 15 years irrespective of previous vaccination. This resulted breaking the chain of transmission occurred in Siem Reap. Ministry of Health with the support from WHO applied again to MRI for operational cost and vaccine for conducting another response.

At the same time, 16 pertussis cases report in Cambodia from 1 January to 4 October 2019.

All the indicators of grant performance framework achieved the target except proportion of suspected measles/rubella cases with adequate investigation and incidence of data errors in DQA reports. As for "proportion of suspected measles/rubella cases with adequate investigation" there were gaps of information

of 10 core variables (which constitute “adequate investigation”) in some filled case investigation form which made performance lower than target. The main reasons of this low performance are because many new HCs or ODs had reported suspected measles cases first time in 2018 and changes of surveillance focal point in some major hospitals and PHDs who didn’t have awareness on this aspect.

4.2. Key drivers of sustainable coverage and equity

- MOH has issued two letters in March and September 2019 to strengthen routine immunization system and increasing immunization coverage.
- Contractual staff were recruited in HC where gaps because of retirement.
- National training workshop of service delivery assessment, development of session plan, data accuracy check/audit, development of HC catchment area map, monitoring chart, etc.
- Replacement of old cold chain equipment and installation of new cold chain equipment to more new health centres by using Gavi HSS funds allowed health staff to deliver regular immunization services closer to the population.
- Distribution of motorcycle to health centre staff acknowledged their contribution and encouraged to work harder including frequent visits to villages.
- Regular supervision and conduct of workshop with PHD and OD officials by HMIS unit of MOH helped a lot for data management and its quality
- Developing, printing and distribution of IEC materials at health centre and community supported to increase awareness and demand especially in hard to reach areas/high risk communities.
- Development and airing of video clips of immunization programme on national television increased awareness throughout the country
- Display of NIP schedule in LED in important locations of Phnom Penh city increased awareness and immunization demand to working parents and general people.
- NIP, WHO and UNICEF’s frequent supervision and monitoring was very helpful to increase quality, however needed more frequent supervision and monitoring visit from PHD and OD level to HCs.

4.3. Immunisation financing⁵

The National Immunization Programme is the priority programme of Government of Cambodia. The Government has been committed and increasing funding for EPI (there are increase amount for annual vaccine procurement). There is a challenge to absorb some of the recurrent and operational costs, for now covered by Gavi.

5. PERFORMANCE OF GAVI SUPPORT

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

Objective 1	
Objective of the HSS grant (as per the HSS proposal or PSR)	Increase immunization coverage in high risk communities
Priority geographies / population groups or constraints to C&E addressed by the objective	1750 villages of all 25 province
% activities conducted / budget utilisation	In 2018, a total of USD 1,171,570 was budgeted in Annual Operational Plan (AOP) and at the end of 2108, expenditure was USD 841,281. In 2019, USD 1,621,336 was budgeted in AOP with the balance from 2018. 2018 utilization: 72%

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

<p>Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption</p>	<p>Several activities were conducted by National immunization Programme in this JA period. However, some major activities are 1. Conducted four rounds of multi-antigen high risk communities' vaccination outreach sessions in 2018. Similarly, two rounds of multi-antigen high risk communities' vaccination outreach sessions by September/October 2019 and planned to conduct remaining two rounds from October/November to December of 2019. 2. Purchased motor bikes and helmets for HC staff. 3. Supported VHSG to get data on numbers of women and children in HRCs not vaccinated. 4 Conducted training for VHSG. 5. Conducted supervision and monitoring. 6. Conducted quarterly review workshop with sub-national NIP staff</p>
<p>Major activities planned for upcoming period (mention significant changes / budget reallocations and associated changes in technical assistance⁶)</p>	<p>Similar major activities are in plan for 2019-2020</p>
<p>Objective 2:</p>	
<p>Objective of the HSS grant (as per the HSS proposal or PSR)</p>	<p>Strengthen cold chain system through improved equipment and management</p>
<p>Priority geographies / population groups or constraints to C&E addressed by the objective</p>	<p>Whole country</p>
<p>% activities conducted / budget utilisation</p>	
<p>Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption</p>	<p>Immunization supply chain management: NIP conducted TOT in SOP for immunization supply chain and logistics management for the PHD and OD level in December 2018 (using Gavi HSS funding). UNICEF at zone level provided technical and financial support to train health centre level in five north-east provinces (using USAID/UNICEF funding). A total 109 health centres (with two staff trained from each health facility) trained in SOP early 2019. Slow progress in scaling up the training health centre level was due to delay in HSS funding. The external audit reports were submitted late to Gavi – and Gavi cannot further disburse funding without an independent check such as external audits .</p> <p><u>Capacity development of newly assigned provincial NIP managers:</u> NIP mapped newly assigned provincial and district level NIP managers staff to the position as NIP managers at the provincial and operational district level and conducted a 3-day training in immunization supply chain management for a total 12 new managers including the plan for post-training follow up at their own work station.</p> <p><u>Procurement of cold chain equipment:</u> In 2019, MoH requested to procure cold chain equipment and spare parts through UNICEF with a total of US\$599,280. The equipment arrived and will arrive between June and December 2019.</p> <p><u>EVM assessment:</u> NIP decided to conduct next EVM assessment using the tablet-based tool EVM 2.0. UNICEF Regional Office introduced the tool NIP. The tool required that NIP to develop capacity by conduct 12 self-assessments (learning by doing) at the health facilities before each of them could be qualified to use the tablet-based tool EVM 2.0. With this pre-requisite requirement, Cambodia will shift the plan EVM assessment to early 2020.</p> <p><u>Primary vaccine store:</u> Central Medical Store deployed two new staff to work at Central vaccine cold store. Both received continuous training and on-site coaching after their assignment to perform their tasks. Although, there is no long-term contract for preventive and repair maintenance services with private provider, case-based arrangements have been managed successfully.</p>

	<p>Refrigerator maintenance and repair: Institutional capacity development continued to strengthen through continuous on-site coaching by central technician team to the provincial and district level trained in minor repair along with provision of spare parts. The effort of institutional capacity development is to prepare for long term agreement with private sector that could be potential for future direction and the trained provincial and district level staff could play roles in monitoring the private provider's work. Currently, there are 15 provincial and district level staff trained in minor repair. NIP and partners continue to advocate with Provincial Health Directors to identify and deploy potential staff who could be trained in minor refrigerator repair. UNICEF funded a retired technician work with the NIP technician to conduct cold chain maintenance at health facility level.</p>
<p>Major activities planned for upcoming period (mention significant changes / budget reallocations and associated changes in technical assistance⁶)</p>	<ul style="list-style-type: none"> ▪ Scale up training SOP in immunization supply chain and logistics to other health centers nationwide ▪ Regularly map newly newly assigned provincial and district managers and plan for capacity development with no delay ▪ Replace old cold chain equipment and apply for CCEOP ▪ Finalize SOP for Central vaccine Cold Store ▪ Scale up the use of 30DTR to the remaining health facility and plan to replace the health facilities reaching 3 years ▪ Conduct EVM assessment using newly developed tool 2.0
<p>Objective 3:</p>	
<p>Objective of the HSS grant (as per the HSS proposal or PSR)</p>	<p>Increase community awareness of, and demand for, immunization</p>
<p>Priority geographies / population groups or constraints to C&E addressed by the objective</p>	<p>Whole country</p>
<p>% activities conducted / budget utilisation</p>	
<p>Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption</p>	<p><u>The communication strategy for immunization:</u> There has been slow progress for moving forward the communication strategy for immunization due the delay in Gavi-HSS funding.</p> <p>The communication strategy outlined two different approaches for high risk community and whole county.</p> <p><i>For high risk communities,</i> where social media are not usually penetrating, the approach is depending mainly on capacity building of inter-personal communication skills, practices and attitude of service providers and the community support network; such as VHSG, CCWC; where they could organize communication sessions on immunization in the high-risk communities.</p> <p><i>For whole county,</i> the approach combined capacity building of inter-personal communication skills, practices and attitude of service providers and multi-channel social media such as Facebook, messenger, telegram etc.</p> <p>In 2019, it has been remarkable year that we could observe many health staff across the country posted through their Facebook and/ or Telegram sharing immunization activities and communication/information materials. That could benefit huge numbers of their Facebook and Telegram' s friends. However, that may not reach people living at the high-risk communities. Also, NIP and partners have developed and distribute different communication materials country wide.</p> <p>To address this gap, UNICEF and nine global partners developed a user-</p>

