Joint Appraisal report 2017

Country	Myanmar
Full Joint Appraisal or Joint Appraisal update	Full Joint Appraisal
Date and location of Joint Appraisal meeting	26-30 June 2017, Nay Pyi Taw, Myanmar
Participants / affiliation[1]	See Annex
Reporting period	2016
Fiscal period[2]	1 April – 30 March
Comprehensive Multi Year Plan (cMYP) duration	2017 – 2021

1. SUMMARY OF RENEWAL AND EXTENSION REQUESTS

1.1. New and Underused Vaccines Support (NVS)renewal request(s)

Type of support (routine or campaign)	Vaccine	End year of support	Year of requested support	Target (population to be vaccinated)	Indicative amount to be paid by country	Indicative amount to be paid by Gavi
Routine	Pentavalent (DTP-HepB-Hib)	2021	2018	923,902	US$143,000	US$1,663,500
Routine	Inactivated Polio Vaccine	2020	2018	875,782	US$0	US$2,434,000
Routine	Pneumococcal	2021	2018	923,902	US$737,500	US$8,849,500

1.2. New and Underused Vaccines Support (NVS) extension request(s)

Type of Support	Vaccine	Starting year	Ending year

1.3. Health System Strengthening (HSS) renewal request

Total amount of HSS grant	In line with Gavi HSIS policy to allow HSS programmes approved in 2016 to access 100% of the ceiling, Myanmar's HSS2 budget ceiling will increase from US$52,000,000 to US$60,000,000. The increased HSS2 budget will support enhanced financial management arrangements following recommendations from the Programme Capacity Assessment, and will also be utilised for the CCEOP Joint Investment. The revised HSS2 budget will be reviewed and approved by the Gavi Secretariat in Q4 2017.
Duration of HSS grant	3 years The HSS2 grant was approved by the IRC in March 2016. Due to delays in completing the Programme Capacity Assessment and re-budgeting to incorporate CCEOP and additional/residual funding, the Decision Letter and first disbursement has not yet been issued.

[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.

	The start date is therefore expected to align with the first disbursement in Q4 2017.
Year / period for which the HSS renewal (next tranche) is requested	The first tranche of US$20,000,000 has already been approved through an Approval Request and will be communicated to the country through a Decision Letter in Q4 2017 upon finalisation of re-budgeting.
Amount of HSS renewal request (next tranche)	Not applicable

1.4. Cold Chain Equipment Optimisation Platform (CCEOP) renewal request

Total amount of CCEOP grant	Amount requested: US$6,580,068 CCEOP application was reviewed at June 2017 IRC and recommended for approval.	
Duration of CCEOP grant (from…to…)	Planned start date: August 2018 Duration of support: December 2019	
Year / period for which the CCEOP renewal (next tranche) is requested	Not applicable. First year of CCEOP support to be approved via Approval Request and Decision Letter following IRC recommended approval.	
Amount of Gavi CCEOP renewal request	Not applicable. First year of CCEOP support to be approved via Approval Request and Decision Letter following IRC recommended approval.	
Country joint investment	**Country resources**	US$0
	Partner resources	US$0
	Gavi HSS resources[3]	US$3,290,034

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

	Programme	Expected application year	Expected introduction year
Indicative interest to introduce new vaccines or request HSS support from Gavi	MR follow-up campaign	2018	2018
	Rota	2018	2019
	HPV	2018	2019

2. CHANGES INCOUNTRY CONTEXT SINCE LAST JOINT APPRAISAL

Immunisation in the Context of National Health Plan and Essential Package of Health Services

The new Government of Myanmar took office in April 2016, and under the new leadership of the Minister of Health and Sports, H.E. Dr Myint Htwe, Myanmar has been committed to ensuring the acceleration of achieving Universal Health Coverage (UHC) by 2030 and subsequently improving health outcomes of the Myanmar population. To attain UHC, the Ministry of Health and Sports has developed the National Health Plan (NHP) for the period 2017-2021. The NHP aims to strengthen health systems and increase access to the Basic Essential Package of Health Services (EPHS) to the entire population by 2020 while

[3] This amount must be included either in an earlier HSS approval or else in the current HSS renewal request in section 1.4 above.
[4] Providing this information does not constitute any obligation for either the country or Gavi, it merely serves for information purposes.

increasing financial protection. Immunisation service provision is well articulated in the EPHS which aims to ensure all children receive all 10 antigens as defined in the national routine immunisation schedule.

To ensure that EPHS delivers the primary intended impact, the NHP has been translated into an Annual Operational Plan, which focuses on the phased implementation of the EPHS and emphasizes an integrated approach for the implementation of vertical programmes. As stated above, immunisation is well defined as one of the key interventions in both the NHP and the NHP Annual Operational Plan. In the NHP (page 27) the Expanded Program on Immunisation is listed under the Communicable Diseases Program (program area 1).

EPI coverage by township (an HSS indicator) is one of the Health Output Scoring Index (HOSI). This composite index combines information on hospital bed occupancy rate, new TB case detection rate and EPI coverage. It is used for prioritization of townships to strengthen capacity for EPHS and also for monitoring and evaluation of NHP implementation.

The comprehensive multi-year plan (cMYP) for immunisation (2017-2021) and Gavi support for Health System Strengthen (HSS2 programme) are the pillars for the Myanmar National Immunisation Program to contribute to realizing the NHP objective and accelerating the delivery of EPHS. There is alignment between the NHP, cMYP and HSS2 common immunisation indicators including the impact indicators.

Myanmar National EPI program Review

Another key milestone accomplished in October 2016 was the International and National EPI Programme and Surveillance Review for Myanmar with the following key conclusions:

a) Myanmar has a rapidly evolving EPI which shows evidence of increased government commitment and a high level of engagement from the international community.

b) The country has successfully introduced a number of new and underutilised vaccines and is supported by a dedicated and hard-working staff.

c) However, there are complex social, cultural and political factors compounded by service delivery challenges

- leading to townships with low coverage and pockets of unimmunised children among urban poor and most well performing townships;
- under-reporting of diseases (including from private sector)

The key recommendation from the October 2016 EPI programme review included the following which will be supported by Gavi where appropriate:

a) Coverage and equity by improving service delivery through implementation of Gavi HSS2 project

- Develop a quarterly implementation plan and set up a high-level mechanism of oversight (Director General, Permanent Secretary or Minister)
- Demand generation: implement and evaluate the impact of communication activities
- Conduct training at regional and township levels to improve interpersonal and risk communication skills among basic health staff and volunteers
- Develop simplified materials on immunisation for communities and caregivers. Materials should be tailored to local languages and cultures.
- Capacity building and in-service training for managers and health personnel.

b) Measles elimination: i) conduct township level risk assessment and focus on improving routine immunisation in high risk areas; ii) improve case-based surveillance and outbreak response; and iii) conduct follow-up campaign in 2018 (apply for Gavi support).

c) New vaccine introduction; i) develop sustainable immunisation financing plan; ii) generate reliable evidence for decision-making on new vaccine introduction (e.g. Rota, HPV)

d) VPD surveillance; i) focus regional surveillance officer responsibility on VPD surveillance and EPI; ii) provide VPD specific refresher training to clinicians and health staff; and iii) increase laboratory confirmation and genotyping of cases (measles and rubella)

e) Immunisation supply chain: i) implement the activities under cold chain expansion optimization platform and HSS2; and ii) expand cold chain capacity within townships for current vaccines, accommodate JE, Rota and HPV introductions

