Joint Appraisal report 2018

Country	Vietnam
Full JA or JA update	☑ **full JA**☐ JA update
Date and location of Joint Appraisal meeting	Oct, 2018
Participants / affiliation[1]	Dr. Véronique Maeva Fages, GAVI Ms. Anna Standertskjold, GAVI Dr Nihal Singh, WHO Vietnam Makiko Iijima, WHO Vietnam Nguyen Huy Du, UNICEF Vietnam Vu Minh Huong, PATH Duong Thi Hong Nguyen Van Cuong Dang Thi Thanh Huyen Hoang Hong Mai Nguyen Lien Huong Nguyen Dac Trung
Reporting period	2017
Fiscal period[2]	*January to December*
Comprehensive Multi Year Plan (cMYP) duration	2016 to 2020
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** x ☐ No ☐ N/A ☐
HSS renewal request	Yes ☐ No ☐ **N/A** x ☐
CCEOP renewal request	**Yes** x ☐ No ☐ N/A ☐

Observations on vaccine request

Population	94,085,859
Birth cohort	1,667,227
Vaccine	**DPT-HepB-Hib**
Population in the target age cohort	1,667,227
Target population to be vaccinated (first dose)	1,629,480
Target population to be vaccinated (last dose)	1,574,238
Implied coverage rate	94.4
Last available WUENIC coverage rate	94.4
Last available admin coverage rate	94.4
Wastage rate	5%
Buffer	1,378,100
Stock reported	1,378,100

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

[2] If the country reporting period deviates from the fiscal period, please provide a short explanation.

In 2017, Vietnam uses the combined vaccine DPT-VGB-Hib produced by Berna Biotech, Korea. The quantity of vaccines supported by GAVI and funded by the government budget met the needs for routine immunization for children under 1 year old. Vaccine wastage rate in all regions, including hard-to-reach areas, was approximately 5% of single dose vial with VVM. The vaccine stock in 2018 is consistent with the annual buffer requirement (about 4-5 months). However, Vietnam is going to switch to ComBE Five vaccine produced by India in 2018. Vietnam should conduct preparations for the switch, including communication, guidance for health workers on use the new vaccine, and vaccination procurement may take longer than that planned.

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

Indicative interest to introduce new vaccines or request HSS support from Gavi	Programme	Expected application year	Expected introduction year
	Rota vaccine	2019	2021
	CCOP2	2019	2021

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

In July 31st 2017, the Government issued Decision No. 1125/QD-TTg on approving "The Health-Population Target Program period of 2016-2020" that including EPI. Therein, EPI is continued to be one of 8 prioritized health projects of The Health-Population Target Program period of 2016-2020. However, a new mechanism of funding was applied to all health programs, including EPI. Regarding to financial resource for EPI, the government assigned: Central government secures fund for procurement of vaccine and immunization materials, provincial people committee allocate budget for operating EPI activities.

Since August 2018, IPV was introduced into routine immunization to children aged 5 months in order to increase immunity against polio virus type 2. Vietnam received IPV supported by GAVI in June 2018. IPV was implemented in small scale in 4 provinces from August to September 2018. MoH allows nationwide implementation since Sept-Oct 2018.

In Vietnam, IPV introduction is an important part of the polio eradication plan because after the switch from tOPV to bOPV in May 2016. IPV is to protect the population against all types of polio virus, including type 2. So, in current situation of Vietnam, this means that over two birth cohorts have not been protected against poliovirus type 2 as IPV vaccine was only introduced since September 2018. As part of mitigating activities, WHO recommends to the countries with delayed introduction of IPV, including Viet Nam, an IPV catch-up campaign should be conducted to those eligible children who missed chance of vaccination in the period from May 2016 to August 2018. Therefore, it is critical to adjust the quantity of IPV vaccine for 2016, 2017 and 2018 to make sure that these eligible children will be protected against poliovirus type 2.

In a serum study conducted by EPI and WHO in 2018, there is immunization gap against polio virus type 2 among children born after the OPV switch. Rate of serum positive against polio virus type 2 was as low as 12% in the first serum samples, and this rate decreased to 2.9 % after 3-4 months (second serum samples).

1. Measles - rubella elimination in 2023: (i) MCV1 is annually maintained at high coverage >95%, but MCV2 did not reach 95% nationwide. Remaining districts with low coverage of MCV1 / MCV2. (ii) Susceptive to measles are cumulated among young children 1-4 years old who born after 2014-2015 MR SIA. Conducting SIA for children aged 1-4 years old in selected high risk areas is for actively prevent potential risks of meals outbreak. Vietnam requests GAVI to support special difficult districts to conduct this SIA in 2019. (iii) Communication on measles-rubella vaccination for young adults (students, workers, etc) to encourage them to be vaccinated through private sector.
2. Increase immunization coverage rate of 95% at district level, aim to communal level: This is challenging target. Received GAVI support for several localities, however this support need to be maintained in coming years. HSS finished so it is necessary to continue the support of international organizations to

[3] Providing this information does not constitute any obligation for either the country or Gavi, it merely serves for information purposes.

remote and difficult areas, areas with ethnic minorities. EPI will prioritize areas for intervention based on vaccine coverage in 2018. Central government locate budget for vaccination incentives in the most difficult mountainous provinces. The most hard-to-reach districts with low performance will be prioritized and supported within transition plan funded by GAVI in 2019.

3. Opportunities for introducing new vaccine into EPI in 2021-2025: Vietnam will cover total cost for pentavalent vaccine. Vietnam proposes GAVI to continue IPV vaccine support following co-financing mechanism in order to create additional opportunities to get government budget for introduction of new vaccine, at least one of three kinds of new vaccines as rota, pneumococcal, HPV vaccine by roadmap to be introduced in EPI. After GAVI transition period, Vietnam need to continue support for reducing vaccine price similar to the price reducing trend in 2016 – 2020 in order to catch up with government budget release progress and sustainable implementation in EPI.
4. Strengthen EPI cold chain system in next five years, especially in difficult areas.
5. Increase local budget located for EPI activities and policy advocacy to invest in EPI:
    - Policy advocacy: Government, national assembly invest government budget for implementing EPI plan in period of 2021-2025.
    - Consideration of using local government budget for procurement of new vaccines, such as HPV for girls in their areas.

3. PERFORMANCE OF THE IMMUNISATION PROGRAMME

3.1. Coverage and equity of immunisation

Strategic Performance

DPT3 & MCV1 coverage

- DTP-HepB-Hib vaccine (Penta3) coverage reported in the 2017 Joint Reporting Form (JRF) surpassed the regional immunization targets, reaching 94.4% but it is slightly lower than this in 2016 (96%).
- The first dose of Measles vaccine (MCV1) was maintained at high coverage rate over 95% last ten year and reached 97.4% in 2017.
- A total of 1,614,203 children under 1 year old were fully immunized with 8 basic vaccines accounted for 96.8% in 2017.

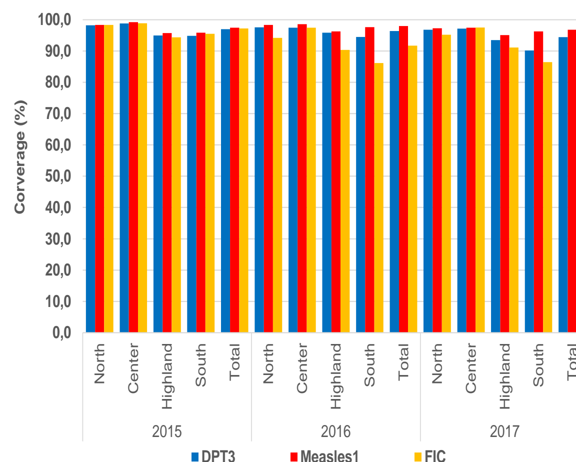

Figure 1. DPT3, MCV1 and Fully immunization coverage, 2015 – 2017

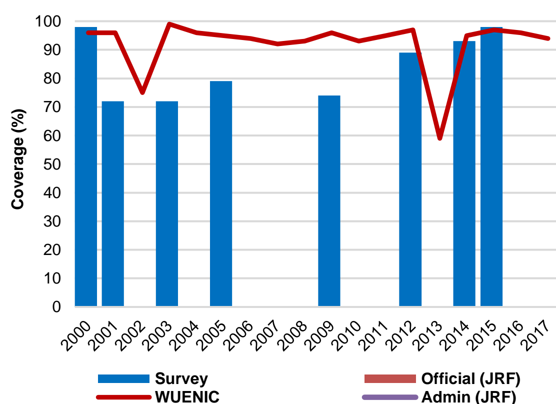

Figure 2. Penta3 coverage by sources, 2000-2017

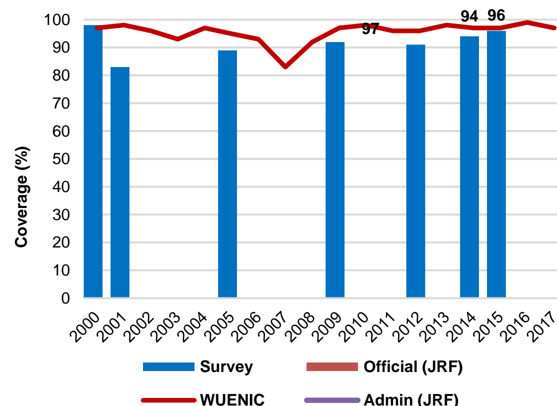

Figure 3. MCV1 coverage by sources, 2000-2017

- *Discrepancy of DPT3 and MCV1 coverage between report and survey*

The most recent coverage surveys (2014, 2015) showed a discrepancy between administrative coverage and survey was lower and an improvement of data quality.