	<p>friendly and interactive training package to strengthen the Interpersonal Communication or IPC skills of frontline health workers on Immunization. Four Cambodia team members participated in the Training of Trainers of IPC-I.</p> <p>Health workers across countries work hard on improving health of children and families in their communities. They try to convince parents to have their children fully immunized, but despite their best efforts, some parents resist or refuse vaccination, or drop out after giving their children a few vaccines.</p> <p>Well-trained frontline workers make an enormous difference in promoting vaccine acceptance as they are better equipped to persuade caregivers and address their concerns, rumours or myths. However, frontline workers often lack interpersonal communication skills and confidence.</p>
<p>Major activities planned for upcoming period (mention significant changes / budget reallocations and associated changes in technical assistance⁶)</p>	<ul style="list-style-type: none"> ▪ Form a behaviour change communication/IEC group for immunization ▪ Recruit a full-time local expert in behaviour change communication ▪ Compilation and review of existing IEC materials on immunization and develop addition based on the need ▪ Development/ approval of Terms of Reference (ToR) for hiring creative agency ▪ Hiring / contracting of creative agency for development of new materials and revise the existing (if needed) ▪ Adaptation of IPC-I training package to fit Cambodia context ▪ Training of trainer (TOT) of IPC-I for national and provincial level ▪ Training health service providers (Health Center and Hospitals) ▪ Launching ▪ Implementation of communication action plan ▪ Monitoring and evaluation
Objective 4:	
Objective of the HSS grant (as per the HSS proposal or PSR)	Strengthen the surveillance of vaccine-preventable diseases
Priority geographies / population groups or constraints to C&E addressed by the objective	All 25 provinces
% activities conducted / budget utilisation	<p>In 2018, USD 1,172,409 was budgeted in AOP and at the end of year, USD 799,281 was spent and balance remained USD 373,128.</p> <p>In 2019, USD 2,263,500 was budgeted but spent USD 295,713 up to June (from balance funds)</p> <p>2018 utilization: 68%</p>
Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption	<p>Several activities were conducted by National immunization Programme in this JA period. However, some major activities are 1. VPD surveillance training for PHD/OD staff. 2. AEFI surveillance training for PHD/OD staff. 3. VPD surveillance training for provincial hospital staff. 4. Reinvestigation of measles cases as part of outbreak. 5. Investigation/re-investigation of other VPD and AEFI cases. 6. Three rounds of catch-up vaccination in 2018 and two rounds in 2019 including support to VHSG. 7. Conducted six-monthly workshop for VPD and AEFI surveillance and outbreaks</p>
Major activities planned for upcoming period	Similar activities will be carried out in 2019-2020

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 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.

(mention significant changes / budget reallocations and associated changes in technical assistance ⁷	
Objective 5:	
Objective of the HSS grant (as per the HSS proposal or PSR)	Strengthen management capacity to support EPI
Priority geographies / population groups or constraints to C&E addressed by the objective	All 25 provinces
% activities conducted / budget utilisation	Objective 5: In 2018, A total of USD 1,277,840 was budgeted and spent USD 817,038 and balance was USD 460,802 In 2019, USD 4,363,054 was budgeted and 118,785 (from balance funds) 2018 utilization: 64%
Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption	Several activities were conducted by National Immunization Programme in this JA period. However, some major activities are 1. Conduct regional training on Immunization in practice by regions. 2. Procure equipment for program management. 3. Accounting support for grant management (Payroll for accountant staff and accountant assistant). 4. Annual payroll of one Technical Assistant for Financial Management of Gavi-HSS Project. 5. Conduct quarterly supervision visits to assess management of immunization program. 6. Maintenance and repairing office equipment. 7. Conducted training on Planning Program Based Budgeting and HIS Web Base Record and Report and financial management. 8. Supportive supervision and monitoring for FMM (NMCHC and DBF) and HIS
Major activities planned for upcoming period (mention significant changes / budget reallocations and associated changes in technical assistance ⁸	Similar activities will be carried out in 2019-2020

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

⁸ When specifying Technical Assistance (TA) needs, do not include elements of resource requirements. These will be discussed in the context of the Targeted Country Assistance (TCA) planning. The TCA planning will be informed by the needs indicated in the JA. TA needs should however describe - to the extent known to date - the type of TA required (staff, consultants, training, etc.), the provider of TA (core/expanded partner) the quantity/duration required, modality (embedded; sub-national; coaching; etc.), and any timeframes/deadlines. JA teams are reminded to both look back (TA which was not completed/successful in the past) and forward (planned vaccine introductions, campaigns, major upcoming HSS activities, etc.) when specifying TA priorities for the coming year. The TA menu of support is available as reference guide.

In 2018, MOH received a total of USD 3,439,978 HSS grant and with the balance from 2017, a total of USD 4,943,250 was budgeted in 2018 Annual Operational Plan (AOP) and was available to implement the activities of all the objectives in 2018. At the end of 2018, balance was USD 2,343,583. In 2019, USD 11,095,335 was budgeted in AOP, however only balance from 2018 was available to implement few activities. This is because of approval process of Gavi HSS took long time. However, with the email approval from Gavi secretariat in April 2019, USD 1.2 million was used by the end of June 2019. Finally, in August 2019, Gavi Secretariat approved all the budget stipulated in Gavi Planning and Budget Template and transfer the funds. MOH started to implement the activities from September 2019.

Since 2014, Cambodia has been implementing high risk communities' outreach session where the list of 1832 villages were derived with specific definition from nation-wide assessment in 2013 through MR SIAs. This initiative has been regarded as best strategies to reach the unreached and provide services to vulnerable, ethnic minority, urban slum, hard to reach area, etc. NIP conducted four rounds of high risk communities' vaccination outreach sessions in 2018 and two rounds up to September/October 2019 and planned to conduct remaining two rounds from October/November to December 2019.