f) AEFI surveillance: allocate budget for enhancing AEFI surveillance

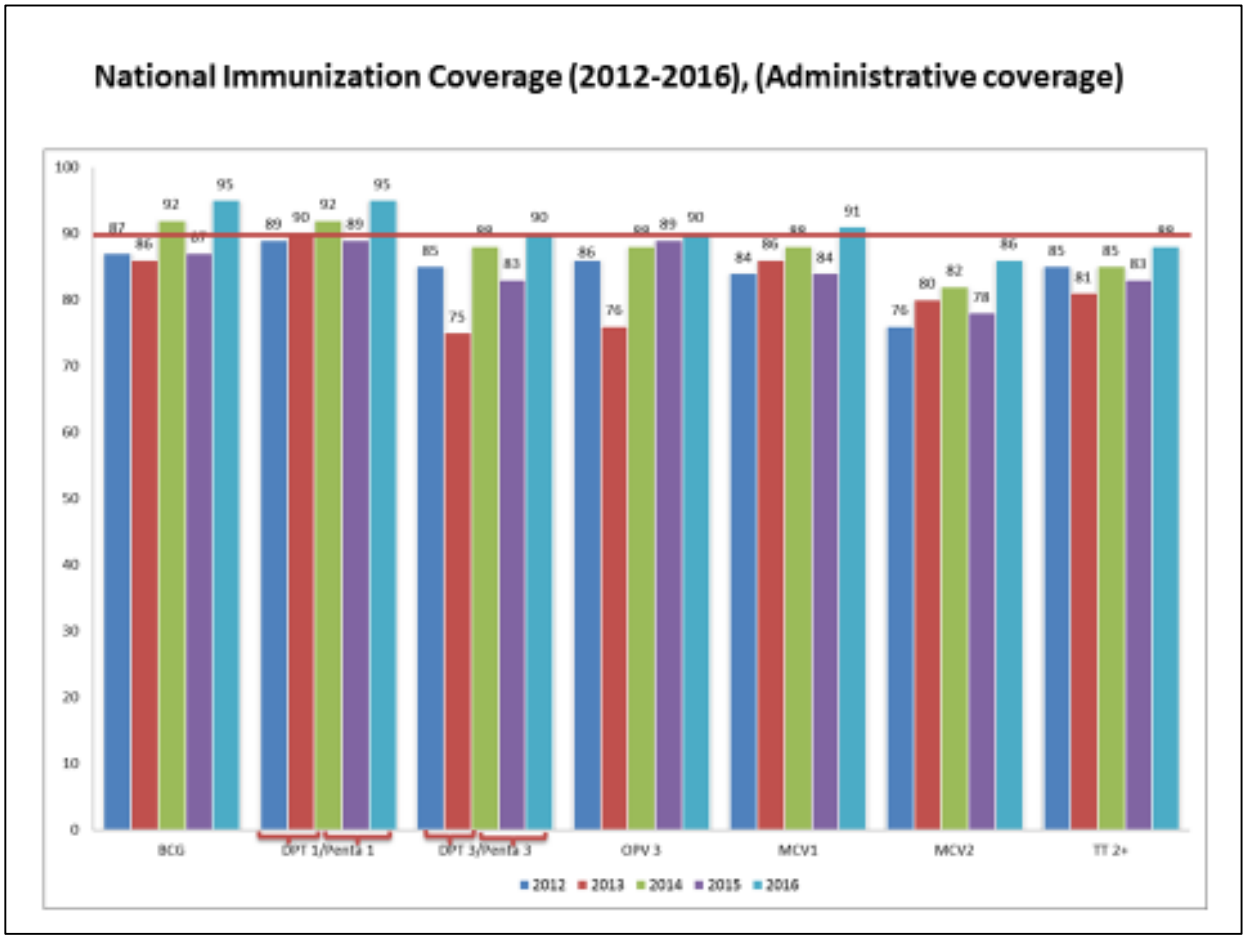
3. PERFORMANCE OF THE IMMUNISATION SYSTEM IN THE REPORTING PERIOD

3.1. Coverage and equity of immunisation

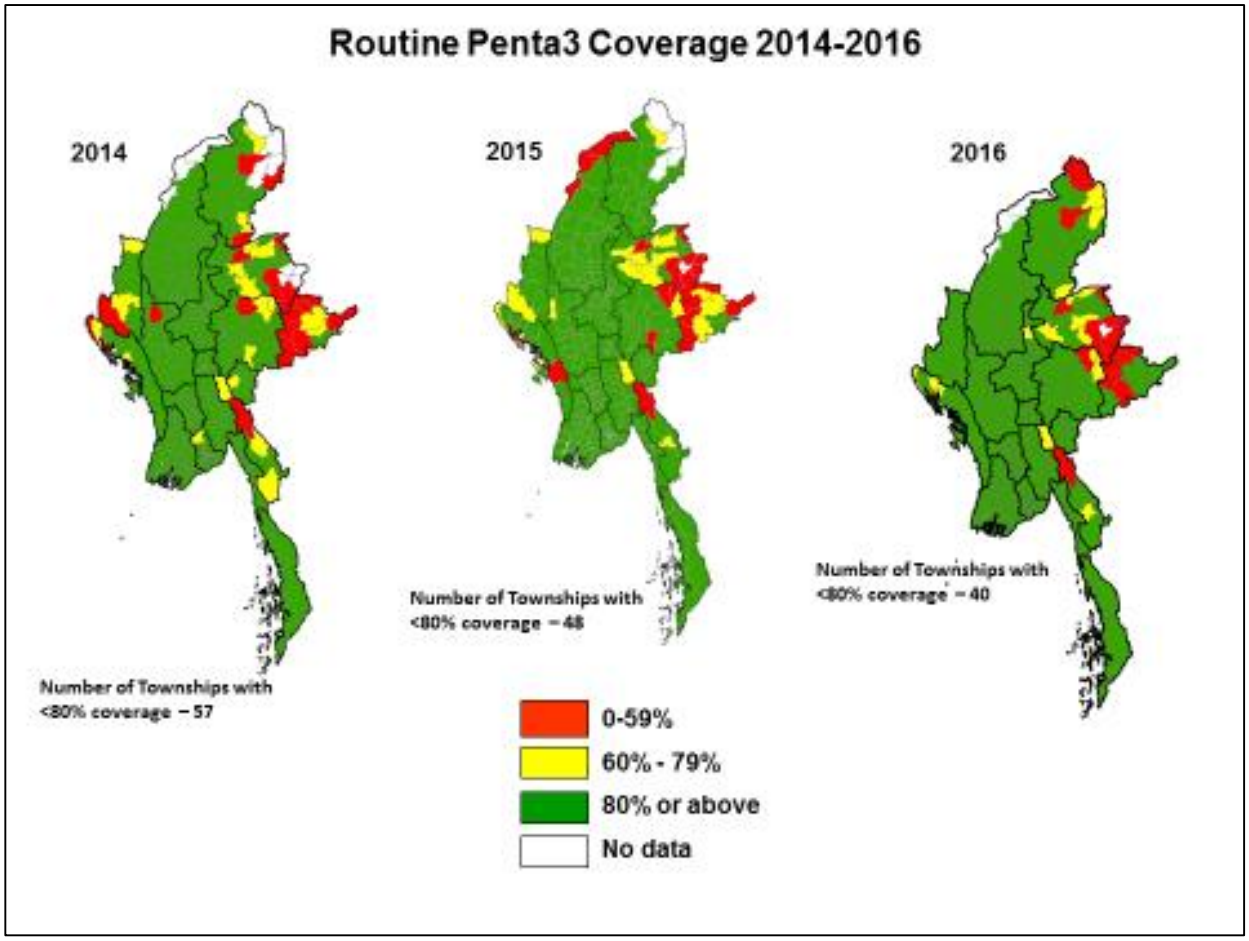
Immunisation Coverage

WUENIC estimates 2016 have been improved and aligned to national administrative coverage rates for all vaccines. The grade of confidence (GoC) remains in the lowest category as there is no independent recent survey data available.

According to the compiled national administrative coverage reports, in 2016 Penta3 coverage was 90% based on official estimates, while MCV1 and MCV2 were 91% and 86% respectively. MCV2 has gradually increased compared to previous years which ranged between 67% in 2015 and 82% in 2014.



Trend in Penta3 Coverage



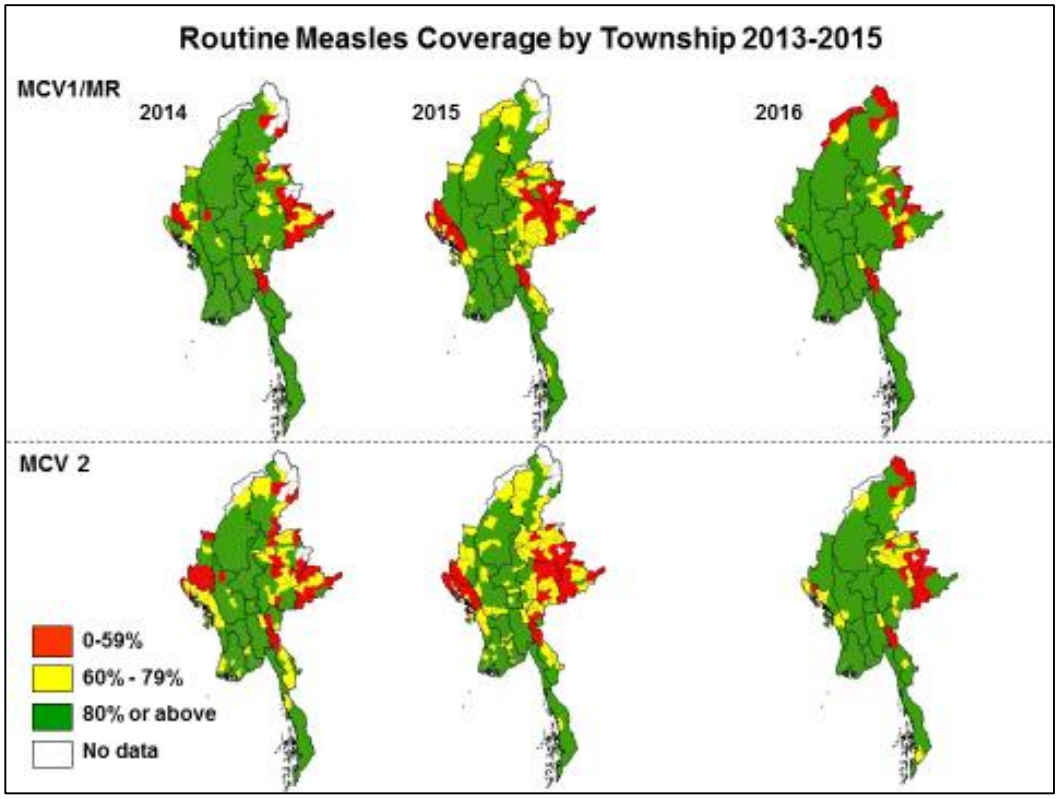
Penta 3 coverage trends in townships show significant improvement including in some areas which did not consistently report immunisation coverage (especially in Kachin and some areas in Shan North). The number of townships with Penta3 coverage below 80% continues to decline from 48 in 2014 to 39 in 2016. This decline has been very significant compared to previous years, especially in 2013 when more than 50% of the townships had Penta3 coverage of less than 80%. Despite the good progress, however, some states still have high numbers of townships with low coverage especially in Shan North (54%), Shan East (50%), Kayin (43%), Rakhine (28%) and Kachin (28%) as indicated in the map below.

Number of Townships with Penta3 < 80% coverage

Year	2012	2013	2014	2015	2016
No. of Township	116	183	57	48	39

State/Region	Total No. of Townships	Townships < 80% Penta3	
		Number	(%)
Kachin	18	5	28%
Kayin	7	3	43%
Mandalay	28	1	4%
Rakhine	17	5	29%
Sagaing	37	3	8%
Shan East	10	5	50%
Shan North	24	13	54%
Shan South	21	3	14%
Yangon	45	1	2%
Grand Total		39	12%

Measles First and Second Dose



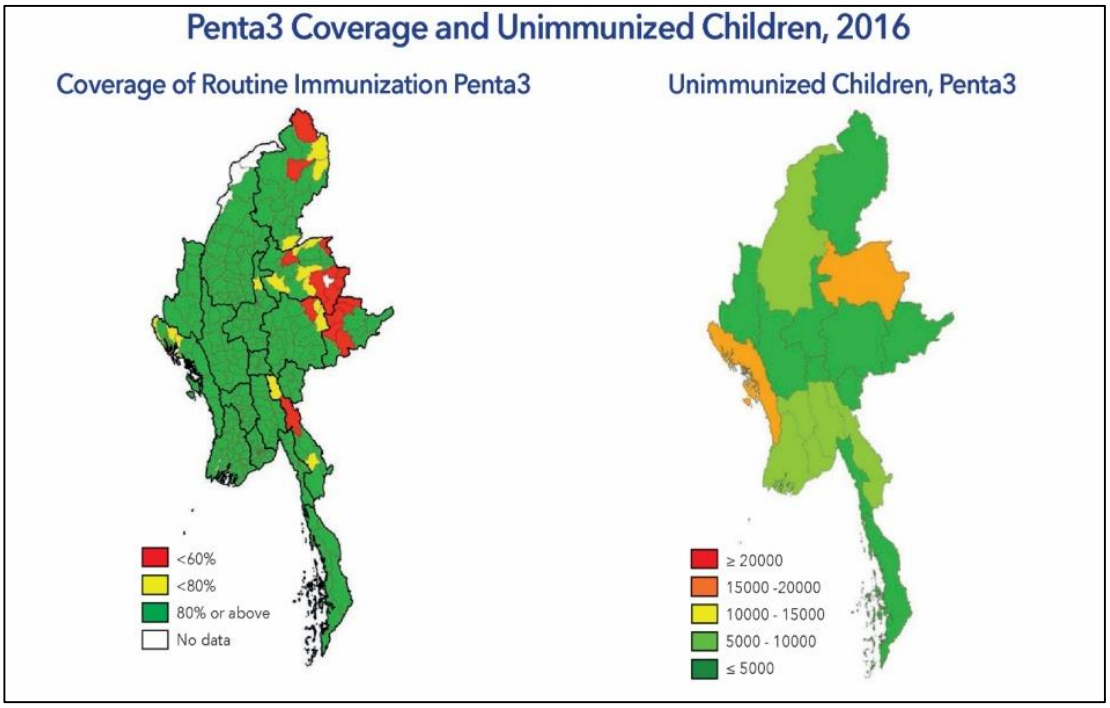
The overall coverage for measles first and second dose has increased in 2016 compared to 2014 and 2015. As indicated above, the coverage for measles first dose in 2016 was 91% and for the second dose 86%. However, despite this achievement there are some townships which still have very low coverage, mainly in Shan, Rakhine and Kachin states.

IPV and PCV

The nationwide reported coverage for IPV in 2016 was 72%. The global shortage of IPV and the need for the country to prioritise high risk areas (potential for possible polio outbreaks) has meant that most townships were not able to receive regular supply and therefore contributed to the low coverage for IPV.

PCV was introduced into routine immunisation in Myanmar on 1 July 2017 and therefore, the PCV coverage reported in 2016 was 45% for PCV1 and 14% for PCV3. The initial date of introduction was 1 January 2016, however, due to circulating Vaccine Derived Polio Virus (cVDPV) outbreak in April and October 2015, the introduction of PCV was delayed to provide an opportunity to implement a series of polio immunisation campaigns in various townships during the period January to May 2017. This delays explains the reason why the reported coverage of PCV is lower compared to other antigens.