- Percent discrepancy for DPT3 was 3% in 2015.
- Percent discrepancy for MCV1 was 1% in 2015.

- *Drop-out rate*

Drop-out rate DPT1-3; OPV1-3 and BCG-MCV1, MCV1-2 varied year by year during the period of 2015 - 2017 (Figure 3).

The drop-out rates OPV1-3, BCG-MCV1 and MCV1-2 were reduced in 2017. These ones were 0.5%, 0.2% and 3.8%, respectively.

However, drop-out rate DPT1-3 and MCV1-2 need to be closed. This was caused of the delayed pentavalent vaccine supply in some provinces in January 2017 and MR vaccine in December 2017. Nine (9) districts reported a DTP1-3 drop-out rate greater than 10% in 2017.

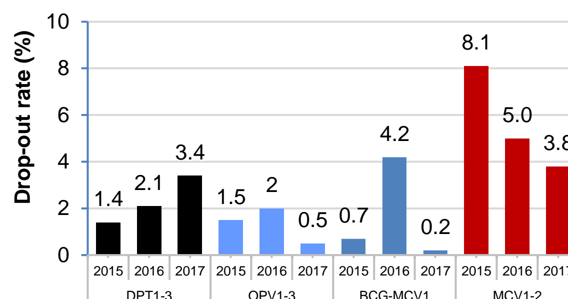

Figure 4. Drop-out rate DPT1-3; OPV1-3, BCG-MCV1, and MCV1-2, 2015-2017

- *HepB birth dose*

Significant improvement is noted for the timely birth-dose of Hepatitis B vaccine. The country reports 76.6% in 2017 as compared to 68% coverage in 2016, 70% coverage in 2015 and 55% in 2014.

In 2017 the coverage rate of Hepatitis B birth-dose varies from province to province (figure 6) and from districts to districts

Coverage	2016	2017
<50%	14	5
50-<80%	37	34
80-<90%	9	17
90-<95%	2	6
≥ 95%	1	1

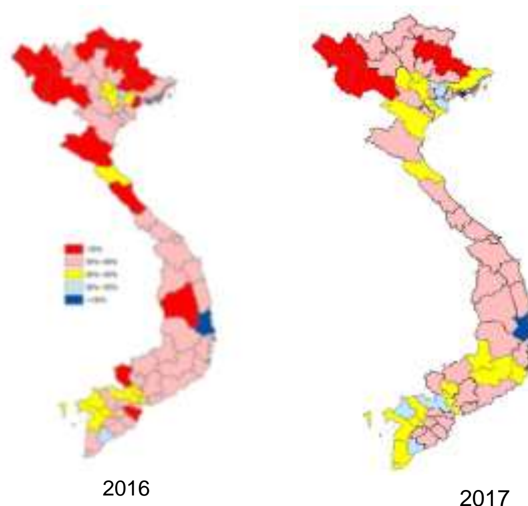

Figure 6. HepB birth-dose coverage by province, 2016-2017

- *Equity*

Gender: In Viet Nam, both boys and girls have equal rights for health care, education and other basic rights. Findings of EPI review showed that no significant difference between boys and girls in their access to vaccination. Results of EPI review in 2015 indicated that gender was not a significant factor affecting immunization service utilization, i.e. 1% was the difference in DPT3 and FIC between boys and girls (99% for boys and 98% for girls and 96% for boys and 95% for girls, respectively).

Vaccine coverage by district

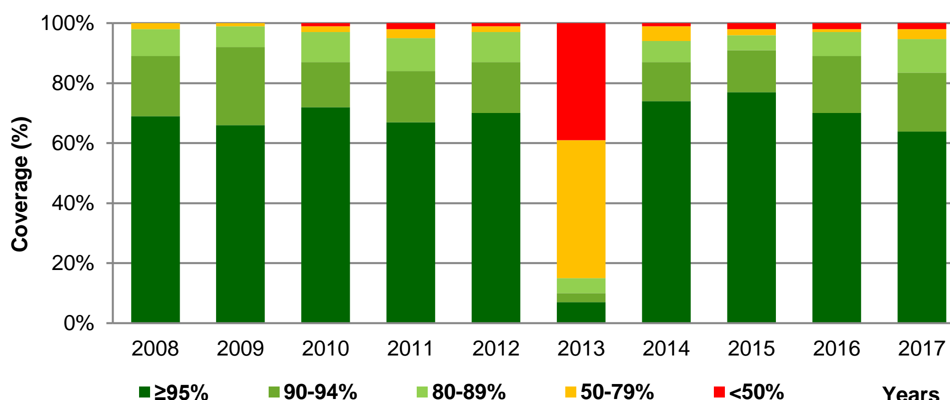

Figure 7. DPT3 coverage by districts, 2008 – 2017

DPT3 coverage varies by districts:

- In 2017, 455/713 (64%) districts reached DPT3 coverage rate over 95%, 140 districts reached the rate from 90% -94%, 80 districts (11%) had the rate ranged from 80-89%, in which 54 districts are mountainous, remote areas with ethnic minorities.
- Districts with DPT3 <50% during 2015-2017: 14 districts reported coverage < 50% were in Ho Chi Minh city where data from private immunization service was not been updated and reported to EPI.
- Slightly increase of districts with DPT3 coverage ranged from 80-89% in 2017 (80 districts): The cause was reduction of out-reach immunization posts.

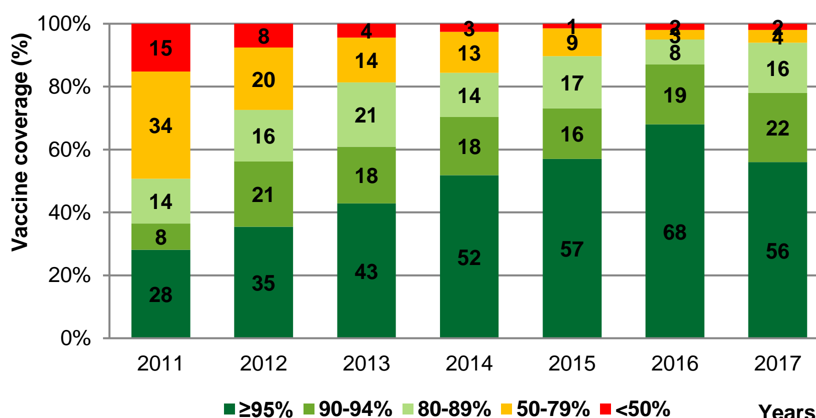

Figure 8. MCV2 coverage by districts, 2011 – 2017

MCV2 coverage was improved from year to year. The rate of districts reached over 95% coverage was 28% in 2011 and 58% in 2017. The rate of districts reported low MCV2 coverage less than 80% was reduced significantly from 49% in 2011 to 6% in 2017. However, there was a shortage of MR vaccine in December 2017 because vaccine switch from imported vaccine to MR vaccine produced locally should take time.

Intensive efforts had been made to close the gap:

- A depth analysis was carried out to identify high-risk districts with low performance of MCV1 and MCV2 less than 95% of vaccine coverage and/or high measles incidence last three years. These districts were selected for a large scale MR follow-up SIA in 2019 with an estimation of 4.2 million children aged 1-5 years old.
- Regarding to MR vaccine supply, EPI has intensive plan on vaccine procurement in 2019 that will cover both SIA and routine immunization.

However, further interventions should be considered to close this immunity gap and reaching at least 80% of districts with MCV2 coverage over 95% in routine immunization. The districts with low coverage of MCV2 will be prioritized in 2019. Besides, parental-targeted communication activities and checking

immunization history before school entry will be conducted in coming years in order to encourage parents to have their children vaccinated with second dose of MCV before 2 years old.

In summary, Vietnam reached high vaccine coverages. Over 90% of children under 1 year old accessed the primary vaccine to protect them from the most dangerous VPDs and vaccination for children 1 year old was strengthen. Almost vaccine drop-out rates were reduced recent years. These improvements were at nationwide and district level. The achievement is resulted by intensive interventions carried out by MoH, EPI. Supports from GAVI, UNICEF, WHO contributed to this result. However, the above data analysis also identifies the gaps in vaccine coverage in different geographic areas and priorities in coming years.