Results of four rounds of multi-antigens HRC outreach immunization services in 2018:

No	Name of province	BCG	Hep B birth dose	OPV3	IPV	Penta3	PCV3	MR0	MR1	JE	MR2	MR Extra
1	Banteay Meanchey	622	273	1235	1210	1232	1234	984	1579	1876	1550	93
2	Battambang	140	66	1661	778	1668	1668	270	1751	1125	1690	43
3	Kampong Cham	33	30	212	205	212	213	47	259	166	236	0
4	Kampong Chhnang	24	12	796	796	795	796	475	1028	1157	944	67
5	Kampong Speu	135	40	638	623	631	635	414	940	757	1096	7
6	Kampong Thom	202	34	363	238	351	369	227	418	204	356	56
7	Kampot	79	14	294	283	296	289	254	370	394	389	88
8	Kandal	112	62	335	290	334	334	299	440	405	498	26
9	Koh Kong	18	3	45	45	45	45	14	72	63	68	16
10	Kratie	254	8	537	457	520	490	384	663	442	656	45
11	Mondul Kiri	194	9	210	205	210	212	120	324	347	295	40
12	Phnom Penh	0	0	3397	3369	3405	3394	2677	4978	1883	6363	3529
13	Preah Vihear	102	12	109	90	107	112	89	172	175	141	10
14	Prey Veng	12	9	196	202	198	193	155	326	240	183	20
15	Pursat	299	217	711	343	675	711	394	676	659	572	363
16	Ratanakiri	243	69	790	246	785	786	226	724	725	690	764
17	Siemreap	383	164	692	480	693	692	536	921	868	838	200
18	Preah Sihanouk	16	4	52	28	55	48	58	93	177	113	11
19	Stung Treng	127	28	158	162	162	158	95	172	135	151	0
20	Svay Rieng	90	82	373	369	366	402	286	500	236	520	359
21	Takeo	134	78	391	400	351	392	350	703	962	799	0
22	Oddar Meanchey	1	0	192	141	193	189	123	249	195	289	7
23	Kep	50	17	112	107	111	114	112	126	128	119	14
24	Pailin	0	0	20	11	10	13	25	70	123	95	34
25	Tbong Khmum	11	11	63	58	58	58	9	50	50	26	0
Total		3281	1242	13582	11136	13463	13547	8623	17604	13492	18677	5792

Results of first round of multi-antigens HRC outreach immunization services in 2019:

No	Name of province	BCG	Hep B birth dose	OPV3	IPV	Penta3	PCV3	MR0	MR1	JE	MR2	MR Extra
1	Banteay Meanchey	125	61	260	260	256	264	45	408	1015	358	0
2	Battambang	5	3	492	468	490	489	198	471	1292	555	20
3	Kampong Cham	16	1	47	47	47	47	19	82	183	64	0
4	Kampong Chhnang	3	2	196	196	196	196	114	425	1851	445	43

Joint Appraisal (full JA)

5	Kampong Speu	22	9	145	144	147	146	137	343	1785	382	13
6	Kampong Thom	42	3	81	62	75	76	18	49	226	78	0
7	Kampot	22	2	86	88	86	87	65	87	133	94	15
8	Kandal	48	24	108	108	108	108	108	191	1257	158	43
9	Koh Kong	0	0	0	0	0	0	0	0	0	0	0
10	Kratie	55	8	105	97	98	82	75	196	443	830	230
11	Mondul Kiri	10 5	2	58	58	58	58	17	114	419	108	131
12	Phnom Penh	0	0	119 7	1187	1197	119 7	566	150 0	5007	225 4	158 4
13	Preah Vihear	31	0	25	1	25	25	12	52	149	44	0
14	Prey Veng	3	1	67	57	62	56	44	80	212	94	34
15	Pursat	82	74	177	177	175	187	139	225	858	212	466
16	Ratanakiri	79	30	169	169	169	169	65	136	450	160	781
17	Siemreap	18 2	98	308	308	308	309	92	173	1539	168	169
18	Preah Sihanouk	0	0	21	21	21	20	10	32	354	137	8
19	Stung Treng	37	15	65	65	65	65	25	50	77	61	57
20	Svay Rieng	27	25	48	39	48	48	75	105	129	112	27
21	Takeo	27	14	100	91	80	99	110	209	420	246	96
22	Oddar Meanchey	2	0	47	47	47	47	17	80	240	86	136
23	Kep	15	0	20	20	20	20	18	42	197	26	0
24	Pailin	0	0	22	23	22	22	25	62	496	83	207
25	Tbong Khmum	2	0	6	6	6	6	1	23	22	16	0
Total		93 0	372	385 0	3739	3806	382 3	1995	513 5	1875 4	677 1	406 0

2017 EPI review found that high risk communities are no more high risk, rather many non-high risk villages/communities became high risk and recommended to review the high risk communities. In 2018, NIP conducted desk review with PHD/OD and reduced high risk communities to 1750 villages/communities. Following the EPI review recommendations, with the support from WHO TCA, NIP conducted pilot study of service delivery assessment in four health centres of two ODs in two provinces. Pilot study was intended to properly conduct service assessment by using agreed upon format with indicators and local knowledge to identify high risk village/community and which village of HC catchment area will be provided immunization services through fixed site (at HC), routine outreach (through government funds) and high risk (through Gavi HSS fund). After successful piloting, dissemination and training workshop was conducted for NIP staff of all 25 provinces and 100 ODs from January to March 2019.

NIP planned to scale of this service delivery assessment along with other activities from April 2019, however because of delayed transfer of Gavi HSS grant trench, WHO mobilized fund to start implementing this service delivery and other activities and four provinces were identified and implementing from June 2019. As Gavi HSS fund is available from the end of August, NIP planned to implement service delivery assessment and some related activities from January 2020.

A lot of efforts were made in strengthening VPD surveillance in 2018 and 2019 including training and focused monitoring in low performing provinces and ODs. 1085 suspected measles cases were reported from 94 ODs out of 100 in 2018. A total 74 Acute Flaccid Paralysis (AFP) cases were reported from 20 provinces in 2018. Adequate investigation and responses were made for three confirmed measles cases and 22 pertussis cases reported in 2018. NIP prepared monthly bulletin and shared to all levels.

In 2019, due to training, instructions from MOH, a total of 1455 suspected measles cases were reported from 97 ODs of 25 provinces which exceeded the performances of last eight years. A total of 43 AFP cases were reported from 27 ODs of 15 provinces in 2019.

INDICATORS OF VPD/AEFI SURVEILLANCE	2018		2019 (January-September)	
	Target	REPORTED	Target	REPORTED
Measles, rubella and CRS surveillance				
Total number of suspected Measles cases reported	310	1085	322	1455
Total number of suspected cases confirmed as Measles by lab		3		325
Total number of suspected cases confirmed as Rubella by lab		3		25
Total number of province reported suspected Measles cases	25	25	25	25
Total number of OD reported suspected Measles cases	100	94	100	98
Proportion of provinces reporting more than two non-measles non-rubella cases per 100 000 population	≥ 80%	89%	≥ 80%	96%
Annual reporting rate of non-measles non-rubella cases at the national level (≥2 cases per 100 000 population)	≥ 2	7.1	≥ 2	7.6
Total number of suspected CRS case reported		21		26
Acute Flaccid Paralysis (AFP) surveillance				
Total number of AFP cases reported	42	74	44	43
Total number of provinces reported AFP cases	25	21	25	15
Annual reporting rate of non-polio AFP cases in children <15 years of age (Target > 1/100,000) at the national	≥ 1	1.8	≥ 1	0.9
NT/ND surveillance				
Total number of ND cases reported		423		163
Total number of province reported ND cases		22		7
Total number of cases classified as NT		14		20
JE/ME surveillance				
Total number of ME case reported		216		103
Total number of JE case confirmed by Lab		5%		0%
Pertussis surveillance				
Total number of suspected Bordetella Pertussis cases reported		115		91
Total number of confirmed Pertussis cases by laboratory		22		16
AEFI surveillance				
Total number of AEFI reported		32		24
Total number of province reported AEFI cases		13		11

Under the objective 4 of Gavi HSS grant, catch-up vaccination with involvement of VHSG is remarkable steps towards managing any VPD outbreaks, sustaining achieved immunization goals and achieving new goals along the line with Regional Committee Meeting resolution. Substantial numbers of children are usually vaccinated throughout the country who are missed to get vaccines in routine immunization fixed site or routine outreach services. Cambodia conducted three rounds of catch-up vaccination outreach session in 2018 and two rounds up to September/October 2019 and planned to conduct remaining two rounds before the end of year. Following table is the results of catch-up vaccination in 2018.