Number of Unimmunised Children



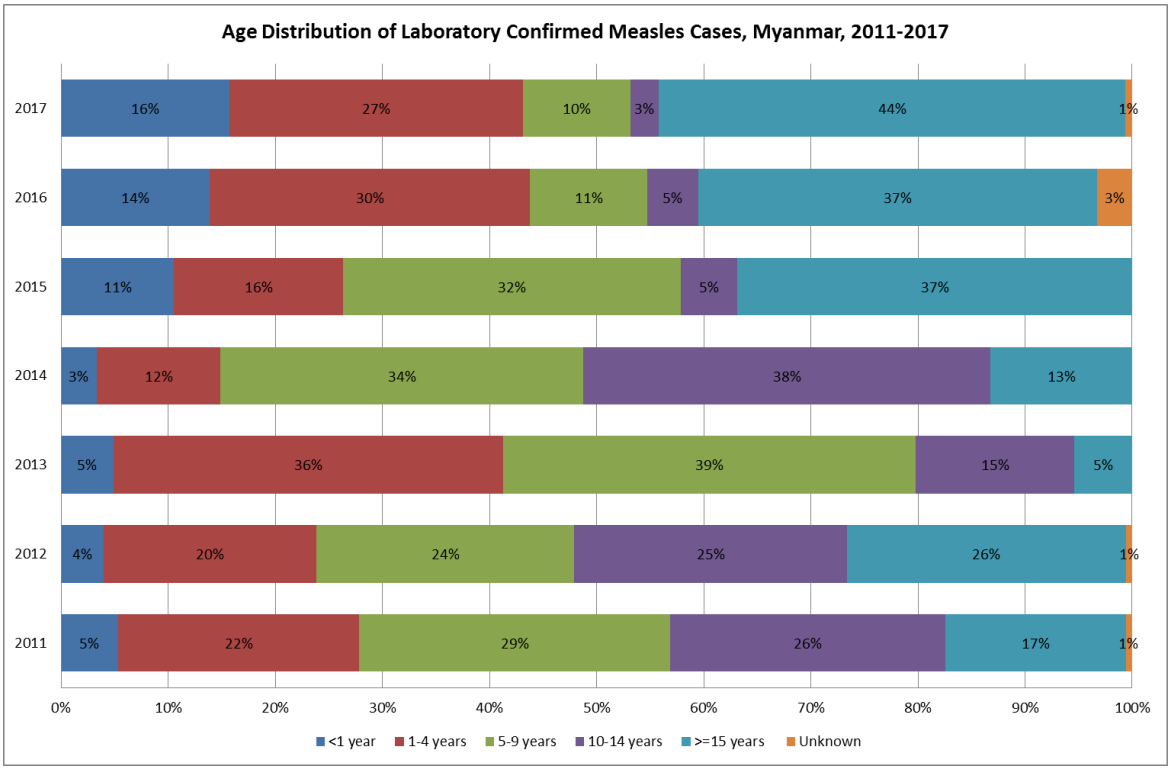
It was reported that in 2016, a total of 93,798 children were not vaccinated with Penta3. Despite good progress in decreasing the number of unimmunised children, pockets exist mainly in Rakhine and Shan North states. This is mainly due to the ongoing conflicts and geographically hard-to-reach areas. The challenges are elaborated in section 3.2 below.

Age group and vaccination status of confirmed measles cases 2016

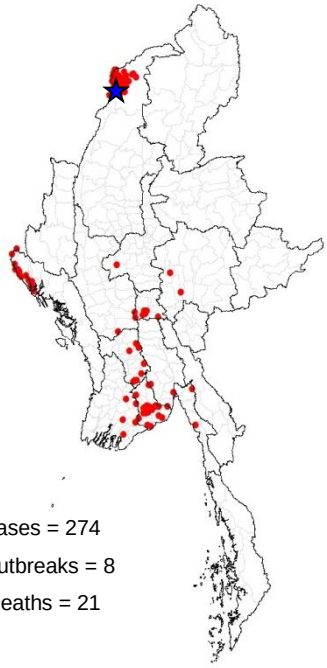
MCV Dose	Age group						
	Group1 0-11 Months	Group2 1-4 Years	Group3 5-9 Years	Group4 10-14 Years	Group5 15+ Years	Group9 Unknown	Grand Total
0 Dose	35	54	15	8	59	6	177
1 Dose	3	18	10	4	23		58
2 Doses							0
>= 3 Doses							0
Unknown		10	5	1	20	3	39
Total	**38**	**82**	**30**	**13**	**102**	**9**	**274**

Age group and vaccination status of confirmed measles cases 2017, as of 31 August

MCV Dose	Age group						
	Group1 0-11 Months	Group2 1-4 Years	Group3 5-9 Years	Group4 10-14 Years	Group5 15+ Years	Group9 Unknown	Grand Total
0 Dose	147	206	85	18	278	7	741
1 Dose	14	36	6	3	48		107
2 Doses	2	36	14	5	18		75
>= 3 Doses		3	2	1	2		8
Unknown	15	29	6	3	147		200
Total	**178**	**310**	**113**	**30**	**493**	**7**	**1131**

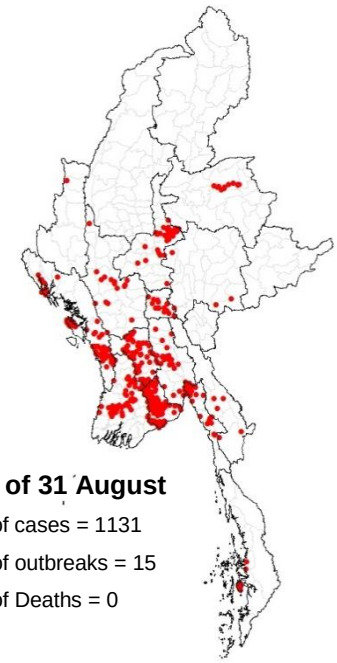


Distribution of measles cases



1 Dot = 1 case

Deaths



2016

Total no. of cases = 274

Total no. of outbreaks = 8

Total no. of Deaths = 21

2017 as of 31 August

Total no. of cases = 1131

Total no. of outbreaks = 15

Total no. of Deaths = 0

Equity analysis based on DHS findings (2015/2016 DHS Report)

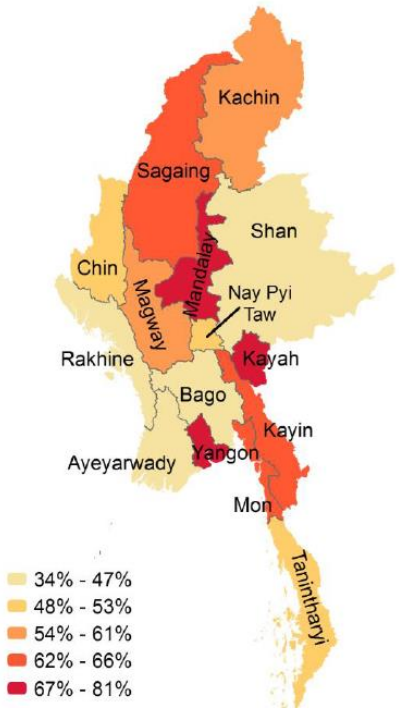
	% of Full Immunisation	95% Confidence Interval	OR	95% CI	P value
Area of Residence					
Urban	**67.8**	**60.4- 75.2**	**0.493**	**0.329-0.74**	**0.001**
Rural	**50.9**	**45.2-56.6**			
Wealth Index					
Poor	**41.4**	**34.9-47.8**	**3.17**	**2.26-4.47**	**0.001**
Middle and rich	**69.2**	**63.9-74.5**			
Mother's education					
No Education/ primary	**51.2**	**45.0 – 57.5**	**1.51**	**1.09-2.09**	**0.01**
Secondary/Higher	**61.4**	**56.0 -66.9**			
Gender					
Male	**58.2**	**52.3- 64.2**	**0.76**	**0.55-1.06**	**0.108 (statistically not significant)**
Female	**51.7**	**45.6-57.8**			

The DHS findings (pages 141-144) indicate that there is a marked difference in vaccination coverage by residence, especially for the third dose of Penta (75% in urban areas and 58% in rural areas). The percentage of children age 12-23 months who received all basic vaccinations varies across the country, ranging from a low of 34% in Ayeyarwady Region to a high of 81% in Mandalay Region. Vaccination coverage improves substantially with increasing mother's education. For instance, 80% of children whose mothers have more than a secondary education are fully vaccinated, as compared with only 41% of children whose mothers have no education. Children living in households in the highest wealth quintile (77%) are much more likely to be fully vaccinated than those living in households in the lower two quintiles (41%).

Although the DHS report provides useful information for the central EPI to consider, there are some limitations noted in the overall methodology, particular on the sample size used to reach conclusions in some of the states/regions. It has been noted that some of the states/regions have a very small sample size which in one way or another could be used to make a final conclusion when considering the coverage for a specific state/region. (Total nation sample size of children is 852 , sample size for some State and Region is very small e.g. Chine= 11, Kayah =6 ,Nay Pyi Taw =18.)

In addition, the caregiver who had the immunisation card seen was only 45%. That means the remaining 55% of caregivers relied only on history/recall for the surveyed period, making somehow difficult to respond correctly on the type of vaccines reported. Therefore, these reasons could justify why there is a difference between the administrative coverage and the DHS coverage. Having realised this challenge, the central EPI is now planning to conduct the coverage evaluation survey to be supported through Gavi HSS2. This survey will be conducted after the JE immunisation campaign and will provide an opportunity to evaluate the JE campaign coverage as well. WHO will be sending an external consultant in July 2017 to assist in the planning of the coverage evaluation survey. The plan is to have a representative sample to evaluate coverage in each region/state and at the national level for vaccines given in the first year and second year.

Vaccination Coverage by State/Region (DHS 2015/2016 Report)



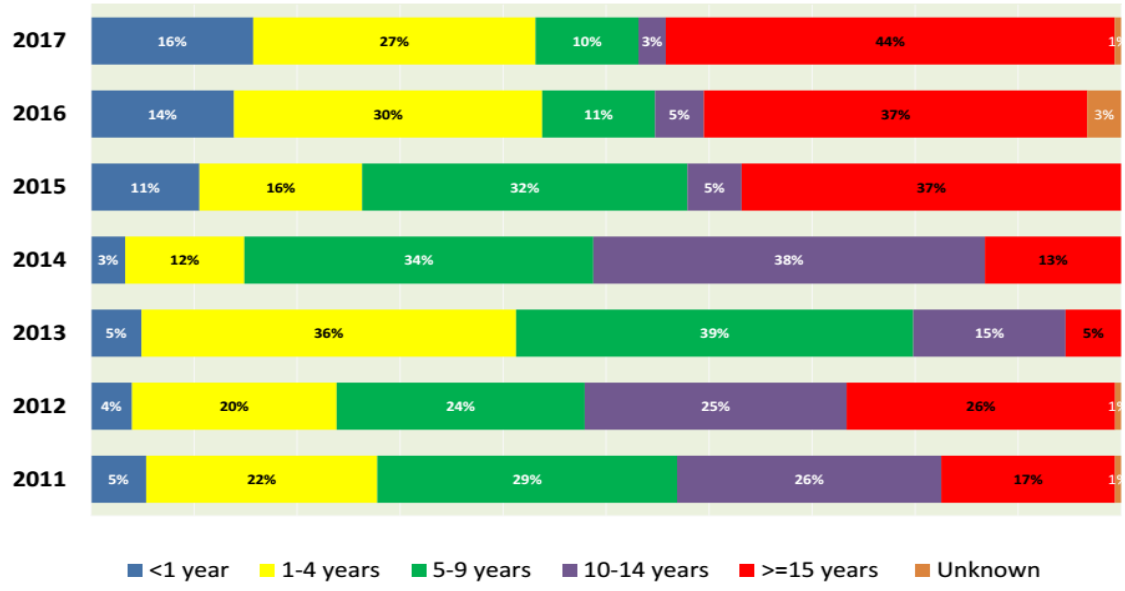
Trends in Disease Outbreaks

Myanmar has made significant progress in reducing the incidence of vaccine preventable diseases due to the increase in immunisation coverage in most of the townships. However, despite this progress, there

have been sporadic cases of vaccines preventable diseases reported in various parts of the country. The number of measles cases reported in 2016 and in early 2017 has increased compared to 2014 and 2015. The age groups mainly affected are those who were not reached by the 2015 nationwide campaign (among adults and also in very young children).