- *Denominator review*

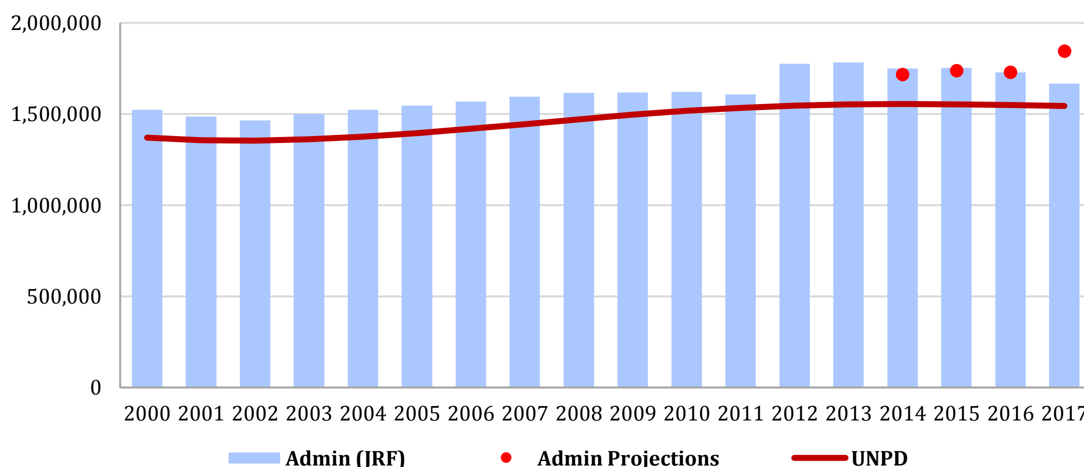

Figure 9. Surviving infants estimates according to different sources for Viet Nam (2000-2017)

There is a discrepancy survival infant among different sources: administrative report from country, administrative projections by UN. This discrepancy is also recognized in different sources published in country.

The denominator of 1,667,227 surviving infants is aggregated from the actual number reported by all communes. Mother and child health Department recorded a number of 1,575,071 infants that was aggregated from provinces, however, infants in some central hospitals were missed.

Sources	**Number of children under 1year old in 2017**
EPI	1,667,227
MCH	1,575,071
GSO	1,396,130

- *VPDs surveillance*

Case-based surveillances for AFP/polio, measles, rubella and neonate tetanus are implemented nationwide.

- AFP/polio: In the whole country, 387 cases of LMC were detected, reaching 1.7/100,000 children under 15 years old, exceeding the target set by the WHO (1/100,000 children under 15 years old) and equivalent to 2016 (383 cases).98. 4% cases were taken adequate samples for testing.
- Measles and rubella surveillance:

Surveillance indicators	**Target**	**2016**	**2017**
Rate of measles / rubella per 100,000 population	≥2	2.5	2.37
Cases with serum samples taken	≥ 80%	50.9%	61.2%
Measles IgM +	-	46 (2.9%)	204 (13.4%)

Rubella IgM +	-	413 (25.7%)	77 (5%)
Provinces with rate of measles / rubella detection > 2 per 100,000 population	≥ 80%	35/63 (55.6%)	35/63 (55.6%)

A total of 1,390 cases were confirmed as measles in 40 provinces from Jan-Oct 2018, 30.2 and 6.8 times higher than the ones in 2016, 2017, respectively. The age group 1-4 year accounted for the highest number of cases with 34.8%, followed by the children under 1 year old (32.9%). The remaining age groups account for less than 10%: the 30-39 years old group (9.6%), and the 20-29 years old group (6.5%).

- Neonate tetanus: Nationwide, 52 cases have been reported in 46 districts of 21 provinces. The number of cases and provinces reporting neonate tetanus in 2017 increased compared to 2016.

Besides, EPI established sentinel surveillance in order to assess disease burden, including Congenital rubella syndrome, Rotavirus, meningo-encephalitis, Japanese encephalitis.

- *AEFIs*

The AEFIs surveillance system has been established at all levels from central to provincial, district and commune levels. Most cases of severe AEFI had been investigated, reported in accordance with existing regulations. In 2017, 27 severe cases had been reported in 19 provinces. Number of mild cases was aggregated through regular monthly reports from the commune level.

3.2. Key drivers of sustainable coverage and equity

Health Work Force

Challenges:

- Changing the organizational structure of preventive medicine systems at provincial and district levels: At provincial level, CDCs were established by merging Preventive Medicine Centres, Communication centres and others. At districts level, Health Centres and District hospitals were merged. This change caused a high turnover of EPI staff at all levels. They should be trained or re-trained on immunization.
- AEFIs investigations: Although the AEFIs surveillance system has been established at all levels, some localities have not reported any severe case, so they have not experienced in AEFIs investigation. In 2018, a total of 261 EPI staff and HCWs at hospitals of 63 provinces / cities and 4 regions had been trained in AEFIs monitoring and surveillance with support from GAVI / WHO. Currently, most cases of severe AEFIs have been reported to the national level within 24 hours and investigated, assessed causes within 5 days in accordance with the existing regulations.
- Vaccine hesitancy: Health care workers at the hospital are not aware the importation of hepatitis B vaccination for neonates. They are also concern about immunization safety in the implementation and are not been updated legal documents to support the implementation.
- Many staff at the provincial and district levels, including the preventive medicine system and hospital, are not trained on VPDs case definition and surveillance procedure, case investigation and taking sample.

- *Activities supported by GAVI*

Organized training to strengthen capacity of AEFI causality assessment for members of provincial technical committee including provincial health departments, hospitals, centres of preventive medicine/disease control of 63 provinces. Update and develop technical guideline “Immunization safety surveillance” and guideline for investigation of serious AEFI. These activities are in the frame work of the Transition plan supported by GAVI and funded through WHO.

- *Activities supported by WHO*

- Organized 07 training courses on Hepatitis B BD immunization for 660 health workers at provincial, district hospitals, polyclinic health clinics and commune levels.

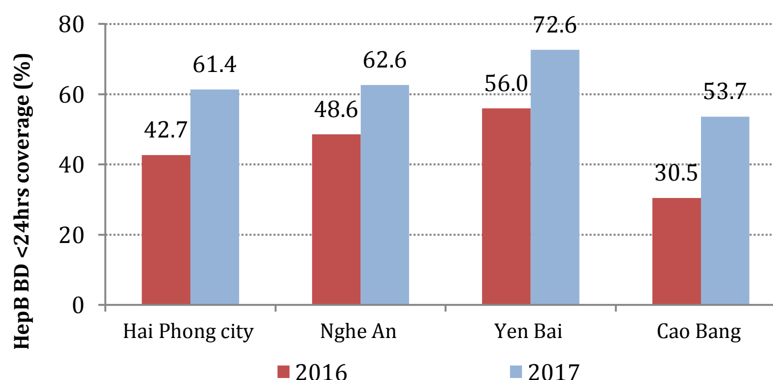

Figure 10. Vaccine coverage of HepB BD within 24 hours before and after intervention in 4 provinces, 2016- 2017

Timely birth dose of Hepatitis B vaccine increased significantly in the four provinces. The differences of coverage in 2016 and 2017 ranged from 14.0-23.1%. In 2017, there are additional 17,437 neonates were vaccinated timely with HepB BD in comparison with the ones in these provinces in 2016.

- Training on VPDs surveillance for health staff at provincial level, including centres of preventive medicine/ disease control, provincial health department, provincial hospitals in 63 provinces. An increasing rate of suspected measles and rubella cases with serum samples taken was recorded. The rate was 50.9% in 2016 and 61.2% in 2017. The rate of districts with ≥2 discarded cases per 100, 000 pop increased from 23.8% in 2016 to 49.2% in 2017.

Supply chain

National EPI issued "List of cold chain equipment for storage and transportation of EPI vaccine" giving background for localities to develop technical criteria for requesting provincial health departments, and provincial people committees to equip additional cold chain equipment of high quality to meet requirement of safe storage and transportation of EPI vaccine.

CCE:

Core Indicator	**Status: Result**	**Status: Target**
Intermediate		
CCE expansion in existing equipped sites	6 districts	713 districts and 63 provinces
CCE extension in unequipped existing and/or new sites	0	3
CCE replacement/rehabilitation in existing equipped sites	6 refrigerators for 6 districts	1,052 refrigerators for districts and provinces
Freeze-free to non-freeze-free carrier ratio	NA	NA
Percentage point difference between Penta 3 national administrative coverage and survey point estimate	94.6%	95%

Service delivery and demand generation

Organise training on planning and updating new immunization regulations for district and commune health staff: These health staff trained and updated with new immunization regulations, immunization safety, then, to develop detailed plan for communes to access all communities, to increase fully immunization coverage rate and timely immunization.
Supports to areas with difficulties in 2018:

- Organize training and re-training on EPI for health workers in 13 difficult districts to improve vaccination coverage rate and quality of immunization; 5 districts in 4 provinces in central region, 8 districts in 4 provinces in the north.