Results of three rounds of multi-antigens catch-up outreach immunization services in 2018:												
No	Name of province	BC G	Hep B birth dose	OPV 3	IPV	Penta 3	PCV 3	MR 0	MR1	JE	MR2	MR Extra
1	Banteay Meanchey	919	574	1726	1883	1726	1726	1206	2234	2671	2663	409
2	Battambang	296	22	2577	2612	2615	2619	1682	3057	2426	3047	825
3	Kampong Cham	844	440	2461	2451	2434	2401	1007	3378	1855	3772	0
4	Tbong Khmum	199	133	803	706	804	788	602	1000	943	1323	472
5	Kampong Chhnang	43	21	1453	1453	1453	1453	894	1903	1416	1336	732
6	Kampong Speu	671	380	1690	1674	1684	1678	1226	2936	2347	3337	21
7	Kampong Thom	611	294	1502	1376	1495	1548	1058	2250	933	2632	0
8	Kampot	361	47	1358	1352	1362	1377	1022	1751	1834	1316	1024
9	Kandal	1148	297	1991	1880	1984	1986	1684	2366	2378	2386	160
10	Kratie	139	35	470	438	468	485	354	525	380	791	9
11	Mondul Kiri	79	10	128	118	128	129	110	192	184	200	45
12	Phnom Penh	0	0	2006	1995	2006	2006	1643	2624	1159	3324.3	2789
13	Preah Vihear	339	217	495	389	476	499	357	562	527	417	26
14	Prey Veng	369	218	3584	3580	3584	3590	1955	3974	2799	3687	1127
15	Pursat	1087	687	1108	613	1252	1252	975	1068	841	1148	0
16	Ratanakiri	346	124	296	202	296	296	134	260	172	243	246
17	Siemreap	1108	491	1603	1460	1601	1606	1488	1863	2059	1850	1132
18	Preah Sihanouk	5	0	59	45	51	49	50	94	50	84	12
19	Stung Treng	150	63	156	155	155	155	109	178	155	174	0
20	Svay Rieng	812	634	1450	2349	2332	2332	1618	3135	2386	2743	653
21	Takeo	586	209	2487	2514	2533	2514	2506	3785	2573	4936	261
22	Oddar Meanchey	17	8	565	380	565	553	361	680	312	831	0
Total		10129	4904	29968	29625	31004	31042	22041	39815	30400	42240	9943

Under the objective five, wide varieties and multiple activities were conducted in programme management in 2018-2019 which improved capacity of human resources and strengthen system including governance. These also facilitated to improve coverage of all antigens in national immunization schedule.

5.2. Performance of vaccine support

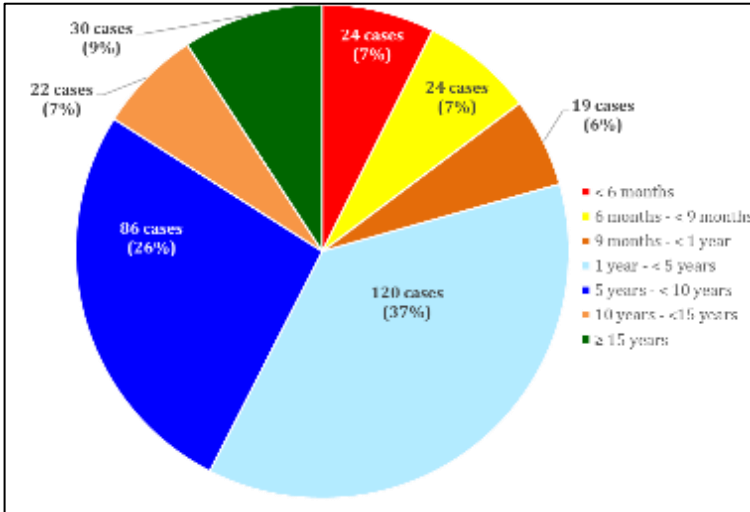
The Government of Cambodia paid the routine vaccines including the co-financing for 2019. The quantity of IPV, PCV-13, DPT-HepB-Hib allocated in the Gavi Decision Letter for 2020 might be low for the country to maintain sufficient stock all year round. We suggest that the country will communicate with Gavi Country Manager and UNICEF Supply Division to avoid stock out and interruption of immunization service especially for those new vaccines.

The country is trying to strengthen the vaccines and immunization supply chain management by scaling up the SOP training to health staff at the service delivery points countrywide, conduct post-training follow up to assure that the responsible. In addition, the managers from central, provincial and district level will have regular monitoring to each health facility with vaccine storage to assess the capacity gap and take corrective actions timely to reduce vaccine wastage rate to a minimum level.

In spite of the report of imported or import-related cases in 2016 (56 cases), and 2017 (10 cases), Cambodia has successfully sustained measles elimination status through aggressive outbreak investigation and small-scale targeted immunization response, and subnational and nation-wide SIAs were conducted in 2016 and 2017 respectively. Cambodia reported 325 laboratory confirm and eight epidemiologically linked measles cases from 159 HCs of 73 ODs in 24 provinces as of 7 October 2019.

The most cases were reported from health facilities/hospitals and few cases were reported from communities, assuming that maybe under reporting of suspected measles cases from the community. The health facilities, hospitals and private clinics are seemed source of nosocomial transmission of measles

Age distribution of the reported confirmed measles cases from 1 January to 7 October 2019:

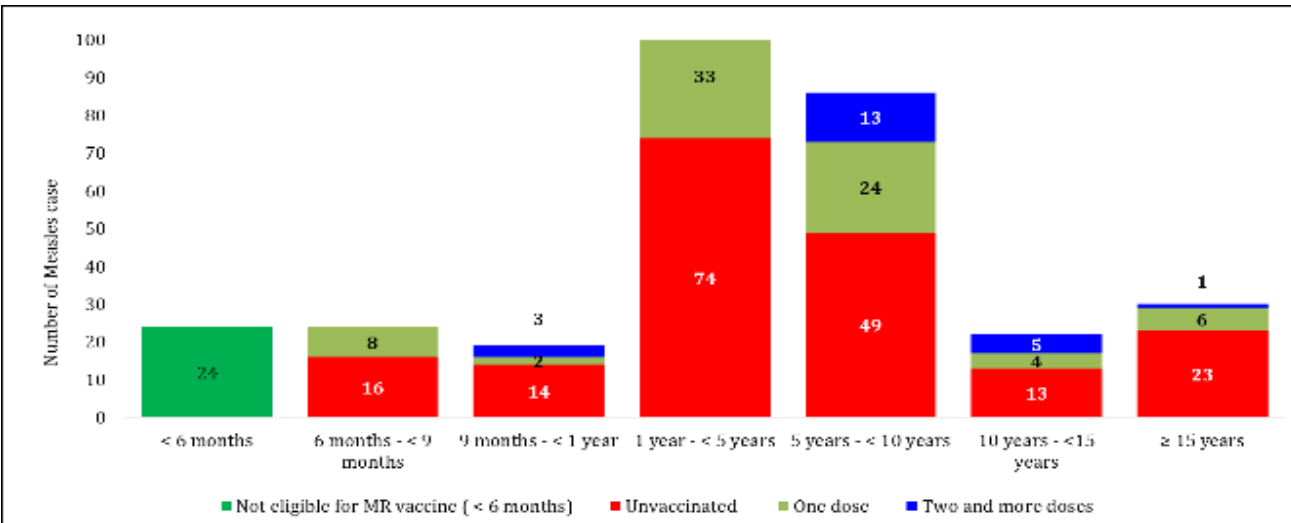


Age group	No of Measles case	Percentage
< 6 months	24	7%
6 months - < 9 months	24	7%
9 months - < 1 year	19	6%
1 year - < 5 years	120	37%
5 years - < 10 years	86	26%
10 years - <15 years	22	7%
≥ 15 years	30	9%
Total	325	100%

Regional Reference Laboratory of Hong Kong identified circulation of B3 and D8 genotype. The phylogenetic analysis and epidemiologically surveillance data giving an interpretation that the transmission of D8 (a) and D8 (c) lineage has been interrupted, B3 and D8 (b) is still circulating in some places. A new D8 (d) lineage is detected on June 2019 in Kampong Speu OD, Kampong Speu province.

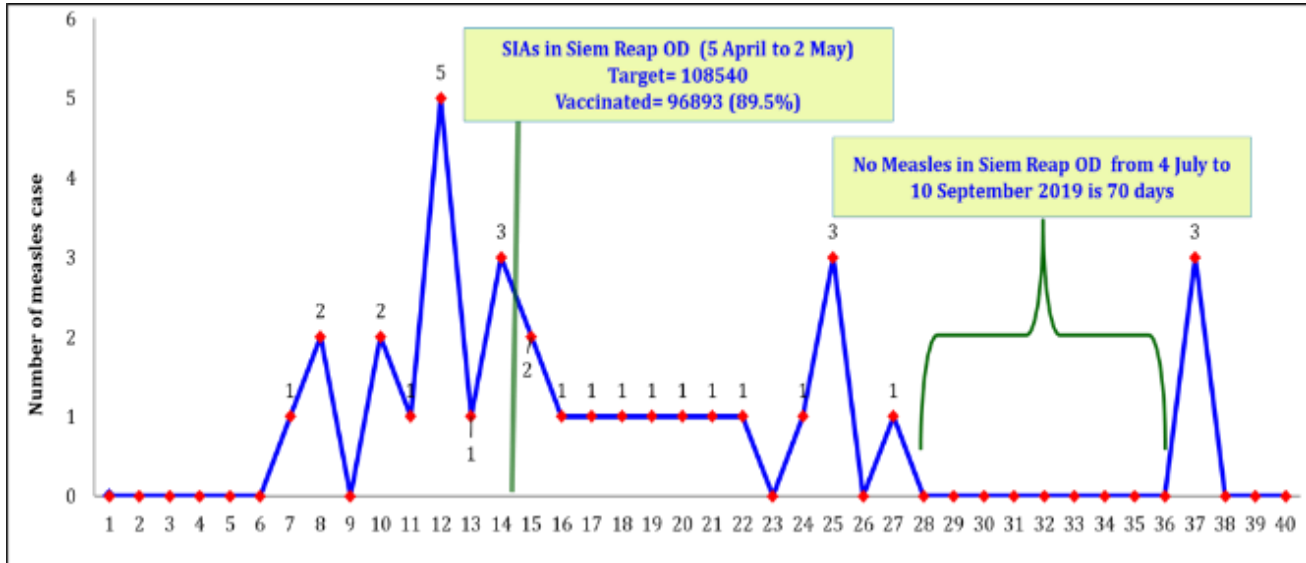
MOH also issued a letter in March and September 2019 to all the provinces and hospitals regarding measles outbreak, response, infection prevention and control (IPC) and to strengthen the surveillance system. Surveillance activities were also strengthened immediately.

Immunization status of measles cases by age group from 1 January to 7 October 2019:



NIP, in collaboration with the hospital department of MOH has conducted infection prevention and control meeting where director/senior officials of 7 major hospitals' have participated. Then onsite training was conducted in six major hospitals immediately after this meeting. This training has included the Kantha Bopha hospitals which have reported most of the confirmed measles cases in 2019.

Epi-curve of reported confirmed measles cases in Siem Reap OD from 1 January to 7 October 2019



In March 2019, there were sudden increase of laboratory confirmed measles cases especially in Siem Reap OD of Siem Reap province. NIP and WHO put all efforts to stop the transmission of virus. Beyond local immunization response in case's village or villages in HC catchment, with the support from WHO and MRI, NIP conducted OD wide SIAs targeting children aged 6 months to 15 years in Siem Reap OD. Following is the results of MR SIAs in Siem Reap. It is proved that this SIAs was able to break the transmission of virus in Siem Reap OD.

No	Name of Health Center	Target 6 months - < 15 years	Number children vaccinated	
			#	%
1	Sra Gne_HC	2538	1953	76.9
2	Toek Vil_HC	3906	3451	88.4
3	Krabei Riel_HC	2527	2233	88.4
4	Sambour_HC	3009	2620	87.1
5	Po Mean Chey_HC	6416	4292	66.9
6	Kouk Chak_HC	9357	7907	84.5
7	Chong Khnies_HC	2147	1503	70.0
8	Nokorthom_HC	2677	2386	89.1
9	Siemreap_HC	13077	9551	73.0
10	Mondul I_HC	16573	13331	80.4
11	Khun Ream_HC	2423	2289	94.5
12	Banteay Srey_HC	2927	2810	96.0
13	Preah Dak_HC	2632	2437	92.6
14	Tbeng_HC	2687	2780	103.5
15	Rumchek_HC	1057	981	92.8
16	Ron Ta Eak_HC	2416	2277	94.2
17	Chob Ta trav_HC	1444	1356	93.9
18	Peak Sneng_HC	1879	2083	110.9
19	Svaychek_HC	2172	2213	101.9
20	Angkor Thom_HC	3198	3212	100.5
21	Balang_HC	2333	2270	97.3
22	Kantrang_HC	3055	3055	100.0
23	Tra Peang Thom_HC	2724	2986	109.6
24	Mean Chey_HC	3055	3109	101.8

25	Prasat Bakorng_HC	2741	3247	118.5
26	Bakong_HC	2433	3274	134.5
27	Kandek_HC	4792	4770	99.5
28	Ampil_HC	2346	2517	107.3
Total		108,540	96,893	89.3

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

Cambodia is planning to apply for Gavi CCEOP support in 2020 with a total amount up to \$2,060,014. Among the total, it is expected that US\$ 1,648,011 (Gavi CCEOP) and country joint investment \$412,002. Ministry of Health communicated with Gavi and agreed to set aside \$412,002 from the additional Gavi HSS fund for the country joint investment.

UNICEF consultant conducted a short first visit (1 week) to Cambodia in August 2019. The first visit focused on Explain the process of CCEOP application, describe the different principle and annex documents, define with the NIP on the process step with calendar, examine the current inventory status, define gaps and check if it can support gap analysis, define the process and deadline for NIP to collect the missing data.