Age Groups	2016	2017
0-11 Months	38 (14%)	178 (16%)
1-4 Years	82 (30%)	310 (27%)
5-9 Years	30 (11%)	113 (10%)
10-14 Years	13 (5%)	30 (26%)
15+ Years	102 (37%)	493 (44%)
Unknown	9 (3%)	7 (0.6%)
Total	**274**	**1131**

Age Distribution of Laboratory Confirmed Measles Cases, Myanmar, 2011-2017 (as of Aug 2017)

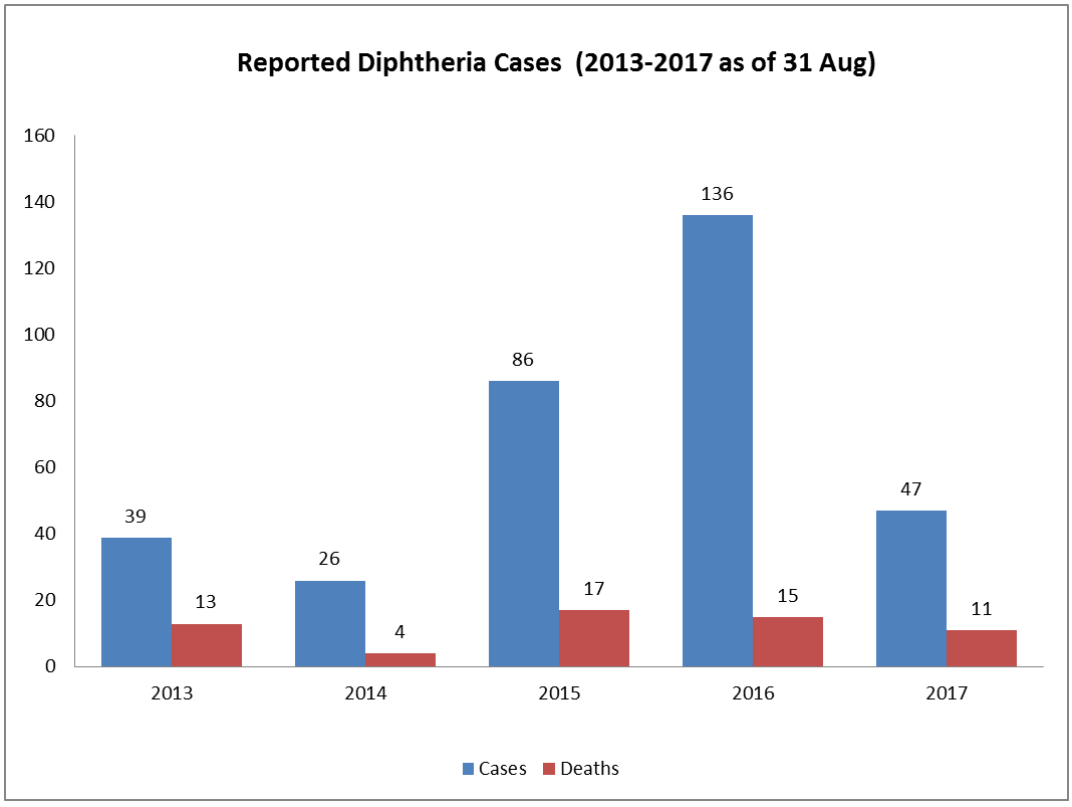


Age distribution of Lab confirmed Measles cases in Myanmar 2016 and 2017 (as of August)

Incidence of VPD in Myanmar (2013-2017)

	2013	2014	2015	2016	2017 (May)
Diphtheria	38	29	87	136	34
Japanese encephalitis	3	50	113	393	75
Measles	1010	122	6	266	896
Pertussis	14	5	5	2	4
Polio*	0	0	0**--	0	0
Rubella	23	30	34	7	2
Neonatal tetanus	39	32	30	22	5

The cases of diphtheria reported in 2015 and 2016 are high compared to the previous years in 2013 and 2014. The reported diphtheria cases increased due to both increased awareness among health professionals and the improved surveillance system. The current national immunisation schedule does not include booster dose of diphtheria toxoid. Therefore, the NITAG in its meeting in October 2016 recommended that DT booster should be given at 5 years of age in school entry and TT for pregnant mothers should be replaced by Td. The central EPI decided to switch from TT to Td in April 2017.



3.2. Key drivers of low coverage/ equity

For more complete description and analysis of coverage and equity challenges, please refer to the HSS2 application and Joint Appraisal 2016. The challenges remain valid and the below have been highlighted from the JA discussions in-country.

Key Challenges to coverage and equity

- **Geography, ethnicity, internal conflict, migration and health system limitation**: Most of the missed children are from hard-to-reach areas; conflict and/or ethnic areas; and children in "special populations" (e.g. migrants, displaced children, peri-urban slum dwellers, orphans and children cared for in religious settings).
- **Human resource limitations:** Sanctioned posts have not expanded in growing urban areas; lack of sanctioned posts for the immunisation supply chain, Cold Chain Key Persons, data focal person. Some of the human resources challenges are also evident in urban areas like Yangon where the population growth is not proportionate with the number of available midwives, and in some geographical hard-to-reach areas some midwives have to cover large catchment areas with high number of villages.
- **Capacity and skills:** Inadequate training in certain subject areas (e.g. preventive maintenance of cold chain, monitoring and supervisory skills, use of data for action, management and leadership skills and capacity)
- **Funding issues**: Insufficient government budget for operational costs (field allowances for midwives, vaccine transportation, outbreak response, supervision and monitoring).
- I**nadequate demand generation and interpersonal communication skills of health staff** to address the fear of AEFI and concerns regarding the administration of multiple injections at a single visit (risk communication). Limited knowledge of parents and the community about the vaccines and vaccine preventable diseases as well as low retention of immunisation cards.
- **Inadequate capacity in financial management**: Complicated and slow financial management processes to channel funding to the districts and townships.
- **Supply chain issues**:
    - **Limited real-time monitoring and tracking system for supply chain** including cold chain inventory and functionality. Lack of sufficient storage space for dry stocks. This also is compounded by inadequate stocks and delayed distribution of supply chain management and reporting tools.
- **Limited number of immunisation days** (first few days of each month) due to limited vaccine distribution points and availability of cold chain storage facilities at lower service delivery points of townships and rural hospitals. In addition there is no mechanism to transport vaccines from vaccine distribution points to the immunisation clinics. Therefore, midwives (vaccinators) are compelled to collect vaccine from the vaccine distribution points at townships and complete all immunisation clinics in the assigned area within 72 hours before ice packs are melted. This has given rise to conducting 2-3 clinics in one day and also injection safety issues such as reconstituted BCG and measles vials being taken to other centers.

Progress in the implementation of EVM Improvement Plan

The current EVM Improvement Plan was developed following the 2015 Effective Vaccine Management Assessment (EVMA). This Improvement Plan is for the period of 6 years from 2016 to 2021 with an estimated budget of US$43 million. Most of the activities are expected to be funded through the Gavi HSS2 programme (2017-2019/20).

The central EPI in collaboration with partners is committed to ensuring that most of the activities in the Improvement Plan are implemented according to the proposed timelines. Some of the activities have been initiated and ongoing, while some have already been completed. Some of the progress already made includes:

a) cEPI is in process of establishing eLMIS in the country for reporting and manging the immunisation data including logistics and cold chain. The eLMIS is in the design phase.

b) cEPI has taken the following measures to improve the temperature monitoring at all levels:

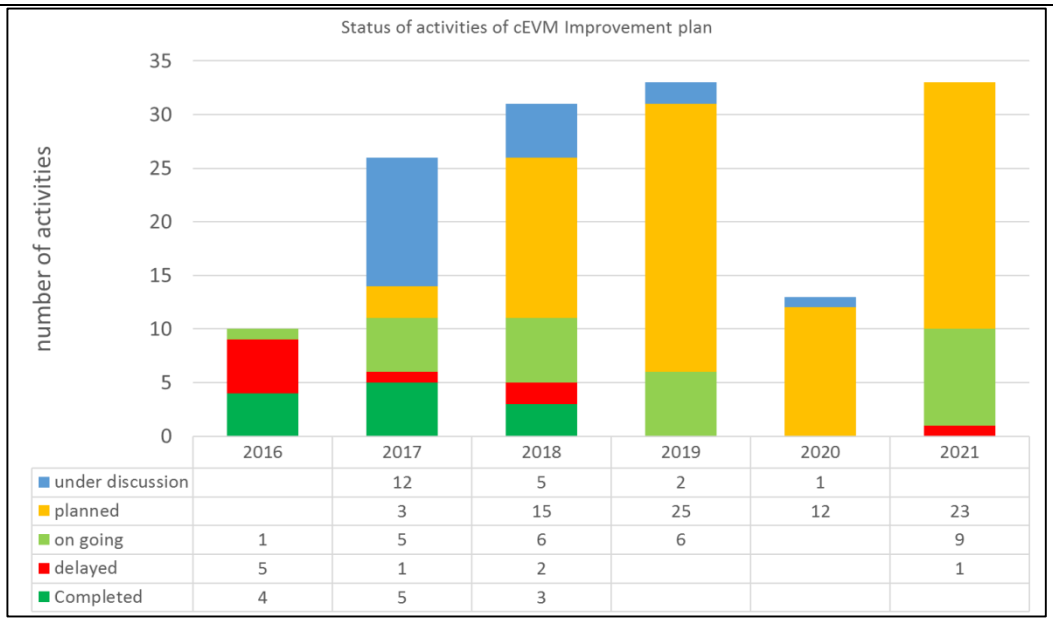
- UNICEF ordered the 30 DTR for all locations (30-day electronic temperature loggers).
- All cold rooms at CCR (Capacity Constraint Resource) and Sub-depot have been installed with central temperature monitoring systems (Berlinger Smartview)
- All cold rooms are mapped and previously mapped cold rooms are remapped: One cold room at the national store has been mapped already as part of national training on how to do mapping using recent WHO guidelines. UNICEF procured the Berlinger mapping kit to conduct the exercise at all the cold rooms. The activity is now ongoing and expected to be completed by October 2017.
- Non-functional fridge tags or fridge tags with low battery warning indicated are replaced. All vaccine refrigerators are fitted with fridge tags, personnel are trained and record sheets adapted.

c) cEPI plans for the Department of Public Health to act as a hub for a centre of excellence. The training programs have been budgeted under the HSS2 proposal (the funding of HSS2 is yet to be disbursed to country).

d) The terms of reference for the EVM Secretariat for Myanmar have been developed and the central EPI is in the process of establishing the Secretariat. The first inception meeting was held and a workshop is planned for Q1 2018.

However, implementation of some EVM activities has been delayed as most of these activities are expected to be funded through the Gavi HSS2 grant. Implementation is therefore expected to accelerate once the Gavi HSS2 funds are disbursed to the implementing lead. The graph below indicates the progress in the implementation of EVM improvement (more details can be found in the EVM Improvement Plan progress report pages 20-47). The following are the activities which have been delayed:

1) Facilitation of Cold Chain Technicians training (10 days/session)
2) Technical support to Ministry of Health and Sports in the procurement of outsource services for various aspects especially transport and distribution of supplies as well as cold chain repair, maintenance and installation.
3) Support in outsourcing transport and distribution services for EPI supplies (this is also in line with 2 above).
4) Ensuring that all cold chain facilities are equipped with fire extinguishers.
5) Procurement of electric forklift truck for central cold rooms for simplification of supplies handling and management at central vaccine store.
6) Technical support in the Waste Management Survey design and project oversight.
7) Ensuring that the EVM SOPs are developed, trainings are conducted and SOPs are customised at all levels.



	2016	2017	2018	2019	2020	2021
under discussion		12	5	2	1	
planned		3	15	25	12	23
on going	1	5	6	6		9
delayed	5	1	2			1
Completed	4	5	3			

Furthermore, it is important to note that most of the activities which are planned from 2017 to 2021 are likely to be delayed further unless funds from HSS2 are disbursed. As indicated above, nearly 60% of all activities in the Improvement Plan are depending on Gavi HSS2 funds. cEPI and partners are committed to accelerate implementation and monitor progress of the EVM performance.