- Mountainous, hard-to-reach districts with low vaccine coverages.
- List of 13 districts: Meo Vac, Xin Man (Ha Giang province), Pac Nam, Ba Be (Bac Kan province), Dai Tu, Dinh Hoa (Thai Nguyen province), Da Bac, Mai Chau (Hoa Binh province), Bac Ai (Ninh Thuan province), Song Hinh (Phu Yen province), Minh Hoa, Tuyen Hoa (Quang Binh province), Tay Tra (Quang Ngai province).

- Organize training, supervision, investigation of neonatal tetanus for health staff in 9 districts at high risk (with neonatal cases or low TT2+ coverage for PWs) to maintain achievement of neonatal tetanus elimination, 4 districts in 2 provinces in the highland, 3 districts in 2 provinces in the south, 2 districts in 1 province in the north.
- Organise training on EPI communication and dissemination of implementation plan for village health workers: These staff trained and updated with EPI communication contains, motivating mothers to bring children for immunization and other obligations for increasing local immunization rate.

Improvement of the vaccination coverage rate: The rate of vaccination in supported localities increased. This positive impact was resulted by village health workers ‘communication with parents, and the more frequent implementation of vaccination mobile teams in hard-to-reach areas. However, in order to maintain this result, EPI staff's effort and supports from leaders at all levels should be continuous. These above activities need to be implemented in similar localities.

Improvement of routine immunization through organizing 2 immunization times per month in almost provinces giving more opportunities for children to get vaccine on time, minimizing dropout rate, late immunization.

Improving implementation of HepB birth dose within 24 hours after birth in district and provincial hospitals, extend the model of HepB birth dose in polyclinics and commune health centres to other hard-to-reach areas. Positive impact of this intervention is mentioned in page 9.

However, immigration from rural to urban and industrial zones causes an increasing trend of target population from year to year. There are ore constrains in management of target population and provide immunization service those areas. In additional, private immunization facilities are more popular recently, especially in large cities. These private facilities and hospitals, where HepB birth dose were implemented, sometimes provided inadequate data. Therefore, immunization data management is more challenged recent years.

- ***Gender-related barriers faced by caregivers***

- ***Leadership, management and coordination***

Leaders and EPI staff at provincial and district level are high turnover because of changes in system structure. These changes may cause challenges in management and coordination, planning, advocacy and implementation of immunization activities.

Quality of VPDs surveillance in Vietnam in 2017 is improved in comparison to the ones of the year 2015, 2016. The rate of districts with reported suspected measles case over 2 per 100,000 populations was increased from 22.2% in 2016 to 49.2% in 2017. The system provides more accurate data for appropriate outbreak responses. However, it is necessary to have a better collaboration between preventive medicines facilities with treatment and clinical facilities at all levels that are coordinated by DoH.

- ***Other critical aspects***

EVM need to be conducted in 2019 to update the assessment of cold chain capacity.

EPI review is conducted every 5 years that is in collaboration with international partners, such as WHO, UNICEF, PATH. The last EPI review was carried out in 2015.

3.3. Data

- *Status of the health and immunisation information system and Denominator-related information:*
  - Starting implementation step by step of an electronic immunization registration in the National Immunization Information System. However, the existing paper-based reporting is continuously maintained and cross checked with electronic reporting. Assign responsibilities to regional, provincial, district levels, and aim toward an electronic reporting.
  - Strengthen target population management: From 2018, to strengthen implementation of immunization register using the NIIS and each child has one unique ID. However, there are still challenges, especially in hard-to-reach and urban areas with high rate of immigration.
  - Periodical coverage survey should be conducted every 5 years, proposed in 2020.

- *Vaccine management and coordination*: Web-based reporting software on vaccines, immunization equipment management has been rolled-out for years. The software has been used at national, regional and provincial level. Data on number of injections, vaccine doses, and immunization equipment is monthly collected at all levels. This system can manage vaccine usage factor.

- *Last nationally representative survey*

The last coverage survey was conducted in 2015 in collaboration with WHO, UNICEF and other international partners. The survey applied a single-stage cluster sampling in which communes were used as clusters (primary sampling unit) and conformed to the WHO guidelines on the EPI coverage survey. Eight provinces were selected. Hanoi and Ho Chi Minh City (HCMC), two major urban centre of Viet Nam, were intentionally selected to assess the status of urban EPI. Other 6 were selected randomly (not taking into account the population size) from different ecological regions, namely Northern mountain, Red River delta, Central, Central highland, South east and South west (Mekong River delta) regions.

Sample sizes

In each province selected, following numbers of samples were intended to be surveyed among children in different age strata:

- 300 children aged 12-23 months;
- 300 children aged 24-35 months;
- 900 children aged from 1-14 years (300 children in the age group from 1 to 5 years, 300 children in the age group between 6 and ≤10 years and 300 children in the age group of 11 to 15 years); and
- 300 mothers of children at 0-11 months of age.

Finding

- Estimation of %FIC with eight types of vaccines among children aged 12-23 months
  - %FIC regardless of timing surpassed 90% except in Binh Phuoc (83.7%). There was a statistically significant difference between Binh Phuoc and other provinces excluding Thai Binh and HCMC.
  - %FIC <1 year of age indicated a bigger challenge faced in Binh Phuoc and HCMC (71.3% and 79.7%, respectively) than in other provinces in reaching children in a timely manner. There were a statistically significant difference between the low coverage provinces (Binh Phuoc and HCMC) and the high coverage ones (Can Tho, Dak Nong and Phu Tho).
  - Coverage of BCG, DPT-HepB-Hib3 and OPV3 were high in all eight provinces surveyed without notable difference between the provinces. Even the lowest figure surpassed 92%.
  - MCV1 surpassed 94% in provinces except in Binh Phuoc (89.7%).

- Estimation of the coverage of hepatitis B birth dose<24 hours after birth: The proportion of HepB birth dose<24 hours was significantly lower than other coverage figures in all eight provinces, with three of them (Quang Binh, Binh Phuoc and Can Tho) having estimated coverage below 50%.

- Estimation of the coverage of MCV2 and DPT4 among children aged 18-30 months
  - The two booster inoculations highlighted significantly sub-optimal coverage in Binh Phuoc and HCMC (83.6% and 88.7%, respectively for MCV2 and 49.0% and 66.1%, respectively for DPT4) in comparison with other six provinces.

- + The main reason of non-immunization of MCV2 and DPT4 in Binh Phuoc and HCMC was that the care takers did not know the necessity of the doses concerned.

– Estimation of the coverage of the MR campaign conducted in 2014-2015 among children aged 1-14 years with disaggregation into three age strata of 1-5, 6-10 and 11-14 years.
  - + It is notable that the campaign faced a bigger challenge in large urban areas of Hanoi and HCMC particularly among younger children aged 1-5 years with coverage of 70.6% and 62.5%, respectively. There was a statistically significant difference between six other provinces and the two urban centers of Hanoi and HCMC.
  - + Among 6-10 years, only Hanoi had a lower coverage (87.0%) with statistical significance while other provinces surpassed 91%.
  - + Among the reasons of non-immunization in the MR campaign Hanoi and HCMC, by far the most prevalent one was that children not be given immunization because of vaccinating already 2 doses or more Measles or MMR vaccine before campaign.

– Estimation of the proportion of newborns aged less than 1 year protected at birth (PAB) through tetanus toxoid (TT) immunization of mothers
  - + %PAB surpassed 90% except in Quang Binh (81.1%). The difference between Quang Binh and other provinces was statistically significant.
  - + Among the main reasons of not protected at birth against tetanus among newborns surveyed in the eight provinces, the most prevalent reason was that the care-takers knew nothing about immunization.

3.4. Immunisation financing

- ***Budget of local government***

Support from central government for EPI, 2012-2017

Year	2012	2013	2014	2015	2016	2017
Billion VND	240	240	284	311	330	301
US$	10,909,511	10,908,692	12,909,334	14,136,288	14,999,986	13,681,786

Support from local government for EPI, 2012-2017

Year	2012	2013	2014	2015	2016	2017
Billion VND	12.459	13.116	14.877	22.287	62.739	51.437
US$	566,340	596,160	676,240	1,013,040	2,851,770	2,338,040
# provinces	24/63	26/63	20/63	38/63	38/63	50/63

Total funding support from local government for routine EPI, in 2017 total 50 of 63 provinces support for routine EPI: US$ 2,338,040.

However, 4/63 provinces did not support for routine EPI during 2012 - 2017.