The follow up second visit will be done when the country is advanced in the preparation of the application documents. The timing and duration of the second visit will depend on the progress made as agreed during the first visit and the timing for the application will either in January or May 2020 depending on the progress.

5.4. Financial management performance

I. Gavi-HSS: AOP 2018 and Budget follow up per objectives from January to December 2018

Objective	Budget	Expenditures	Budget Balance	%
<u>Objective 1:</u>				
Increase Immunization Coverage in High Risk Communities	1,171,570	841,281	330,289	72%
<u>Objective 2:</u>				
Strengthening cold chain system through improved equipment and management	967,772	56,770	911,002	6%
<u>Objective 3:</u>				
Increase community awareness of, and demand for, Immunization	410,388	142,026	268,362	35%
<u>Objective 4:</u>				
Strengthen the surveillance of vaccine-preventable diseases	1,172,409	799,281	373,128	68%
<u>Objective 5:</u>				
Strengthen management capacity	1,277,840	817,038	460,802	64%
Total	4,999,979	2,656,396	2,343,583	53%

II. Gavi-HPV: AOP 2018 and Budget follow up per objectives from January to December 2018					
<i>Objective</i>	<i>Budget</i>	<i>Expenditures</i>	<i>Budget Balance</i>	<i>%</i>	
<u>Objective 6:</u>					
HPV Demonstration (Grant number: 1617-KHM-24a-Y)	24,000	21,658	2,342	90%	
Total	24,000	21,658	2,342	90%	
III. Gavi-MR SIA: AOP 2018 and Budget follow up per objectives from January to December 2018					
<i>Objective</i>	<i>Budget</i>	<i>Expenditures</i>	<i>Budget Balance</i>	<i>%</i>	
Objective Gavi-MR SIA(Grant number: 17-KHM-34a-X/17-KHM-35a-Y)	64,396	-	64,396	0%	
Total	64,396	-	64,396	0%	

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

NA

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

WHO:

Two WHO staff members, two longer term national and international consultants and two short term international consultants supported national immunization programme to implement the activities of HSS2 in this JA periods. Moreover, WHO staff member worked together with NIP for completing planning and budget template for 2019-20. Findings from audit report was reviewed together with NIP, supported to prepare responses on queries including analysis of findings and recommendations to plan for the implementation under NIP's AOP and WHO TCA. WHO staff members and both national and international consultants actively participated in monitoring high risk communities and catch-up vaccination outreach sessions.

Under TCA 2018-2019, WHO continued to support NIP in strengthening routine immunization system and programme towards increasing coverages and reducing inequities. Four pilot studies were ended in January 2019 and WHO supported to develop implementation guidelines, job aids and training materials of

- service delivery assessment
- development of session plan
- data accuracy check/audit,
- fixation of local denominator for using for all purposes of immunization programme

Moreover, as per other recommendations of 2017 comprehensive EPI review and missed opportunity workshop, with above activities WHO supported to develop implementation guidelines, job aids and training materials of

- development of microplan and workplan at HC and OD
- development of HC catchment area map
- development of monitoring chart

NIP and in country partners (WHO and UNICEF) planned to scale up the four pilot studies and other related activities in 2019, however there was no funds available from Gavi HSS and TCA. WHO supported

to conduct national workshop for strengthening routine immunization and vaccine preventable diseases surveillance system for the NIP staff of all 25 provinces and 100 ODs in three batches from the end of January to March 2019. Before that WHO supported to conduct national ToT for NIP central level staff.

As Gavi funds delayed, WHO has been supporting to implement the following activities in four provinces.

- Service delivery assessment and use
- Development of vaccination session plan as per service delivery assessment and use
- Review denominator used for immunization programme at local level and use of it for all purposes of immunization programme.
- Review accuracy of routine immunization coverage data by using structured data verification template
- Development and use of micoplan at HC
- Development and use of HC catchment area map
- Development and use of monitoring chart at HC

NIP planned to implement above activities to remaining 21 provinces by using Gavi HSS grant. It is believed that if NIP at PHD and OD ensure quality implementation of above activities then service delivery with session plan will be better organized and will identify actual high-risk communities which is stipulated in Gavi HSS proposal.

Moreover, WHO has been supporting to conduct following activities in same four provinces

- HC staff meeting at OD
- VHSG meeting at HC
- PHD/OD supervision

WHO staff members and consultants are conducting supervision and monitoring of implementation of above activities in four provinces.

With the TCA funds, WHO also supported to develop and print banner for outreach services at village under the HC catchment area. This has been well appreciated by all levels of NIP staff. At the same time, support made to develop and print hand fan with immunization schedule for distribution to working parents in factories.

Beyond TCA funds WHO also supported to develop and print following IEC materials in 2019

- Immunization schedule display through LED at 10 important locations in Phnom Penh
- Hepatitis B birth dose brochure to distribute to mother antenatal care and during immunization session
- Immunization video clips airing on national TV
- Development of radio spot on immunization (planned to airing too)

Banner for outreach services:



It is believed that above IEC materials and related activities will have big impact on awareness and increasing demand in general people, working parents in urban areas and international border provinces.

WHO staff members and consultants worked closely with NIP to strengthen the VPD surveillance system including increase detection and reporting of VPD cases. Cambodia reported three and 325 lab confirmed measles cases in 2018 and 2019 (7 October) respectively. WHO has been supporting NIP for responding to ongoing measles outbreak. Following are the support WHO staff member and consultants relentlessly supported NIP in VPD surveillance in this JA period.

- Re-investigation (2nd investigation) of lab confirmed measles cases and local outbreak immunization responses in case's village or neighboring villages or villages under HC catchment area (2018-19)
- Training on Congenital Rubella Syndrome (CRS) Surveillance to doctors and surveillance staff of Angkor Hospital for Children (AHC) - 2019
- Development of training materials and conduct of three -day long training workshop on VPD and AEFI surveillance, outbreak preparedness and response in three batches for PHD (new) and provincial hospital staff in 2019
- Training on VPDs surveillance for national hospitals' staff in November 2018
- Development training materials and conduct of three -day long on AEFI for PHD and OD staff in December 2018
- Onsite training on in seven major hospitals for infection prevention and control in 2019
- Analysis data and conduct measles outbreak risk assessment four times in 2019 and risk assessment in polio in 2019
- Case investigation and analysis of pertussis cases 2018-2019
- conduct investigation of three serious adverse events following immunization (AEFI) cases-2019
- Development of bulletin for VPD surveillance 2018-2019
- Conducted National Verification Committee for measles elimination and prepared its report in 2019
- Conducted National Certification Committee for polio eradication and prepared its report in 2019