Recommendations for effective implementation of EVM Improvement Plan (2018-2021)

- cEPI and partners to jointly review the status of planned and ongoing activities and take urgent measures on activities that are delayed, including prioritisation.
- All delayed activities should be reviewed urgently, and follow-up action taken to initiate implementation once funds are made available.
- Consider establishment of EVM Secretariat at national level as indicated in the EVM Improvement Plan.
- Conduct mid-term review on the EVM Improvement Plan performance and undertake prioritisation based on available funds and the current needs.

3.3. Data

Key challenges:

- **Unreliable and/or inaccurate denominator** mainly in peri-urban, conflict, geographically hard-to-reach and ethnic armed controlled areas makes it difficult to determine the actual coverage and supply requirements.
- **Supply chain data:**

  Limited availability and quality of regular supply chain data like wastage, vaccine and dry stocks status and functionality of cold chain equipment leads to difficulties in monitoring the performance of the supply chain.

  An Immunisation Supply Chain Data Use assessment in Myanmar was conducted during the period May - October 2016. The assessment pointed out that Myanmar does not have indicators for monitoring immunisation supply chain performance, there is limited analysis and use of supply chain data at both national and subnational levels and visualisation through dashboards is limited. Following this assessment, the Immunisation Supply Chain Data Use manual was developed including the revision of current immunisation supply chain tools. The implementation plan based on the assessment recommendations was also developed (refer the immunisation supply chain data use assessment report – October 2016).

Recent Data Quality Self-Assessment and drafting of Strategic Data Improvement Plan

Overview:

- Well documented (e.g. in previous Joint Appraisals) challenges related to denominators, recent large downward adjustment in population estimates, as well as discrepant coverage estimates (recent DHS and surveys inconsistent with the data the programme collects through its own system).
- An in-depth data quality self-assessment (DQSA), with technical assistance from WHO was recently completed in Myanmar (2012 was the last time data quality was comprehensively assessed).

Recent DQSA summary:

- The assessment took place from 1-10 August 2017 with participation by central and regional staff from EPI and HMIS groups, WHO, UNICEF and Gavi Alliance staff.
- The assessment focused on coverage data, and included vaccine usage data for triangulation purposes. Surveillance data were not included at this time. The assessment focused on the EPI system and data, but EPI data were compared to the equivalent data from HMIS where possible.
- 16 teams went out to 8 states and regions. Sampling included townships, regional health centers, urban health centers and sub-regional health centers and a total of 160 children were sampled.
- Gavi funds were used to support the DQSA.
- Following data collection, all teams came together to share key findings in terms of strengths, weaknesses and recommendations across recording, reporting, denominators, data analysis and use and community verification.

Key findings and recommendations feeding into a strategic data improvement plan:

- Overall, the assessment concluded that the system appears to work quite well for *registered* populations, with largely positive findings related to recording and reporting practices (although perhaps overly burdensome / complex at times).
- Main challenges identified relate to denominators.

10 draft recommendations were then developed to make up the basis of a strategic data improvement plan. These recommendations build upon and compliment other recent assessments/ reviews, including the 2016 EPI and VPD surveillance review and the 2016 Myanmar immunisation supply chain data use report. Note that some recommendations relate to work already underway. These recommendations were debated and ultimately supported during a debriefing with high-level representatives from EPI, Population, HMIS and public health divisions.

1. Revise targets and denominators to ensure that all children are included (to end potential exclusion or underestimation of migrants, informal settlements etc.);
2. Further align EPI and HMIS (e.g.: align timelines and data flows, clarify roles and responsibilities etc.);
3. Advance eHMIS and eLMIS integration (aligning with already agreed plans related to commitment to use single platform – DHIS2 – with single data entry at township level);
4. Ensure the availability of reporting forms and vaccination cards;
5. Update and consolidate SOPs for use of all tools (development of comprehensive handbook for data recording, reporting, review, analysis and use and develop standardised feedback template for all levels);
6. Integrate data quality checks in supervision practices;
7. Develop a comprehensive training strategy;
8. Consider recruitment of a designated data analyst at state and region level;
9. States and regions to conduct in-depth data quality self-assessment for their townships periodically;
10. Organise technical working group review meetings.

Next steps:
Q3 2017:

- Further refinement of recommendations (e.g.: consider recommendation around more in-depth assessment of surveillance data)
- Translate recommendations into milestone-based data quality improvement plan (time-bound deliverables, designate lead responsible agencies / teams)
- Allocate budget for improvement plan implementation (consider Gavi HSS for funding)
- Endorsement of finalised improvement plan

Q4 2017 onwards:

- Begin implementation as per plan, with regular monitoring of progress against milestones (including as part of annual Joint Appraisals).

3.4. Role and engagement of different stakeholders in the immunisation system

The new Government of Myanmar has made efforts to strengthen collaboration and coordination with all development partners and donors. The National Health Plan (2017-2021) also puts an emphasis on strengthened collaboration with key stakeholders.

National Coordination Forum: the ICC has been conducting regular meetings in 2016 and 2017, which included the review of EPI work plans and proposals as well the recommendation of the new vaccine support renewals. The Cold Chain Equipment Optimization Platform (CCEOP) proposal and the 2018 vaccine renewals were endorsed by the ICC in May 2017. The ICC structure has been revised to ensure high level representation of all key departments in MOHS, UN agencies, NGOs and Donors. The Chair is the Permanent Secretary of the Ministry of Health and Sports.

Civil Society Organization and INGOs: CSOs like Myanmar Maternal and Child Welfare Association (MMCWA) have been involved in supporting immunisation service delivery. MMCWA have also been actively involved and participating in the ICC activities at central level. Some of the INGOs are continuously providing support to immunisation services, especially in conflict affected areas in Kachin, Shan (North and East) and Kayin states, including working with Ethnic Health Organizations (EHOs). In addition, CSO/NGOs have been supporting townships and health workers in mobilising communities to increase awareness and demand for immunisation services including immunisation campaigns. MMCWA is also a potential partner for demand generation activities in urban and peri-urban areas, such as awareness raising, community talk, defaulter tracking and social mobilisation activities.

Other Donors: A key donor in Myanmar is the 3MDG Fund which has been supporting the delivery of integrated health services in selected townships. The 3MDG Fund (through UNICEF) has also supported the cold chain expansion and replacement activities in Myanmar. In addition, the World Bank continues to provide an IDA loan to the Ministry of Health and Sports in planning and implementation of the Essential Package of Health Services in the context of the National Health Plan. The Ministry also received support in cold chain and vaccine procurement from the Japan Committee "Vaccines for the World's Children" (JCV) which has contributed nearly US$8 million over the past 7 years.

Private sector: Most of the immunisation services in Myanmar are provided by the public sector (government health facilities), while the private sector provides some vaccines to a very small segment of the urban population. However, with the current establishment of hospital based immunisation sessions in major government hospitals it is anticipated that most caregivers will seek services from these facilities due to the fact that vaccination services will be available on a regular basis throughout the month. There have been challenges in receiving immunisation data from private service providers, however this is not a major issue for Myanmar because all routine vaccines in Myanmar are provided through public facilities and the Government does not issue vaccines to the private service providers. The private sector mainly provides vaccines which are not included in the national EPI programme (e.g. MMR, Rota, HPV, and Influenza). To ensure that the private sector understands the immunisation policy, the central EPI is planning to actively involve them to ensure they can refer children to immunisation sessions in public health facilities so that they can receive all vaccines recommended by the country. In addition, the private sector will be oriented to help in reporting all suspected cases of vaccine preventable diseases. Currently, the private health sector is not involved in the routine VPD surveillance system.

Cross-sectoral collaboration: The Ministry of Health and Sports has been working closely with the Ministry of Education especially in planning for the nationwide JE campaign. In addition, the Ministry of Education will play a key role in checking for the immunisation status at school entry and when the booster dose for some of the vaccines will be introduced. Furthermore, the Ministry of Health and Sports is working closely with Ministries of Defence, Border Affairs, General Administration Department, State and Region local governments (reaching conflict affected areas, self-administrative regions and schools managed by these ministries), and as well the Ministry of Communication especially for the involvement of media.

Media

The Ministry of Health and Sports has been working very closely with the media especially in ensuring that they understand the value of immunisation so that they can subsequently inform the general public on the importance of immunisation. The following were the key activities of involvement with the media in 2016:

a) Participated in the national launching of PCV introduction by organizing a series of media advocacy workshops in Yangon and Nay Pyi Taw before the launching. In addition, the media participated actively during the launching and the events were widely covered by key media outlets in Myanmar (TV, Radio, newspapers).

b) The media supported the airing of TV talk shows involving key EPI staff as well as technical experts (the TV talks mainly focused on the importance of immunisation and the types of vaccines provided in routine immunisation in Myanmar).

c) The famous TV channel in Myanmar (MRTV) supported in airing the folk media (Anyeint) which is a theatrical performance which involved a group of highly celebrated comedians in Myanmar. This performance generated a lot of discussions among the general public on the importance of immunisation.

4. PERFORMANCE OF GAVI GRANTS IN THE REPORTING PERIOD

4.1. Programmatic performance

Improved coverage and efforts made to reach uncovered areas

As stated in the previous sections of this report, Myanmar has made a good progress in 2016 towards achieving and sustaining high immunisation coverage, and hence is on course to attain the agreed targets. As reported, coverage for Penta3, MCV and MCV2 increased in 2016 compared to 2015 and this has been reflected in the WUENIC estimates. The collaborative efforts to reach previously uncovered areas by Government, Ethnic Health Organizations (EHOs) and partners mainly contributed to this progress. However, there are still under-served populations and gaps include migrants, urban poor, rural remote and areas of insecurity. Regular outreach sessions are often constrained by lack of funds for the travel of health center staff, especially to more geographically hard-to-reach areas.

Progress against the country's measles-rubella 5 year plan

The National Strategy for elimination of Measles, Rubella and Congenital Rubella Syndrome was endorsed by the ICC in 2017.The strategies are strengthening routine immunisation coverage, surveillance of fever with rash cases, supplementary immunisation activities whenever necessary and effective treatment. Although national coverage of MCV1 and MCV2 increased from 84 % and 78 % in 2015 to 91 % and 86 % in 2016 respectively, townships with more than 95% coverage of MCV1 and MCV2 only number 150 (45%) and 85 (26%) townships. Although there was decline in the number of measles cases following the nationwide campaign in early 2015, in late 2016 and early 2017, some townships have reported measles cases even in areas with reported high coverage. Most of the recent cases were reported in Yangon, especially in townships with the highest number of migrant populations and urban slums. In addition, an outbreak was also reported in the Nagaland, one of the hard-to-reach areas in Sagaing region with limited health services access. Therefore, the low coverage rates of measles in some townships compounded with sporadic measles outbreaks poses significant challenges towards attainment of measles elimination and control of rubella/Congenital Rubella Syndrome (CRS) by 2020. In addition, Myanmar plans to replace the second dose of measles with MR vaccine in August

2017. This will contribute in reducing high wastage rate as well as attaining measles elimination and control of rubella/CRS targets.

Another important milestones has been the smooth taking over of the procurement of measles/rubella second dose by the Government after Gavi support for measles second dose will come to an end in October 2017. The Ministry of Health and Sports has already procured the vaccines through UNICEF and also included resources in the 2017/2018 budget to cover the needs until 2019. The country is also planning to conduct an MR follow-up campaign targeting children 9 months to 5 years in 2018 and a proposal will be submitted to Gavi in early 2018.

Successful Introduction of PCV-10

Myanmar continued its engagement and commitment to ensuring children are protected from vaccine preventable diseases with the introduction of PCV-10 in all townships in July 2016, making a total of 10 antigens available in the routine immunisation programme. To document lessons learned, best practice and challenges, the Ministry of Health and Sports is planning to conduct a Post Introduction Evaluation (PIE) of PCV in March 2018. Furthermore, during its meeting on 23 May 2017, the ICC endorsed and requested to switch from PCV10 to PCV13 which is also approved by the NITAG in Myanmar. Reporting against indicators in the Grant Performance Framework will commence at the next Joint Appraisal.