Figure 11. Support from local government for routine EPI, 2012-2017

- ***IPV project***

- Funds received during 2017: US$ 0
- Total funds available in 2017: US$1,045,737
- Use of funds during 2017: US$254,110
- Remaining funds (carry over) from 2017: US$791,627
- With Bank interest 2017: US$ 2.840 it becomes: US$ 794,467

- Balance to be carried over to 2018: US$ 794,467

Detail expenditure:

1. Development of implementation plan:
   - Develop Circular on guideline for EPI implementation in accordance with Decree 104/2016 / ND-CP issued on 1/7/2016
   - Prepared and issued 26 standard procedures (SOP) for storage, receipt, distribution and transportation of vaccines at all levels, developed posters on vaccine storage and cold chain maintenance.
   - Developed a list of EPI cold chain equipment at all levels.
   - Developed guidelines for the polio vaccine implementation of supplementary immunization activities for high risk areas.
   - Prepared to calculate vaccination package costing (operational cost) at all levels
2. Training, meeting, workshop
   - Organized national EPI review meeting in 2017 for 63 provinces / cities in Thua Thien Hue.
   - Training on examination, counselling and indicated before vaccination for health workers
   - Professional advisory meetings, council meetings on EPI
3. Social mobilization, IEC and advocacy
   - Developed document on Question – answer about EPI vaccine, vaccine safety for commune health staff, village health staff to communicate to the community
   - Successfully organized the immunization week in Quang Ngai province
   - Communication on mass medias about immunization safety, communication on risk of AEFI, high bOPV coverage, response anti vaccine
4. Supervision

   Supervision visits to provinces with bOPV vaccination rates and surveillance of AFP to protect polio eradication achievement
5. Hiring technical consultants expert
6. Project management (Stationary, Office equipments, Project Audit 2016…)

   Total expenditure in 2017: 254,110 USD

- ***ISS project***

- Funds received during 2017: US$ 510,750
- Use of funds during 2017: US$ 510,750
- Balance to be carried over to 2018: US$ 0

Detailed expenditure:

1. Improve AEFI surveillance:
   - Management and analysis AEFI data include serious AEFI cases
   - Communication on mass medias about immunization safety and communication on risk of AEFI
2. Improve immunization quality
   - Purchase 6 fridges VLS 200 and 128 cold boxes for vaccine transportation for new districts, district suffered from flood, disaster in 2017
   - Purchase 310 fridge-tag 2 for 63 provinces to monitor vaccine refrigerator
   - Quarterly review meetings (4 meetings) with regional and provincial EPI staff.

- Supportive supervision to lower levels on EPI activities
- Implement assessment, researches on antibody persistency among children after using vaccine in EPI
- Monitor immunization coverage rates, data input and analysis, quarterly feedback
- Hide one assistance for NEPI office to support for implementation of the project and other EPI activities

3. Office expenditures: stationary, photocopy, others…

- ***Transition plan***

Transition plan activities through UNICEF:

- Support for improving immunization quality and coverage rate in difficult areas:
  - 2017: Implemented 10 immunization training courses for 354 districts and commune health staff in 10 districts of 5 provinces. 21 immunization training courses 1,260 village health workers in 10 districts
  - Implementing activities of 2018
- Communication:
  - Update detailed contents on EPI's website
  - Communication during immunization week in 2018
  - Organize trips for reporters/ journalists to visit and write news on immunization in various areas (in Quảng Ninh, Bắc Ninh, Đắc lắc provinces)
  - Produce immunization messages on the need, safety of MR vaccine and Congenital Rubella Syndrome (CRS) prevention method to be broadcasted on VOV, for show talk on News channel. The contains were Toward measles elimination, rubella control in Vietnam
  - Organized communication in industrial zone in Bac Ninh province, exchanging question and answer with specialists to improve knowledge of workers on active immunization against measles, rubella and CRS
  - Produced 01 clip on benefit and schedule of MR vaccine to be broadcasted on VTV3; 01 clip on vaccination for pregnant age woman to prevent measles, rubella and CRS to be broadcasted on VTV1.
  - Published communication articles on benefit and schedule of immunization, MR vaccination, immunization safety on most popular papers/ magazines
  - Printed immunization materials on immunization and MR vaccination (Leaflet on MR vaccination and flip book to guide mother when they need bring children for vaccination)

Transition plan activities through WHO:

- In 2017:
  - Based on WHO's document, NEPI developed and compiled "Handbook on AEFI surveillance", print and distributed 27,000 copies for commune level.
  - Conducted 5 training courses for 261 provincial EPI staff and health workers in provincial hospitals in 63 provinces on AEFI surveillance
- In 2018:
  - Support for costing of immunization package was started and training workshops to disseminate a new decree on provincial budgeting requirement for the operational cost public health programmes were conducted.
  - Technical assistance was provided to support the MOH-NRA team's implementation of the Institutional Development Plans have been provided throughout 2018, with a special focus with the GDPM for the NRA re-benchmarking in November 2018, especially in the areas of AEFI management and pharmacovigilance for vaccines.
  - Training to provincial health offices on post marketing surveillance and AEFI management, as well as training to NICVB on reference standard for vaccines were conducted.

- A study visit to New Zealand with the national central procurement center, NIHE, MOH/DAV, MOH/DPF, with other stake holders, was conducted in order to support capacity building for central procurement for medicines and vaccines.
- NEPI completed provincial level trainings for EPI staff and hospital for generating knowledge on AEFI early detection, timely responding and programme management.
- Support NICVB, which is also National Control Lab has conducted nationwide wide workshop on reviewing post marketing surveillance activities of vaccines and biological products circulation in Vietnam.
- Support General Department of Preventive Medicine is supported to conduct 3 workshops on AEFI causality assessment for Provincial Professional Committee of Northern, Southern and Central Highland regions.

Difficulties:

Several activities in the frame work of the transition plan got late approved that affected to implementation progress; this was reported annually to MoH in the first quarter. WHO Vietnam reviewed the respected activities under the GAVI transition plan for which the funds were received in July 2017. Due to the delayed approval of the workplans, the implementation was also affected. As of October 2018, the implementation rate was around 65% (674,507$ expenditures/1,043,250$ total allocation)

All the completed, ongoing and planned activities to be supported by GAVI Transition Plan funding are thoroughly reviewed during the Joint Appraisal Mission in October 2018 by GAVI team all other parties. It was agreed by the government/MoH, WHO, UNICEF and GAVI officials that almost activities will be completed by the end of December 2019 as per the contract agreement. We would request no-cost extension of the few activities to be completed by June 2020. The workplan was revised accordingly for better monitoring. (*Please refer to a list of activities requested for no-cost extension - Item 4.5 Transition planning)*

During the GAVI Mission in October 2018, all the stakeholders discussed the timeline of the activities. Based on the current situation, most important activities are prioritized and streamlined. A number of activities which can be supported by other sources, budget are saved for some new activities, most relevant to current situation are incorporated.

- Immunization Financing and technical support for new vaccines introduction will be supported by WHO with other funding sources and other international organization. Fund for these activities will be saved for outbreak responses.
- New activity was added to fast-track the support for responding out-breaks: Saving fund from activity on GIS mapping and tracking system for mobile population to identify low immunization coverage areas for a new activity that is to fast-track the support for responding out-breaks: Vaccine preventable outbreaks spread further when the response is delayed because of funding lately. Therefore to mitigate the initial spread, the outbreaks will be responded initially with these funds and followed by government support. It is expected that later on these types of reserve funds will be made available with the program to timely response to any outbreaks.

4. PERFORMANCE OF GAVI SUPPORT

4.1. Performance of vaccine support

- ***Overall implementation progress of Gavi vaccine support***

  - *Supply DPT-HepB-Hib vaccine:*

With support from GAVI and investment of Vietnam government, pentavalent vaccine had been procured and supplied to all provinces for routine immunization. Vaccine coverage of DPT-HepB-Hib in 2017 reached 94.4%uptake coverage nationwide with a total of 1,574,238 children under 1 year old vaccinated with this vaccine.

In 2018, there are 2 new vaccine branch names licensed in Vietnam including ComBE Five vaccine from Biological E, India and a DPT-HepB-Hib vaccine from SII, India. National EPI have been approved by government for procuring the vaccine through UNICEF. The co-financing vaccine amount is around 90% of total amount. The switch of pentavalent vaccine takes longer than expectation. The vaccine stock-out was recorded since last August 2018. The ComBE Five vaccine had been introduced into EPI since October 2018 in small scale of 7 provinces, then nationwide from December 2018. However, Pentavalent vaccine switch take longer time than expectation. Pentavalent vaccine supply did not meet requirement since August 2018. The first two improted batches of Penta vaccine are under MoH's process with WHO's supports now.

- *IPV introduction*

Received 1,455,000 doses in 2018. To reduce vaccine wastage, the large provinces will implement the immunization in monthly basic; other provinces in 2- months/time basic, mountainous provinces could implement every 2-months or quarterly.

Next vaccine shipment should be arrived in November 2018 for consecutive supply for routine immunization.

However, the remained two birth cohorts were not been immunized against polio virus type 2 after tOPV switch from May 2016 to July 2018. These children need to mop-up during the catch-up campaign in 2019. Vietnam request GAVI to IPV and operational cost for this campaign.