PERFORMANCE INDICATORS OF VPD SURVEILLANCE	INDICATORS REPORTED	RECOMMENDED ACTION
ACUTE FLACCID PARALYSIS		
Total number of AFP cases reported	49	42
Total number of provinces reported AFP cases	25	15
Total number of OD reported AFP cases	100	27
Annual reporting rate of acute flaccid AFP cases in children <15 years of age (Target > 1/100,000) at the national	± 1	0.9
Proportion of reported AFP cases with 2 specimens collected < 14 days since onset	≥ 80%	100%
Proportion of reported AFP cases investigated < 48 hours of report	≥ 80%	90%
NEONATAL TETANUS (NT) AND NEONATAL DEATH (ND)		
Total number of ND cases reported	163	163
Total number of cases classified as NT	7	7
Total number of ND cases investigated	32	32
Total number of provinces reported ND cases	25	20
Total number of OD reported ND cases	100	71
JAPANESE ENCEPHALITIS (JE)		
Total number of ME case reported	100	100
Total number of CSF sample collected	100%	85 (100%)
Total number of first serum sample collected	100%	96 (99%)
Total number of second serum sample collected	100%	93 (90%)
Total number of JE case confirmed by Lab	0	0
Total number of JE sentinel surveillance site reported ME case	6	3
BORDETELLA PERTUSSIS		
Total number of suspected Bordetella Pertussis cases reported	88	88
Total number of confirmed Pertussis cases by laboratory	16	16
Total number of province reported suspected Pertussis cases	25	17
Total number of OD reported suspected Pertussis cases	100	42
DIPHTHERIA		
Total number of suspected Diphtheria cases reported	0	0
Total number of positive Diphtheria cases confirmed by laboratory	0	0
Total number of province reported suspected Diphtheria cases	25	04
ADVERSE EVENTS FOLLOWING IMMUNIZATION 'AEFI'		
Total number of AEFI reported	24	24
Minor AEFI	19	19
Serious AEFI	5	5
Total number of province reported AEFI cases	25	11
Total number of OD reported AEFI cases	100	13

Due to these remarkable supports, there has been increased case detection and report of VPD cases and improvement of surveillance indicators in this JA period.

WHO supported to conduct consultative workshop on development of HPV vaccine proposal and subsequently supported to develop HPV vaccine proposal for submission to Gavi secretariat. This application has already been approved and WHO will continue to support in planning, preparation of HPV vaccine introduction nationally from the end of 2020.

WHO supported NIP for data entry, cleaning of VPD surveillance data. Staff members and consultants regularly conducted data analysis for routine immunization programme and VPDs surveillance weekly/monthly basis. Moreover, WHO staff and consultants conducted analysis and identified low performance provinces/ODs and has also been conducting focused supervision and monitoring including on job training in low performing provinces/ODs/HCs for routine immunization and VPD surveillance.

UNICEF:

Provide progress on TCA 2019

- Trained newly assigned managers: UNICEF support to conduct a 3-day training in immunization supply chain management for a total 12 newly assigned PHD and OD managers including the plan for post-training follow up at their own work station.

- Training in SOP for Immunization supply chain management: After NIP conducted TOT in SOP for immunization supply chain and logistics management for the PHD and OD level in December 2018, UNICEF provided support to train health centre level in five north-east provinces using USAID/UNICEF fund. A total 109 health centres (about 9% of health centers trained) and quarterly follow up to assure their implementation.
- EVM assessment: NIP decided to conduct next EVM assessment using the new tablet-based tool EVM 2.0. UNICEF Regional Office provided technical support to introduce the tool NIP. The tool required that NIP to develop capacity by practicing 12 self-assessments (learning by doing) at the health facilities before each of them could be qualified as an assessor to use the tablet-based tool EVM 2.0.
- Develop SOP for primary vaccine store: UNICEF with NIP provided technical support to Central Medical Store to develop SOP for primary vaccine store. A total 23 SOP planned to be developed and 12 of them were already developed in a participatory approach.
- Increase coverage with default tracking in 12 selected health facilities:
In 5 north-east provinces, UNICEF staff stationed at the Zone Office provide technical support to reduce dropout rates in 12 selected health centres with highest drop-out rate for Penta1-3 based on 2018 data. Those 12 health centres were selected among the 53 health centres with Penta1-3 above 10%. The drop-out rate for Penta1-3 reduced from 21% to 9% comparing the same nine months' period (Jan-Sep 2018 and 2019). The process was documented for future strategy.
- Increase coverage with Behaviours change/ communication intervention:
In 5 north-east provinces, UNICEF staff stationed at the Zone Office provide technical support to six (6) selected health centres with low immunization coverage. Those were the areas with high seasonal migration, ethnics population. The activities required that the health staff conduct regular screening of the health centre register to identify drop-out children and start communicating with village health support group (VHSG) who will communicate with the parents. In addition, the VHSG organized parent sessions in their community to improve awareness and promote demand. As result, Penta1-3 coverage increased from 45% to 52% comparing the same nine months' period (Jan-Sep 2018 and 2019). The process was documented for future strategy.
- Temperature monitoring for vaccine storage:
In 5 north-east provinces, UNICEF staff stationed at the Zone Office provide technical support to collect and analyse the Temperature monitoring for vaccine storage by collecting the data from Fridge Tag (30DTR) for the purpose to understand the risk of vaccines exposure to unwanted temperature and to inform the technician to timely repair. Between Jan-Aug 2019, a total 436 Fridge Tags data recording 25,724 days were collected. The temperature data was analysed showing 85 freeze alarms and 547 upper alarms.

6. UPDATE OF FINDINGS FROM PREVIOUS JOINT APPRAISAL

Prioritised actions from previous Joint Appraisal	Current status
1. Implementation of Gavi HSS grant's funded activities including identified activities for additional funds and other Gavi supported activities; Use new budget template including for reallocation	Completed. Multiple discussions held and back-forth comments from Gavi Secretariat and took many months to complete the Planning and Budget template for 2019-20 with additional funds, some parts of PBF
2. Identify priority populations based on combination of HRC, number of unimmunized, others. Denominator, data management and quality improvement plan	Ongoing. Pilot studies ended, national workshop for scale up already conducted, Implemented four activities and other related activities in four provinces from June 2019. As Gavi HSS budget is available from August, these activities will be implemented in remaining provinces from 2020
3. Preparedness and response to VPDs outbreak	Ongoing. A refreshers training was conducted in 2019 on measles/polio outbreak preparedness and response. A total of 325 lab confirmed measles cases were reported by 4 October and country is investigating these cases including conducting local

	immunization responses. 16 pertussis cases were also investigated by 7 October
4. Immunization Supply Chain	Ongoing. Country is implementing recommended activities in improvement plan
5. Development of key documents for national immunization programme	Country is not yet started writing national health strategic plan. Therefore, CMYP was deferred to start and it will be in 2020.
6. Sub-national level coverage monitoring	Ongoing. NIP, WHO and UNICEF regularly conducting supportive supervision and monitoring including more focus in low performing provinces/ODs/HC
Additional significant IRC / HLRP recommendations (if applicable)	Current status

6. 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:

In last one year lots of meeting, discussion and communication took place for planning and budgeting of the activities in 2019-2020 by using Gavi HSS grant including activities for the additional funds proposed and given by the Gavi and portion of PBF. Agreed upon activities were planned and budgeted in planning and budget template and approved. Country team (MOH, WHO, UNICEF) will work together to implement the activities as stipulated.