Drop Out Rates
The Penta drop-out rate was 5.2% against 10% Gavi-approval in 2016.

Status of Vaccine Supply and Availability

During 2016, PCV and Penta stock were maintained and there were no reported stock-outs. The 2016 allocation of Penta in the Gavi Decision Letter was cancelled due to over-estimation of the needs taking into consideration the revision of the denominator following the result of 2014 population census projections (actual supplies of Penta in 2016/17 where accounted against the unused allocations in Decision Letters from previous years). The future supply plan was also corrected based on the adjusted annual requirements (EPI head counts and 2014 census).

The major challenge was the global shortage of IPV which subsequently affected the vaccine availability at central and lower levels. In this regard, due to IPV shortage in Q3 of 2016, Q1 and Q2 of 2017, available stock was prioritised to high-risk areas for polio outbreak which includes all townships of Rakhine state. The country is considering switching to IPV fractional dose based on the available and pipeline supply (there is a pipeline of 500,000 of both 5 and 10 doses vials).

JE Campaign

The nationwide Japanese Encephalitis campaign will be conducted in November and December 2017 targeting children aged 9 months to 15 years. The campaign preparations are proceeding as planned with the following updates:

- Campaign operational funds and vaccine introduction grants were received by UNICEF and WHO.
- Supplies have been secured (vaccines and injection materials) and shipments to the country are expected during August and September 2017.
- Cold chain equipment to address the storage gaps for the JE campaign is expected to be installed on time.
- The IEC materials are being finalized and the printing and distribution is to be completed before October 2017.
- Budget proposals were submitted by EPI to MoHS by mid-July 2017 and then officially submitted to UNICEF and WHO to request for disbursement for activities at central and sub-regional levels (the transfers to state/regions and townships is planned for September 2017). Central EPI has already informed MoHS that the timely release of funds is critical for effectiveness of the campaign.

After the campaign, JE will be introduced into routine immunisation in January 2018. Government will also receive in kind contributions of JE vaccines from PATH to cover the co-financing requirements of JE vaccine for 3 years. An SIA Technical Report is due within 3 months after the end of the campaign. The post campaign coverage survey report is planned to be finalized by November 2018.

Planned New Vaccines Introduction

The Ministry of Health and Sports is considering the introduction of Rota (targeting under 1 – 2 and 4 months) and HPV. The applications to Gavi will be completed in 2018 with the support of all key partners. The cold chain gap analysis was conducted in 2017, which included the storage space requirements for future introductions.

Overview of HSS 1 Grant Implementation and Performance

As reported in the previous joint appraisals (2015 and 2014), the approval of HSS 1 was done in 2008 and it was a four year grant. However, the first disbursement was made in early 2011, and the implementation started in June –July 2011. The township level activities began in January 2012 covering 20 townships which was then expanded in 2013 to cover 40 townships and in 2014 additional 60 townships were covering bringing a cumulative total to 120 townships. Gavi exceptionally approved a no-cost extension of HSS1 grant until 30th June 2017, which provided a good opportunity to implement most of the pending activities.

All the fund were utilized and there is no residual funds from GAVI HSS 1 grant.

The following section provides a brief update on the overall progress made, challenges and proposed next steps.

Progress made in the implementation of HSS1

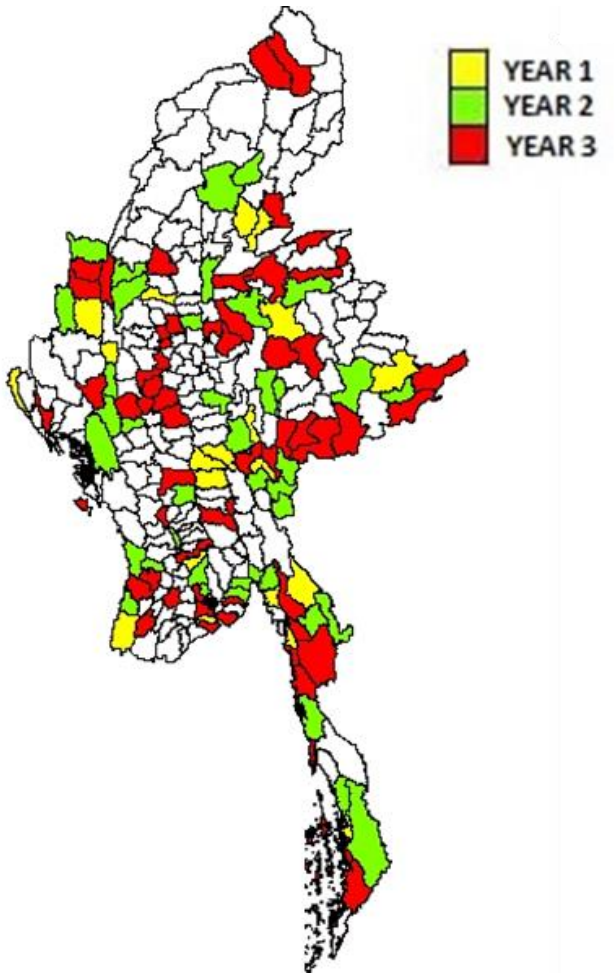
a) Coordinated township health plan (CTHP) (microplanning);
   - Plans developed to address health mapping, human resources for health, community participation, procurement of commodities and equipment, infrastructure and transport, M&E.
   - Coordinated township health plan (CTHP) were developed in all Gavi HSS townships after assessing the current health system and barriers inhibiting the service provision at township level.
   - The implementation of these plans is monitored through quarterly supervision visits by state/regional and bi-annually by central HSS team such as Program Director, National Program Officer, National Finance Officer and Monitoring and Evaluation Officer.

b) Provision of package health care services to hard-to-reach areas;

   - Hard to reach areas were identified and provided as a package of services which covered MCH, EPI, nutrition, environmental health and health education by group of basic health staffs.
   - On average for 120 townships, 28% of the 24,613 villages in the 120 townships now provide a package of health services for hard to reach areas.
   - Reported number of outreach tours in 2016 decreased slightly in some states and regions compared to 2015, due to insufficient data and reporting caused by a lack of HSS Officers and the targeted number of package tours in 2016 (10,000) was just missed with 9,453 tours

c) Quarterly and End Review Meetings
   - Improved collaboration and coordination between stakeholders (MOHS, NGOs, UN, local authorities and communities, improved monitoring of CTHP and RHC plans).

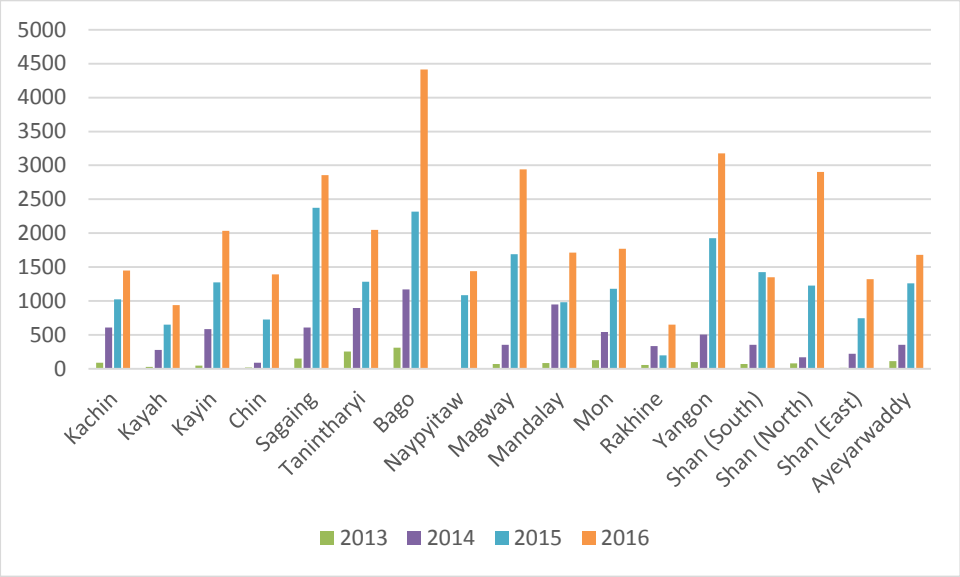
The map below indicates all townships which implemented HSS1



Townships were selected using a combination of criteria: DTP3 coverage below 80%, skilled birth attendance below 60%.

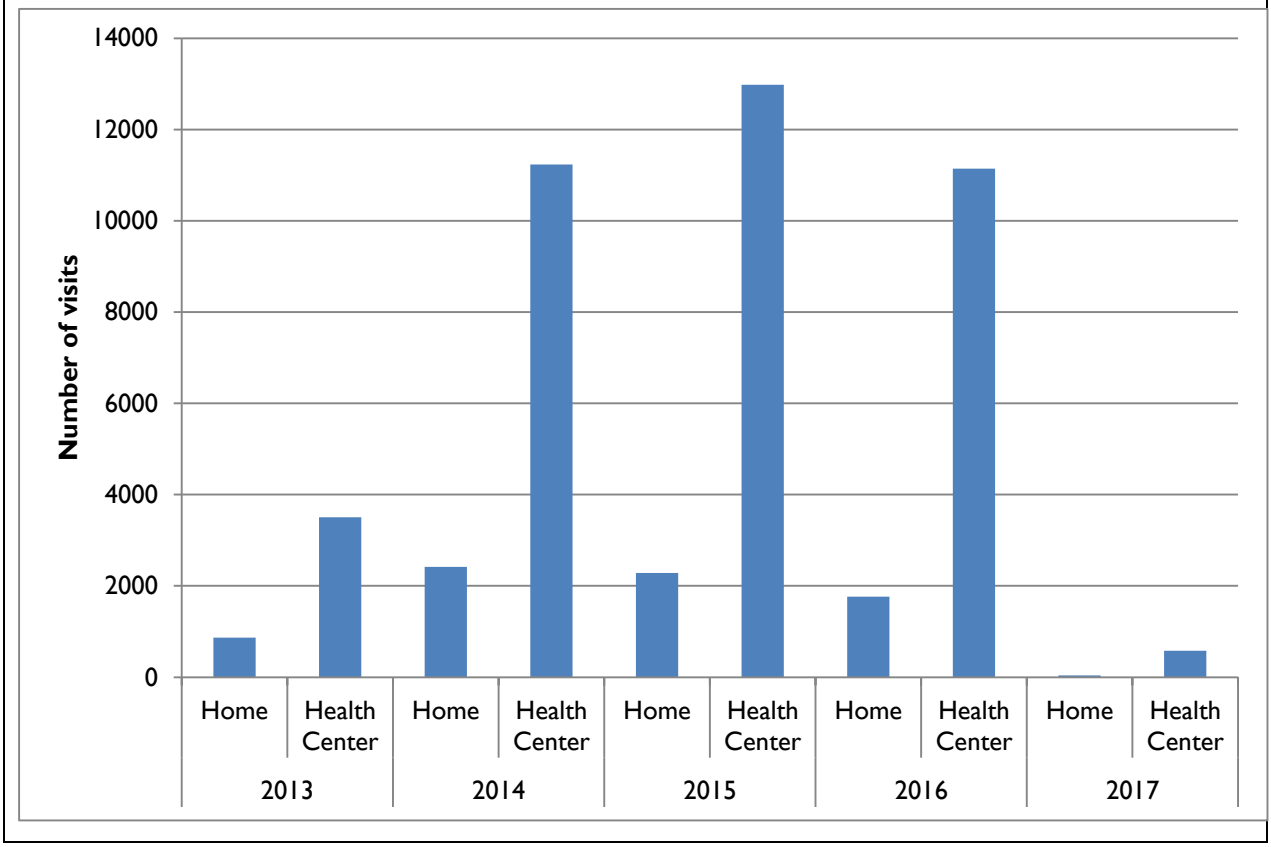
d) Hospital equity fund (HEF)