- ***Actions related to Gavi vaccine support in the coming year***

Measles – Rubella follow-up campaign for an estimation of 1,100,000 children aged 1-4 years old in 131 high risk districts nationwide that is planned to be implemented in quarter III of 2019. The proposed campaign is a part of comprehensive plan toward measles elimination in Viet Nam.

The proposal of MR campaign was submitted MoH and GAVI. MR vaccine, immunization equipments, and 50% of operation cost will be covered by central and local government budget. Vietnam requested GAVI to support for difficulty areas to conduct implementation of following activities in the SIA:

- Development of national planning and implementation guide for micro-planning on MR follow-up campaign
- Planning workshops from national to district level and coordination with other sectors.
- Development of training materials, IEC materials and record keeping & reporting forms
- Advocacy, communication, social mobilization
- Immunization supply chain management
- Vaccine and logistics procurement, storage, transportation and management
- Conduct immunization session including out-reach vaccination in hard to reach areas
- Safety immunization
- Human resource management
- Supervision, rapid assessment, and monitoring including management of electronic data on personal immunization status in National Immunization Information System
- AEFI reporting system and management
- Injection safety/Waste management

4.2. Performance of Gavi HSS support (if country is receiving Gavi HSS support): *to be filled by HSS project*

Objective 1	
Objective of the HSS grant (as per the HSS proposals or PSR)	
Priority geographies / population groups or constraints to C&E addressed by the objective	

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

Major activities planned for upcoming period (mention significant changes / budget reallocations and associated **needs for technical assistance**[4]	

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

A deployment plan for implementation of the Cold Chain Equipment Optimization Platform 1 (CCEOP1) is developed and biding for procurement of 302 units of mains powered refrigerators has been completed by UNICEF. The biding results were shared with national EPI for review and consideration. The above amount of fridges were assessed and approved by EPI PMU based on usage requirements and capacity of using specialised fridges at all levels. Prime Minister has issued decision No. 1125/QĐ-TTg dated 31 July 2017 assigned local government to cover EPI cold chain budget for their localities. Therefore, together with central government budget, there will be motivation of local government budget to supply fridges for EPI.
To date, ministries are continuing their review on procurement refrigerators using government budget following current Vietnam regulations. In 2018-2019, National EPI have allocated budget for CCEOP 1 project. As Vietnam decision, National EPI will submit MoH for approval of tendering plan for procurement and selection of equipment and suitable amount of fridges. Vietnam will notify GAVI and UNICEF of type and amount of fridges for provincial level and request GAVI to support the equivalent fridges, then.
Maintenance and running management system for cold chain equipment was supported by Luxembourg government and has been continuously maintained for over recent 10 years at national and regional levels. Vietnam EPI have experiences in installation, running, maintenance, repairing equipment made by B Medical and absolutely have ability in effective self-installation, maintenance, repairing equipment. Annually, government budget has been allocated for these activities in national scale with total 6,049 refrigerators. Because of these above reasons, Ministry of Health ask National EPI to propose GAVI to support Vietnam the above mentioned specialized refrigerators and Vietnam will conduct maintenance and running of the refrigerators which are co-financed by the government. The equipment funded by the government will be installed in Northern region. The refrigerators funded by Gavi are proposed to be installed in the south parts of Vietnam and UNICEF will be in charge of instalment for the equipment.
In 2018 – 2019, National EPI have been allocated budget by government and MoH for co-financing of equipment procurement for provincial and district levels with amount of budget equal to the budget proposed in CCEOP application as procuring equipment not included installation, running …

For CCEOP2:
MoH has a project co-ordinated with World Bank to support 13 difficult provinces in a project of infrastructure and support for heath service providing at grass root level. National EPI have proposed MoH, in frame work of this project, to provide refrigerators for storage of vaccine in commune health centres and district health centres of the 13 provinces. 50% budget for these equipments from Gavi, 50% budget will be funded by the World Bank.

EVMA in 2019:
National EPI have requested Gavi to conduct an EVM assessment in 2019 to have updated information on vaccine management and current situation of cold chain equipment. The assessment also give us

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

inputs for updating EVM improvement plan in order to have strong vaccine management system and high quality and enough volume of the cold chain for routine EPI, new EPI vaccines and also for SIAs. It was discussed and agreed that Gavi will be able to provide additional funds for EVMA and PATH will be sub-contracted to support EPI to conduct the assessment with necessary support from UNICEF.

4.4. Financial management performance

a) *Procedure of using GAVI budget transferred to NIHE*

- After receiving GAVI letter notifying the support to Vietnam, NIHE developed project and submitted to MoH for approval. Implementing the project following Vietnam current regulations.
- MoH will organize project evaluation meeting and issue Project Approving Decision. After NIHE submit to MoH proposed Project Management Unit (PMU), MoH will issue Decision of setting up PMU and assign NIHE director to be PMU manager, PMU members will be directors of Hygiene and Epidemiology/ Pasteur institutes in 4 regions: north, central, highland and south and heads of NIHE departments to assure effective and targeted implementation.
- After receiving budget GAVI transferred, NIHE report MoH, Ministry of Finance and process procedures for recognizing GAVI support as non-returned aid.
- PMU will develop and issue project financial requirements following government regulations such as accounting activity following Accounting law No. 88/2015/QH13 dated 20/11/2015, tendering following Tendering law No. 43/2013/QH13 dated 26/11/2013, decrees, circulars, guideline of government on management and using of foreign aid.
- Every quarter, PMU develop implementing plan, inform ICC member in Vietnam about plans that strictly follow details of project document. ICC meeting is held 2 times per year and several unexpected meetings to report and agree plans for project activities.
- Then, National EPI develop budget estimate for activities, send to NIHE department of planning and international cooperation and accounting department for review. Final budget estimate will be submitted Planning and financing department of MoH for budget and implementation approval.
- As financial regulation, during implementation of program and project with foreign aid, procurement of equipment, materials, hiring consultation service will follow Tendering law and current procurement regulations in Vietnam.
- For activities need to transfer budget to localities, PMU (NIHE) will sign responsibility contract with hygiene and preventive/Pasteur institutes and provincial preventive medicine/CDC centers and advance 70% of the budget for implementing activities, after completion of activities we will process outcome acceptance and sign contract conclusion and transfer the remaining 30% of budget. Original invoices and proof of payment are kept by NIHE
- Cost norm following cost norm approved by GAVI in the email dated 18 April 2016
- Interest of the project account (if any) will be used to cover bank service expenditures and fees. In the year of closing project, PMU have to report MoH, MoF and process for recording aid for this additional amount as a new aid and to get agreement with donor to integrate the amount into project activity plan, yearly financial plan
- Project will be implemented following mechanism of public administrative mentioned in Circular No. 107/2017/TT-BTC dated 10 October 2017 and other related legislative documents.
- All original proof of payments including electronic invoice, proof (named accounting proof) will be kept in accounting and financing department in NIHE
- The accounting proof is kept for at least 3 years after finishing the last disbursement of the project.
- Every quarter, MoH will carry out spot check accounting proof of the project.
- At the end of fiscal year (31 December 2018), department of accounting and financing in NIHE will summary project activities and report MoH. In quarter I of 2019, MoH will assign a team to work and check project accounting proof, review to approve NIHE yearly financing report.

Every year NIHE conduct selection of auditing company: Base on list of auditing companies in short list of World Bank announced in 2017, in quarter I of 2018, PMU will implement auditing company selection process following regulations of Tendering law. NIHE signed with company won the tendering and conduct auditing GAVI projects of 2017 in April 2018 then sent auditing report to GAVI on 15 May 2018

b) *Transition plan*: Transfer budget through WHO, UNICEF and follow financial requirements from WHO, UNICEF.