During the week-long JA activities/Gavi staff mission and during several meetings of review and JA report writing by the country team, discussion took place in all areas of NIP including findings and recommendations of Gavi Audit:

- It has been discussed well of an opportunity to include expanded partners. MOH reiterated that WHO and UNICEF have been supporting NIP very well since establishment with their full capacity of expertise. There is no need to have expanded partners, however if further assistance is required, the MOH will look into it.
- There was discussion on transition of Gavi support. There are existing issues and challenges which NIP, WHO and UNICEF has been working to overcome, Gavi 5.0 strategies will be shared in 2020 including eligibility criteria (e.g GNI threshold), therefore it has been concluded that there is no need to initiate any discussion on transition until clear Gavi strategies with eligibility criteria shared with countries.
- The two years budget (2019-2020) for Gavi HSS grant has already been approved, the cash requirement for the period up to June 2020 will be submitted to Gavi secretariat by the end of October 2019.
- For the Gavi HSS grant 2019-2020, MoH will submit a “No cost extension” request for one year to Gavi.
- MoH and Gavi agreed that the catch-up activities is the best intervention to interrupt the measles outbreak.
- UNICEF is the partner who is providing the procurement services of cold chain equipment, spare parts, goods and services of the Gavi HSS project
- Gavi secretariat informed that Gavi have some extra fund to support CDHS 2020 if needed. MoH will explore the partnership’s feasibility accordingly.
- Laboratory surveillance is very important. National measles and JE lab of NIPH has been supporting NIP since long with the support from WHO. WHO funds shrink but will try to continue to provide reagents. However, there is need to procure a ELISA and reader machine and provide 15K annually for their operational cost (consuming items, training cost, field supervision, etc). Needs to communicate with Gavi secretariat to include NIPH as part of Gavi health system strengthening grant.

Country team further discuss on Gavi TCA and WHO and UNICEF will conduct following activities in next 2020-2021 TCA

<p>UNICEF will provide technical support to conduct the following TCA activities in 2020:</p> <ul style="list-style-type: none"> • Finalize SOP for primary vaccine store • Application for CCEOP • Conduct EVM assessment, development of EVM improvement plan, progress tracking • Implement of communication strategy for immunization • Scale up SOP training to the health centre level and follow up • Increase immunization coverage with default tracking in selected health facilities with high drop-out rates in 5 north-east provinces • Increase immunization coverage with behaviours change/ communication intervention in 5 north-east provinces.
<p>WHO TCA activities 2020:</p> <ul style="list-style-type: none"> • Support NIP to plan, implement and monitoring of activities under Gavi HSS2 grant • Supportive supervision and monitoring of fixed site, routine outreach, catch-up and high-risk communities outreach session • Support in strengthening routine immunization system by planning and conducting following activities in remaining 21 provinces <ul style="list-style-type: none"> ○ Review the current service delivery strategies focusing on revision of status of high risk communities ○ Conduct review and development of vaccination session plan ○ Review denominator used for immunization programme at local level for improving data quality ○ Review accuracy of routine immunization coverage data including vaccine utilization ○ Other activities such as work plan development, development of catchment area map, updating monitoring chart, etc. • Support to conduct activities towards strengthening VPD and AEFI surveillance • Conduct detailed case investigation of VPDs outbreak and conduct immunization responses • Support in immunization and VPD data management and conduct data analysis • Support to develop guidelines/SOPs on data management for building capacity at the sub-national level • Support in disseminate the results of assessment conducted for international border and urban provinces (conducted in November 2019) and organize workshop to develop action plan and start implementing activities • Support NIP for activities related to ISM and communication especially continuous support for demand generation both at national and community level • Support in preparation of development of application for HSS3

Key finding / Action 1	Implementation of Gavi HSS grant and PBF's funded activities
Current response	Good achievements have been made in last three years though delayed transfer of funds halted progress in expenditures. Also current grant was expanded in terms of financing in August 2019.
Agreed country actions	Adequate preparation for implementation and monitoring of Gavi HSS grant's supported activities
Expected outputs / results	Prioritized planned activities in AOP are implemented
Associated timeline	2020
Required resources / support and TA	WHO and UNICEF will provide support in prioritizing activities, adequate preparation, implementation and monitoring of activities
Key finding / Action 2	Routine immunization system and programme strengthening by implementing immunization services delivery assessment, development of immunization sessions plans at HC, fixation of denominator used at local level, immunization data accuracy check/audit, development of microplan, development of HC catchment area map, etc.
Current response	Inadequacy of immunization service delivery, not need based session plan, data inaccuracy, and use of different denominator at HC level. Pilot studies completed in January 2019 and implemented in four provinces
Agreed country actions	Implementing immunization services delivery assessment, development of

	immunization sessions plans at HC, fixation of denominator used at local level, immunization data accuracy check/audit, development of microplan, development of HC catchment area map, etc in remaining 21 provinces
Expected outputs / results	All 25 provinces implemented routine immunization system strengthening activities, well organized service delivery
Associated timeline	2020
Required resources / support and TA	WHO and UNICEF will provide technical assistance to implement national scale-up.
Key finding / Action 3	Vaccine Preventable Diseases (VPDs) surveillance, AEFI surveillance preparedness and response to VPDs outbreak
Current response	325 laboratory confirmed measles cases, 27 laboratory confirmed rubella cases and 16 laboratory confirmed pertussis cases were reported by first week of 2019. Country is conducting immediate re-investigation of measles cases though struggling as number is too high. Responses are conducting for other VPDs and AEFI cases
Agreed country actions	Active response activities for import/import related measles cases and other VPD cases
Expected outputs / results	Well organized responses conducted
Associated timeline	2020
Required resources / support and TA	WHO will provide technical assistance for VPD surveillance, AEFI surveillance and preparedness and responses to VPD outbreaks
Key finding / Action 4	Immunization Supply Chain
Current response	Remarkable progress has been made in supply change management including procurement of equipment, implementation of EVM improvement plan.
Agreed country actions	Conduct of EVM assessment and development of CCOP application, procurement of cold chain equipment and implementation of activities of improvement plan
Expected outputs / results	Well functioned immunization supply chain system
Associated timeline	2020
Required resources / support and TA	WHO and UNICEF will provide technical assistance to supply chain management
Key finding / Action 5	Data management including analysis, quality improvement, SOP development
Current response	Country developed immunization data quality improvement plan including developed format to check/audit data accuracy. Regular data entry, cleaning, analysis and development of bulletin are being conducting including feedback to sub-national levels and other related institutions/departments/programmes
Agreed country actions	
Expected outputs / results	Improved data management with quality
Associated timeline	2020
Required resources / support and TA	WHO and UNICEF will provide technical assistance to data management and its quality improvement
Key finding / Action 6	Monitoring of sub-national level coverage
Current response	With central NIP and PHD NIP staff, WHO and UNICEF staff has been extensively monitoring the immunization coverage and surveillance performances at sub-national levels
Agreed country actions	Strengthen supportive supervision and monitoring of immunization coverage and VPD surveillance
Expected outputs / results	Low performing HCs and ODs identified and extensively monitored
Associated timeline	2020
Required resources / support and TA	WHO and UNICEF will provide support and actively monitor immunization coverage and VPD surveillance at sub-national levels
Key finding / Action 7	Inequity and low immunization coverage in international border and urban areas
Current response	With the direct support from WHO, NIP is conducting assessment of immunization programme in international border and urban provinces.
Agreed country actions	Findings will be disseminated with all related provinces and ODs, will be organizing workshop to develop comprehensive action plan and start implementing activities

Joint Appraisal (full JA)

	from 2020
Expected outputs / results	Reduced inequity in international border province and urban areas and increased coverage
Associated timeline	2020
Required resources / support and TA	WHO and UNICEF will provide technical assistance

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.

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

Mr Ork Vichit, NIP manager presented draft Joint Appraisal report in Sub-TWGH of MCH on 25 October 2019. Mr Ork Vichit also presented draft Joint Appraisal report to TWGH (ICC) on December 2019 and meeting minutes with endorsement will be shared in December 2019.

8. ANNEX: Compliance with Gavi reporting requirements

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

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

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