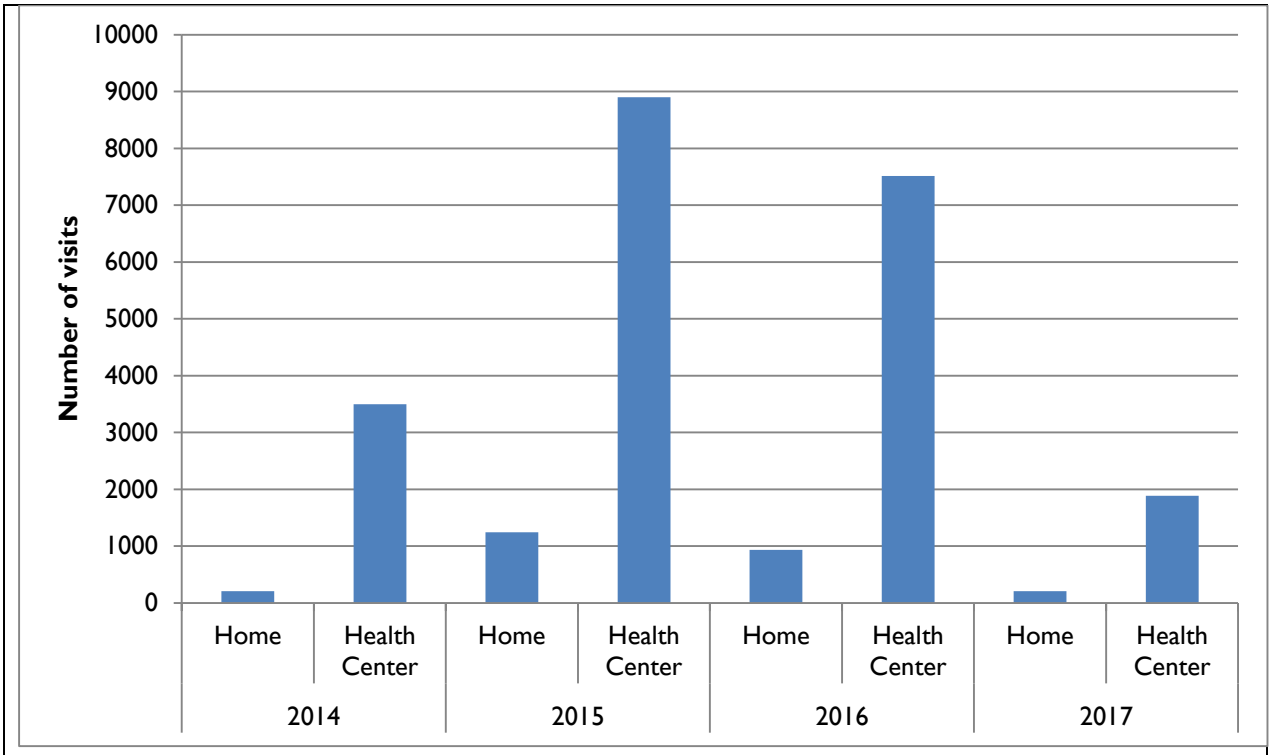
- Enhanced access hospital based services (complicated delivery, childhood acute illness, other lifesaving emergencies) through support for emergency transport costs, and referral transport, daily allowance for patient and attendant (scaled up in 2015 to 119 townships).
- Increase in number of beneficiaries 34,093 in 2016 in all regions and states. The following graph shows number of beneficiaries by States & Regions by year



e) **Maternal voucher scheme (MVS)** covered antenatal, delivery and postnatal care for poor pregnant women including immunization for children by giving them vouchers redeemable at health facilities or with skilled birth attendants (SBAs) in 2 townships of Bago Region.

f) Reduce financial barriers for mothers (e.g. travel cost) has led to increase over the last years in number of visits for ANC, PNC, and vaccination, peaked in 2015 showed in following graphs of implementation status of Yaedashae and Paukkaung Townships respectively.





g) Provision of medicine and medical equipment and office stationary (S&E) and vehicles

- Procurement of equipment and kits had happened in 2012-2014, the remaining procurement was completed in 2015/16 including backpacks and jackets.
- Micronutrients are being distributed during the no-cost extension Jan-June 2017.
- 20 cars have been distributed, 300 motorbikes are being shipped (motorbikes are to arrive in September 2017)

h) **Construction of 30 rural sub-centers** has been completed in all 12 townships of 9 States & Regions by the Myanmar Red Cross Society (MRCS), certification of completeness issued by DOPH at the end of May 2017 (18 fully functional, 12 just completed construction).

i) **Supervision (Central and State/Region) and HRH Development** - Supervision continued to improve in 2016:

- Regarding supervision, although RHCs are visited for supervision by Township level supervisors (TMO, THN, HA-1) throughout the year, some RHCs couldn't be covered 6 times. There are limited human resources in some townships and geographical, seasonal constraints impede ability to complete 6 times for each RHC in those areas.
- Other achievement is that capacity building of BHS for basic emergency obstetric and newborn care (BEmONC) has been completed in 63 HSS1 townships with Gavi funds and 57 townships with other funds.
- 50% of the townships could be staffed with standardized number of staff (midwife and PHS2) according to national HR standards.

Sustainability Issue on the Gains Made From HSS1

Despite some good lessons and best practices reported, there have been concerns particularly on the sustainability of the gains made once HSS1 is completed. In view of this, some activities could continue through HSS2, and the following facts should be considered during the revision of the HSS2 budget:

- **Hospital Equity Fund -** helped increase hospital utilization rate for MCH services

- **Maternal Voucher Scheme** – promote seeking of care from Skilled Birth Attendant and increase health facility utilization.
- **HSS Officers** improved monitoring and supervision, data quality and reporting, and supportive in development of outreach plan and implementation of outreach services.

If funding is discontinued for these interventions it might affect the awareness and access for MNCH services as well as the overall monitoring of the work which was initiated through HSS1. Alternative funding sources would need to be mobilized for the HEF and MVS which could be interim measures before achieving universal coverage through a national health insurance scheme. Evaluation is essential to reach decisions on identification of alternative funding sources to give continuous support and consider scale up.

HSS1 next steps

After the no-cost extension was granted, all implementing partners under the leadership of MoHS have accelerated the implementation before the grant expiry date on 30 June 2017. The next steps now will be to ensure the grant closures including final technical and financial reports (see table in section 4.2).

4.2. Financial management performance (for all cash grants, such as HSS, vaccine introduction grants, campaign operational cost grants, transition grants, etc.)

Myanmar Jan - Dec 2016 Financial and Audit Reporting Compliance

Implementer	Grant	Financial Reporting		Audit Reports		Comments
		Reporting due date	Report Submission	Submission due date	Report submission	
Red Cross	HSS	31-Mar-17	Over-due	30-Jun-17	To be completed	Preliminary Financial reportir submitted. Audit and Construction techni
MoH	HSS	31-Mar-17	Reporting Completed	30-Jun-17	To be completed	Funds received as MoH Sub-re
UNICEF	HSS	30-Jun-17	To be completed	N/a	N/a	Uncertified interim reporting t
	JEV - Operational costs	30-Jun-18	N/A	N/a	N/a	Apr 2017 disbursement
	MR - Operational costs	30-Jun-17	To be completed	N/a	N/a	Uncertified interim reporting t
	VIG - IPV	30-Jun-17	To be completed	N/a	N/a	Uncertified interim reporting
	VIG - JEV	30-Jun-18	N/A	N/a	N/a	Apr 2017 disbursement
	VIG - Pneumo	30-Jun-17	To be completed	N/a	N/a	Uncertified interim reporting t
WHO	HSS	30-Jun-17	Reporting Completed	N/a	N/a	
	ISS	30-Jun-17	To be completed	N/a	N/a	Preliminary reporting by MoH
	MR - Operational costs	30-Jun-18	To be completed	N/a	N/a	Preliminary reporting by MoH
	JEV - Operational costs	30-Jun-18	N/A	N/a	N/a	Jun 2017 Disbursement
	VIG - JEV	30-Jun-18	N/A	N/a	N/a	Jun 2017 Disbursement
	VIG - IPV	30-Jun-17	To be completed	N/a	N/a	Preliminary reporting by MoH
	VIG - Measles	30-Jun-17	To be completed	N/a	N/a	Preliminary reporting by MoH
	VIG - Measles-Rubella	30-Jun-17	To be completed	N/a	N/a	Preliminary reporting by MoH
	VIG - Penta	30-Jun-17	To be completed	N/a	N/a	Preliminary reporting by MoH
	VIG - Pneumo	30-Jun-17	To be completed	N/a	N/a	Preliminary reporting by MoH

Cumulative cash utilization to 31 December 2016					
		Total disbursements Dec 2016	Cumulative Expenditure Dec 2016	Cash balances Dec 2016	Update
Red Cross	HSS	**1,023,813**	**909,400**	**114,413**	114,413
UNICEF	HSS	7,916,500	7,525,405	1,405	
	JEV - Operational costs				
	MR - Operational costs	4,844,946	4,817,780	27,166	
	IPV - VIG	325,727	324,824	903	
	JEV - VIG				
	Pneumo - VIG	607,638	605,408	2,230	
UNICEF Total		**13,694,811**	**13,273,417**	**31,704**	31,704
WHO	HSS	20,832,711	12,529,926	1,991,714	
	ISS	3,109,000	2,812,000	-	
	MR - Operational costs	6,512,554	5,124,374	1,388,180	
	IPV - VIG	397,773	397,773	-	
	Measles - VIG	1,209,000			
	Measles-Rubella - VIG	1,222,000	874,332	347,668	
	Penta - VIG	1,209,000			
	Pneumo - VIG	603,362	454,300	149,062	
WHO Total		**35,095,400**	**22,192,705**	**3,876,624**	1,884,910
Grand Total		**49,814,024**	**36,375,522**	**4,022,741**	**2,031,027**

Residual funds from cash grants**:**

- The cumulative residual funds from cash grants will be re-programmed in accordance with new Gavi guidelines to the HSS2 programme until the end of 2017 or early in 2018.

Financial **absorption** and utilisation rates:

- Over the entire implementation period HSS1 absorption had significant delays which lead to 10% of the grant remaining undisbursed and the remainder only being absorbed with extensions provided;
- Key elements of slow absorption have been reported in previous JA reports and improvements are proposed for HSS2.

Compliance with financial reporting and audit requirements:

- As per the table above, as at the date of the JA mission, reporting and audit compliance was up-to-date across most grants. The only missing reports relate to the Myanmar Red Cross where the December 2016 financial statements are missing as well as the audit thereon.

Major issues arising from cash programme **audits** or programme capacity assessments (PCA):

- The Gavi PCA concluded that Government systems were not yet strong enough to handle the new HSS2 grant and proposed to use Gavi alliance partners, with UNICEF taking a bigger role in handling funds management. The PCA report is under discussion with MoHS.
- The Auditor General (AG) report on 2015 and 2016 showed some questioned costs and EPI will follow up with the AG as to whether these amount to audit 'qualifications' and whether there is any possibility for the AG to re-visit the findings if additional support or explanations are provided;
- A Gavi programme audit will take place in July 2017 (scoping phase) and September 2017 (execution/field work phase)

Financial management **systems**

- The main PCA conclusions are noted above. The report has been circulated to the Ministry after the JA and is under discussion with MoHS;
- Key issues remain: cumbersome central planning and budgeting systems and difficulty to reconcile them with donor requirements, largely manual systems, shortage of skilled financial staff, all such problems at central level are multiplied at sub-national level.