As of Oct 2018, the budget transferred through WHO and UNICEF was as follows:

Funds categories	**UNICEF**	**WHO**
Staff cost to UNICEF	USD 107,000	USD 181,550
Programme cost to EPI	USD 190,878.56	USD 299,926
Programme cost to other institutions of MoH	0	USD 202,516 (NRA agencies)
In direct support cost (8%)	USD 28,870.28	(7%)
Un-spent	USD 188,051.16	Will confirm later
Funds received in USD	USD 577,800	USD 604,550

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

Transition plan activities through WHO:

- Based on the immunization performance reports of previous years, high priority provinces were identified with low Birth-dose administration of HepB vaccine. During 2018, five such provinces were supported through trainings and supportive supervision. These provinces are Bac Giang, Son La, Quang Binh, Khanh Hoa and Bac Kan.
- Demonstration new model of house to house HepB birth dose vaccination: At present all vaccines are being provided at commune health centers only. There are many hard to reach areas where people are reluctant to take their babies to health centers for vaccination. Therefore a demonstration project is supported to evaluate the feasibility of vaccination by trained health workers by visiting house to house for vaccination of neonates. Lao Cai is a mountainous province, which is selected for pilot demonstration for this innovative approach. The activity has started in September 2018 and will be completed by March 2019.
- Regional level trainings on AEFI for trainers of Provincial officials were completed during June to September 2018. Two sessions of the trainings are conducted for 28 provinces of Northern region and 56 officials have participated in the training. Two sessions are also conducted for the EPI staff from Southern provinces and 40 officials trained. From central and high land provinces 30 participants are trained in one session.
- Second phase of AEFI surveillance and response training is being supported in 5 provinces of the Northern Region in Viet Nam. In these trainings, officials from the districts and selected hospitals are being trained. During next phase, the health staff from commune health centers will be trained. With the technical support from WHO and NEPI and financial support from GAVI TPP, the training materials (Manuals and hand-books) on immunization safety in Vietnamese language are printed and distributed to all the provinces.
- Updating and rolling out National Immunization Information System (NIIS): National Immunization information system was rolled out nationwide in June 2017. It is a web based system and is installed in all communes in the country. It started with entering data on the antigens administered in this system. Now in the second phase, NEPI is being supported to expand it to record information on other parameters like vaccines and logistics stocks, alert system on any shortage or expiry of the products and to correlate the demand and utilization pattern in the country. This activity will be completed before January 2019.
- Workshop on AEFI causality assessment for provincial Professional Advisory Committee will be supported in the last Q of 2018.
- Support National EPI Programme to conduct a costing of immunization package through recruiting two national consultants (health economist). This work is ongoing till end of 2018 and will provide a basis for advocacy to the policy makers and the National Assembly on the needs of sustainable financing for immunization and other essential public health programmes, which are planned for Q1 of 2019 (the original work tasked to SABIN Institute under the Transition Plan).

- Support National EPI Programme to conduct a series of regional workshops to disseminate a new circular which requires the provincial government to be responsible for financing the operational cost of delivering immunization services and support strengthening planning and budgeting for EPI at the provincial levels.
- A full time national consultant provides technical support to GDPM (MoH) to strengthen pharmacovigilance functions of the NRA (Drug Administration Viet Nam) as it prepares for WHO benchmarking in mid-November. Further capacity building activities to strengthen NRA functions especially on pharmacovigilance and communications and reporting of AEFI will be planned for Q1/Q2 of 2019 following the results of WHO benchmarking in November
- Supporting NICVB and other NRA institutions to conduct a national workshop to review the post-marketing surveillance of vaccines and biological products circulated on Vietnam market in late November 2018. This workshop is a part of the NRA capacity building as identified in the Institutional Development Plan (IDP) in order to familiarize with the latest WHO Guidelines on Adverse Effect Following Immunization (AEFI) surveillance, share practical experiences with the provincial CDCs and plan for post-marketing surveillance activities in 2019
- A part-time international consultant provides technical support to the newly established National Centralized Procurement Center to strengthen their work force capacity, expand their coverage of pharmaceuticals and address other institutional development needs.
- A study tour to New Zealand (NZ) to learn about the PHARMAC model of centralized procurement, full regulation life cycle for therapeutics by Medsafe (NRA in NZ) and supply change management for MoH and VSS officials took place in May 2018. The mission report is attached in the annex

Utilization of Gavi transition funds by WHO: as of October 2018: Funds utilization is USD 664,123 (63.6%) against the received (USD 1,043,250). Country Office has received the remaining funds of USD 604,550.

Within transition plan through WHO, following activities will be requested for no-cost extension till June 2020:

1. Strengthening Case management at Hospital levels – As it will be like cascade training; Regional and Provincial Hospitals will be supported in 2018-19, whereas district level hospitals, being large in numbers, will be completed by June 2020.
2. NRA need continue support for strengthening of vaccine vigilance and technical assistance will be required till June 2020.
3. For modification of pharmaceutical legislation and further development of plans, the National Centralized Procurement Unit will further support from GAVI and the support will need to continue till June 2020 and further continuation will be secured by the government budget.
4. As technical assistance through WHO was planned for three years; which started from July 2017. Therefore further extension till June 2020 is also considered equally important.

<u>Transition plan activities through UNICEF:</u>

Equity-focused planning and focused service delivery for hard to reach and vulnerable populations:

- Immunization monitoring check lists at different levels were reviewed, standardized and used in routine immunization. There were 319 communes developing and implementing commune action plans to increase vaccination coverage in 319 difficult communes of 22 districts of 13 provinces. 2421 village health workers from 13 difficult districts were trained in communication for immunization and have had improved knowledge and skills in communication for immunization at village level. 3,700 handbooks on immunization for village health workers were developed, printed and distributed to the hard-to-reach communes and villages with low immunization coverage.
- A comprehensive package of IEC materials on MR and routine immunization schedule including training materials was appropriately, creatively and user-friendly designed and developed for different target groups, i.e., health workers, parents, childcare givers and public. There have been 114,900 leaflets and 12,800 posters on MR; 12,800 posters on routine immunization; 114,900 leaflets on vaccination schedule, and 24,100 flipcharts on “what the mother needs to know about

immunization" being printed and distributed to all health facilities in Viet Nam (*UNICEF funds was utilized*).

Procurement:

- An action plan for introducing the new brand of DTP-HepB-Hib vaccine in 7 provinces is approved by Ministry of Health and will be implemented in June 2018 which will be followed with national wide DTP-HepB-Hib switch in August 2018. 833,200 DTP-HepB-Hib doses financed by Gavi was supplied for Viet Nam however did not pass the safety tests conducted by the local NRA, thus, were not released for use in EPI. Accordingly, DPT-HepB-Hib vaccine stock out has occurred in Viet Nam since August 2018. A PQ experts from WHO reviewed and fund the local safety tests did not comply with WHO standards and recommended that NRA conduct the tests again and in addition send samples for retesting by a third laboratory in Korea. In September 2018, EPI received Government approval to procure vaccine through UINCEF and has transferred their co-financing budget of USD 6,064,105.13 to UNICEF for procurement of 4,646,500 doses for Viet Nam. To date, 289,000 doses which passed the local safety tests were supplied for Viet Nam and the rest of 4,357,500 doses will be procured and delivered to Viet Nam in November and December 2018. With this, EPI will meet the co-financing obligation with Gavi in 2018.
- A list of cold chain equipment meeting WHO standards for keeping and maintaining and transporting vaccines in immunization was standardized in line with WHO's standards and used by national EPI. It serves as a standard document to which provincial EPI mangers refer when they do planning and use their own local funds to procure cold chain equipment for immunization.
- For implementation of the national plan for introducing IPV vaccine in routine immunization, a first and second batch of 835,000 and 620,000 IPV doses is supplied for Viet Nam in April and September 2018 respectively.
- A national guideline on vaccine storage and management for provincial and district EPI staff is revised, updated. 2,000 booklets on vaccine storage and management and 2,000 posters on regulation on vaccine management are printed and distributed.
- 05 national staff has improved knowledge in vaccine and cold chain equipment procurement through participation to vaccine and CCE procurement workshops organized by UNICEF.

Immunization financing:

- Regarding financing for immunization, a list of immunization services and 04 immunization service packages were developed and customized. The 04 packages are: fully immunization for children under 1 year old, Hepatitis B birth dose, tetanus vaccination for women at reproductive age, and other vaccination for children from 1-5 years old. Costing of these packages is being conducted.
- National EPI developed a planning framework for immunization which helps provincial EPI managers being able to develop their local immunization plan with fund proposal which will be submitted to provincial authorities. All provincial EPI managers from 63 provinces of Viet Nam were trained and have improved knowledge and understanding of planning and mobilizing local funds for immunization (EPI funds was utilized).
- Immunization financing activities will be move under WHO's technical assistance in the revised Gavi transition plan which was endorsed and sent to Gavi by national EPI in June 7, 2018.

Utilization of Gavi's transition funds by UNICEF: as of 22 November 2018, funds utilization rate is 68.5% (USD 395,459.34 out of USD 577,800). Country Office has received the next transfer of funds of USD 400,000.

No cost extension until June 2020 is requested by UNICEF for those activities below:

- Develop and institutionalize equity focused planning and delivery of integrated services in immunization system in hard to reach areas with low coverage,
- Conduct operational research and surveys to support and sustain EPI,
- Technical assistance staff to ensure coordination and implementation of UNICEF-led immunization activities.

All of the above activities had been updated in the most recent Transition Plan that was reviewed and revised by all relevant partners during the GAVI assessment as of October 2018.

4.6. Technical Assistance (TA)

- ***Technical support to different levels :***

- Support EPI consolidating implementation action plans to increase vaccination coverage in 319 difficult communes of 22 mountainous/difficult districts of 13 provinces with low immunization coverage rate.
- Training for new EPI staff, re-training and update EPI knowledge, regulations, management for provincial health staff to become training facilitators for districts and commune levels. Training on strengthening AEFI investigation and surveillance skills of staff at all levels to assure timely response to AEFI cases, improving VPDs surveillance capacity of district and commune health staff.
- Developing documents, technical guideline: Immunization practice for provincial and district levels and a handbook on immunization practice for commune level, a handbook on AEFI surveillance, guideline on implementation of Hep B BD
- Technical support for procurement of DTP-HepB-Hib vaccine financed and co-financed by Gavi and Viet Nam
- Technical support for implementation of the CCEOP.
- Monitoring and feedback of quarterly immunization progress.
- Conducting supportive supervision to localities.
- Technical support for implementation of communication activities for routine immunization. Training for EPI and health staff at commune and village level on immunization communication skills and planning for immunization.

- Thank to support activities, significant results obtained in 2017 as follows:

- Quality of EPI was strengthened.
- Timely response to AEFI cases. Maintained community's truth in EPI.
- FICs for children under 1 year old maintained at high level of over 90%, increased coverage rate of HepB BD nationwide, especially in identified hard to reach communes.
- Improved VPDs surveillance outcomes.

- However, these activities were just only implemented in several localities, so, it is necessary to continue the implementation in other difficult areas to consolidate EPI, maintain sustainable obtained achievements.

5. UPDATE OF FINDINGS FROM PREVIOUS JOINT APPRAISAL

Prioritised actions from previous Joint Appraisal	Current status
1. Very delay for introduction of IPV in routine EPI	IPV vaccine was introduced in routine immunization for 5 months old children from August 2018 in 4 provinces as small scale implementation and from September 2018 as nationwide implementation.

2. A lot of refrigerators more than 10 years old still use for store EPI vaccines. Some of them broken during store vaccines.	Vietnam is receiving Gavi CCEOP support.
3. Replay Pentavalent (DPT-HepB-Hib) in routine immunization from Quinvaxem to ComBE Five product by Biological E. Limited, India, and MR vaccine product by SII, India by MRVAC product by POLYVAC (local production)	ComBE Five will be used from October 2018 and MRVAC product by POLYVAC was used in EPI from March 2018.
4. Information from Anti-vaccination Group on social media recently (2017) will impact to EPI vaccines coverage.	Implement the national communication plans for EPI focusing on demand generation and vaccine hesitancy, within IPV project and with UNICEF support. Communication activities for routine immunization and MR were carried out with UNICEF support in 2018. Support for implementation of activities to deal with anti-vaccination is on-going by WHO under the transition plan.

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 2019:

- ***IPV***

- Implementing plan of polio eradication:
  - Development and dissemination of plan of improving high coverage in difficult areas for 63 provinces.
  - Support difficult and remote areas on reaching high IPV and other EPI vaccines coverage rate. Surveillance and monitoring supportive supervision at all levels
- Communication on mass media about maintaining polio eradication. Organize events "Immunization week", including IPV introduction in Viet Nam
- Data management of vaccine and IPV immunization coverage, management and analysis AEFI data include serious AEFI case.

- ***Transition plan in 2019***

UNICEF: to develop the 2019 annual work plan on immunization with MOH/national EPI for implementation of the Gavi's transition funds. While detail sub-activities are included in the revised Gavi transition plan, main activities are as follows:

- Develop and institutionalize equity focused planning and delivery of integrated services in immunization system in hard to reach areas with low coverage.

- Conduct operational research and surveys to support and sustain EPI.

- Implement targeted community based communication tools to generate demand and build up trust to immunization in hard to reach areas with low immunization.

- Adapt and implement the media toolkit for AEFI and risk communication.

- Strengthen vaccine-specific national procurement capacity for more efficient tendering and negotiations in the medium- to long-term.

- Technical assistance staff to ensure coordination and implementation of UNICEF-led immunization activities.

  - Provide necessary support to PATH and EPI to conduct EVM assessment in quarter III-IV 2019.

Co-ordinate with MoH for preparation of CCEOP2 in a project co-ordinated with World Bank to support 13 difficult provinces.

WHO:

- Improve capacity of AEFI surveillance system, train provincial and district staff including health staff in hospitals on detection, reporting, investigation of serious AEFI case. Proposed 40 provinces to implement in 2019.
- Mobilise sustainable financial resource for EPI, guide provinces to plan and mobilise local budget.
- Improve capacity of EPI staff at all levels, train on immunization management for new provincial EPI staff in newly merged and re-organised provincial CDC centres.
- TOT training on EPI management for middle level.
- Increasing HepB BD: expanding model of house-to-house delivery of HepB BD vaccination
- Strengthen management of target population: (i) Revised and implementation of National Immunizations Information System and strengthen management of target population: TOT training for regions and provinces. (ii) Immunisation tracking for mobile population and migrants.
- Immunization checking before school entry
- Support planning for SIAs for MR and bOPV in high risk districts identified by low immunization coverage and hard to reach areas.

Activities of Transition plan: almost activities were not changed. One additional activity need to be conducted in order to support high risk areas to response to emerging of Vaccine preventable diseases in EPI (OPV, diphtheria, pertussis, etc), natural disasters, etc…: Budget for this activity was reallocated from activities of Sustainable financing.

Key finding / Action 1	Secure vaccines for EPI
Current response	Implementation of switch of pentavalent vaccine from Quinvaxem to ComBE Five
Agreed country actions	Training for EPI staff on switch of pentavalent vaccine, demonstration in small scale of 7 provinces, implementation nationwide then.
Expected outputs / results	Successful implementation of the switch
Associated timeline	October-December 2018
Required resources / support	GAVI supports, and government budget
Key finding / Action 2	Strengthen the cold chain system in EPI
Current response	Develop allocation quota for cold chain equipment for storage and transportation of EPI vaccine at different levels, supply continuously spare parts, and provide refrigerators to several districts affected by flood. Revise and finalize CCEOP1 project proposal in accordance with existing regulation in Vietnam.
Agreed country actions	Train for provincial levels on development of their own allocation quota for cold chain equipment and plan on cold chain equipment funded by local and central governments.
Expected outputs / results	Allocation quota for cold chain equipment will be approved by provincial People Committees. The CCEOP1 project will be implemented.
Associated timeline	December 2018
Required resources / support	GAVI support, and government budget
Key finding / Action 3	Advocate for allocation of local government budget for immunization operational costs at provincial, district and commune levels.
Current response	50/63 provinces located budget for immunization operational cost

Agreed country actions	Orientation workshop on Government Decision no. 1125/QD-TTg dated 31/7/2017, making annual EPI budget and action plan
Expected outputs / results	Annual EPI plan was developed by provinces that includes prioritized activities should be funded by local government in accordance with Decision no. 1125/QD-TTg
Associated timeline	December 2018
Required resources / support	GAVI TP/WHO, and government budget
Key finding / Action 4	Improvement of vaccine coverage in hard-to-reach areas
Current response	Allocation of central government budget for 8 most difficulty provinces in 2018
Agreed country actions	Train for HWs on immunization planning, supportive supervision, and for village HWs on EPI communication in hard-to-reach areas with low vaccination coverage
Expected outputs / results	Increase of vaccine coverage rate and immunization service quality in hard-to-reach areas
Associated timeline	December 2018
Required resources / support	GAVI TP/UNICEF/WHO
Key finding / Action 5	Strengthen MR vaccination towards measles and rubella elimination
Current response	Make plan on MR follow-up campaign for children under 5 years old in high-risk districts in 2018-2019
Agreed country actions	Implement the MR follow-up campaign in high-risk districts
Expected outputs / results	95% children from 1 to under 5 years old will be vaccinated with one dose of MR vaccine in high-risk districts
Associated timeline	June 2018 – December 2019
Required resources / support	GAVI supports and government budget
Key finding / Action 6	Introduce IPV into EPI nationwide and conduct bOPV SIA in high-risk areas in order to maintain polio eradication achievement
Current response	Conduct preparatory activities for IPV introduction into routine immunization for children under 1 year old. Make plan on bOPV SIA for children under 5 years old in high-risk areas
Agreed country actions	Introduce IPV into EPI for children under 1 year old nationwide. Finalize the plan on bOPV SIA for children under 5 years old in high-risk areas
Expected outputs / results	Children under 1 year old in the whole country will be vaccinated with one dose of IPV The plan on bOPV SIA for children under 5 years old in high-risk areas will be approved by MoH.
Associated timeline	June 2018: IPV introduction December 2018: approval of the bOPV SIA plan
Required resources / support	GAVI supports / government budget

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

8. ANNEX: Compliance with Gavi reporting requirements

	Yes	No	Not applicable
Grant Performance Framework (GPF) * reporting against all due indicators	x		
Financial Reports *	x		
Periodic financial reports			
Annual financial statement			
Annual financial audit report			
End of year stock level report (which is normally provided by 15 May as part of the vaccine renewal request) *	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)			x
Measles & rubella situation analysis and 5 year plan	x		
Operational plan for the immunisation programme	x		
HSS end of grant evaluation report			
HPV specific reports			x
Reporting by partners on TCA and PEF functions	x		