Closures

Following an additional 6-month no-cost extension, the end date of the HSS1 grant was 30 June 2017. The following financial and programmatic closure reporting requirements were agreed:

HSS1 Grant Closure Requirements

Closure requirement	Responsible	Timeline
1. 2016 audit report 2. Certified financial statement 2011-2017 3. Certified financial statement 2011-2016	1. MOHS 2. WHO 3. UNICEF	31 December 2017 31 December 2017 30 June 2017
Gavi Closure assessment: evaluation of health financing scheme – Hospital equity fund – voucher scheme: report to be completed, analysis of sustainability and future funding options.	MOHS + HiTAP + WHO	31 July 2017 (draft) 30 September (final)
1. Certificate of completion of project from the certification committee for the construction under MOHS 2. 2015 and 2016 Audit report 3. Signed financial report (October 2015 to 30 June 2017) 4. Confirmation of bank details for last disbursement	MRCS	ASAP (condition for disbursement)
Asset register once distribution of motorbikes is completed	MOHS	30 September 2017
Narrative closure reporting on HSS1 implementation (secondary data analysis)	MOHS with UNICEF, WHO and MRCS	31 December 2017

4.3. Sustainability and transition planning

Financing of the Immunisation Programme

Over the period 2014-2016, Government committed increased funding for EPI and the inclusion of immunisation as one of five health priorities of the Government.

Myanmar financed traditional vaccines and has fulfilled Gavi co-financing requirements over the past years from other donor funds (UNICEF, Japan). The level of Government financing of vaccine expenditure in the last 3 years has been on average 10% and the financing of the routine immunisation programme reached 21% in 2015, which are still relatively low to move towards sustainability. The country reporting on overall expenditures on immunization for 2016, which again shows a very low share of below 5% of government funding for routine immunisation (excluding shared health systems costs). The data requires further analysis to make it comparable to previously reported years.

Data on health expenditures and a detailed financial analysis of cEPI for 2014-2015 and projections for 2017-2021 (cMYP) are included in the EPI Review (see page 34ff.).

The Vaccine Independence Initiative (VII) proposal was positively reviewed by government (MoHS, MoPF, Planning Commission) and is now expected to be endorsed by the Cabinet to further support traditional vaccine procurements and Gavi co-financing for 2017-2021 out of national budget funds. This is an **important political step** towards more sustainable EPI financing in Myanmar.

The following main challenges were also identified during the joint national/international EPI review:

- High dependence on external funding;
- Persistent operational cost barriers for health workers

The EPI review recommendations relating to immunization financing are:

- Advocate for a comprehensive health financing policy for the universal health coverage (UHC) with priority given to EPI in light of the high return of investment of immunisation.
- Develop Sustainable Immunisation Financing plan; periodically update it to ensure predictable funding.
- Consider introduction of budget lines and mobilisation of funds to support operational costs at all levels.
- Introduce flexibility in funding allocation at peripheral levels and facilitate transfer of funds from central to peripheral levels.

Polio transition planning

The polio eradication endgame strategic plan of Global Polio Eradication Initiative (GPEI) specifies managing polio legacy and transition planning of polio resources as one of its four objectives. Based on the assessment of the regional and global epidemiological situation of polio and other considerations, GPEI has finalized the long-term budget projections that reflect the year-to-year decline in polio funding, from 2017 to 2019. In close collaboration with GPEI partners at the global, regional and national levels, a country support mission to Myanmar for transition planning has been coordinated by WHO-Myanmar and a polio transitional plan has been developed.

Major findings and recommendations for a polio transition plan in Myanmar

There is high reported national routine immunisation coverage and good progress with disease control initiatives, but there are various immunisation inequities as mentioned in the sections above. The last indigenous wild polio case was reported in 2000 and the last case of imported WPV was identified in 2007. Several outbreaks of cVDPV, the last in 2015, have been rapidly and effectively interrupted. There have been significant efforts to eliminate measles, including several large scale campaigns and introduction of two routine measles vaccine doses, but measles transmission is still considered to be endemic.

The Regional Surveillance Officer (RSO) network was established in 1999 to focus on polio eradication. Since then it has rapidly become a vital resource at the state level, including surveillance and response for VPDs and other diseases, routine immunisation and new vaccine introduction among their many supportive state duties. The 17 RSOs are government-employed medical doctors, selected by MoHS and assigned to state RSO duties for the period of one year. The RSO works in a functional unit which includes an administrative assistant, a driver and a 4WD vehicle, they are not WHO employees, but part of the state public health team and located in the state public health offices. The states value the WHO supported RSO network because it gives them the mobility and operational support to travel and work throughout the state for surveillance and immunisation.

The MoHS has an ambitious and detailed EPI multi-year plan 2017 to 2021 which will require continuous technical expertise at state and township level for implementation. The RSO network in its close relationship with the states, is in a good position to provide the required technical support and capacity building on priority activities in the multi-year plan.

Given the need to implement the multi-year plan nationwide 2017 to 2021 in states and regions that vary considerably in immunisation performance, an option would be to ensure the continued support of the

RSO network functions during this five year period. This is the preferred option for transition recommended for the report.

With the termination of GPEI support at the end of 2019, funding for the RSO network functions through 2020 and 2021 will have to be obtained from other sources. Since the functions of the RSO network closely align with activities in the GAVI HSS2 funding proposal, the potential funding of the RSO network from GAVI HSS sources should be explored by MOHS and partners with an agreed upon phase-out of external support and ramp-up of government funding.

The EPI unit in WHO-Myanmar should continue to be funded in order to maintain a technical, monitoring and financing oversight of the functional units. The EPI unit will also continue to have a vital role in new vaccine introduction for many years.

4.4. Technical Assistance (TA)

Overview of 2016/ 2017 Tailored Country Assistance

Prioritised needs and strategic actions (identified in 2016 JA)	Associated timeline for completing the actions (as per 2016 JA)	Does this require TA (as per 2016 JA)	Current status at 2017 Joint Appraisal
1. Review, update and development of EPI planning including micro planning guideline	April 2017	Existing plan/guideline will be reviewed and adjusted accordingly Organisation: WHO	**Completed** for review, update for microplanning guideline and workshop on microplanning workshop. It would be continued for refresher training of BHS based on recommendation of Data Quality Assessment activities in Myanmar.
2. Develop, conduct and implement specific strategic plan for reaching hard to reach, migratory, peri-urban and conflict areas	April 2017	Specific strategy needs to be developed for reaching children in hard to reach, migratory and conflict areas in coordination with partners and local NGOs on the ground. Organisation: WHO & UNICEF	**Completed** for development of strategic plans and implementation stratus is in progress. Supported cEPI to develop the draft concept note for urban immunisation and also the establishment of hospital based immunisation services. The key focus for the remaining period is on finalizing the urban immunisation strategy, ensuring all hospital have initiated immunisation services. Strategic plan for revitalization of routine EPI in selected townships of Rakhine State Comprehensive health development plan for Naga Land.

3. Develop data management tools	March 2017	A data management tool will be developed and implemented at township, state/region and central level for better recording and analysis of information in coordination with HMIS. Organisation: WHO	**Completed** for development of data management tools and capacity building of BHS for data management at different levels is in progress. Data management program had been developed and implemented central Training of Trainers (TOT).
4. Communication and demand creation especially in areas with low immunisation coverage and hard to reach areas	October 2017	a) assessment of existing innovation to inform development of new innovation that could influence behaviour change; b) KAP survey for immunisation; c) accelerate implementation of communication plan of action. Organisation: UNICEF	**In progress** Design, printing and distribution of IEC materials (both routine and PV) and development of theatrical traditional performance. In addition, efforts being made to initiate planning for KAP survey to be supported through Gavi HSS2.
5. Strengthening cold chain and effective vaccine management including accelerating the implementation of EVM improvement	December 2017	a) Job-aids for the cold chain key persons; b) assessment of the progress in EVM implementation; c) establish web-based cold chain equipment inventory; d) strengthen management of EPI supplies including immunisation logistics information management systems. Organisation: UNICEF	**In progress** The cold chain training manuals have been finalized and UNICEF supported the training of cold chain key persons, the EVM improvement plan implementation progress report has been finalized; the web-based cold chain inventory will become an integral part of immunisation electronic logistics management information system; immunisation supply chain data use assessment and eLMIS available options for possible integration of EPI eLMIS have been completed.
6. Expansion of cold chain system to lower levels especially in the priority Rural Health Centres	April 2017	a) re-analyses of existing storage gaps; b) documenting the cost benefit of expanding cold chain to lower levels; c) guidance on establishing cold chain system at lower levels including policy change. Organisation: UNICEF	**Completed** The cold chain equipment inventory has been updated which led to a comprehensive cold chain capacity gap analysis for current routine immunisation, JE campaign and planned introduction of Rota and HPV vaccines. A participatory cold chain. This analysis informed the development of the Cold Chain Equipment Optimization Platform (CCEOP) proposal which was successfully submitted and recommended for approval by Gavi IRC in June 2017.
7. Implementation, monitoring and	2017	Quarterly evaluation at state and regional level and monthly review of data at	**Completed** annual evaluation and mid-term evaluation is **in progress.**

evaluation of EPI activities		central level against the indicators set in the HSS application. Organisation: WHO	Central evaluation was implemented in March 2017.
8. VPD surveillance and disease burden studies	2017	Integrated VPD surveillance will continue to guide the program. Organisation: WHO	**In progress** Plan to implement VPD surveillance disease burden study in Q4 2017
9. Coverage survey and data quality assessment	2nd quarter of 2017	A full coverage survey will be conducted in country. Organisation: WHO	Consultancy support for coverage survey and data quality assessment had **completed** and implementation of coverage survey is **in progress.** **In progress** for consultancy support and preparation for EPI coverage survey was **completed** in July. Survey (using new WHO methodology) likely to take place Q1/Q2 2018.

The **World Bank** also received PEF TCA support to complete the Health Financing System Assessment (HFSA), which will provide important information on immunisation financing within the broader health financing work in country. Due to delays in the disbursement of TCA funds in 2016, World Bank Myanmar frontloaded the use of DFAT funds in the 2016-2017 fiscal year. World Bank Myanmar is expected to use Gavi funds in the 2017-2018 fiscal year to complete the Health Financing Sustainability Analysis (HFSA, the analytical work for the HFSA is underway and is expected to be complete in late 2017). A central focus of the HFSA is on the challenges and opportunities of integrating immunisation in the health budget and transitioning from Gavi support. In addition to the HFSA, World Bank Myanmar is conducting the following analyses as part of the Essential Health Services Access Project and a complimentary program of Advisory Services and Analytics: Health Financing Options Paper in 2015, Fiscal Space Analysis in 2016 and Analysis of Myanmar Poverty and Living Conditions Survey. Other work includes: forthcoming Health Financing Strategy, development of Essential Package of Health Services and dialogue with external financers and implementing partners on the implications of the structure of external financing for health on long-term sustainability of disease programmes. The World Bank also conducted trainings on public financial management at the State/Region and township levels.

In 2016, CDC (US$87,200) supported data and surveillance activities mainly for measles and CRS surveillance. There is no budget allocated for this in 2017.

5. UPDATE OF FINDINGS FROM PREVIOUS JOINT APPRAISAL

Prioritised actions from 2015 Joint Appraisal	Responsibility	Timeline	Status at 2016 JA	Current Status
COLD CHAIN: Conduct EVM and closely monitor implementation of improvement plan	MoHS, National EPI, UNICEF	2015/16	Done. Some activities initiated in 2016 and most of EM-IP integrated into HSS2 programme for implementation.	**Completed** The progress report on EVM improvement plan has been finalized. Some of the activities could not be initiated due to delays in the release of Gavi HSS2 funds.
COLD CHAIN:	MoHS, National EPI, UNICEF	2015/16	Done. Financial support of 3MDG Fund	**Completed** The investment made in 2015/2016 represented over

Accelerate implementation of cold chain expansion and replacement plan in preparation for vaccine introduction			(approx. 6 million USD).	65% of all investments made in the past 10 years. That means most of the investment were due to the efforts made in preparations for the new vaccines introduction particularly PCV. Thel equipment arrived on time and have been installed before the introduction.
COMMUNICATION AND SOCIAL MOBILISATION: Develop routine immunisation communication strategy/plan of action and roll out implementation	MoHS, National EPI, UNICEF	2015/16	Ongoing, most of the works to be implemented in late 2016 and to continue under HSS2 in 2017.	The involvement of local actors through theatrical TV presentation has been **completed** which will contribute in increasing awareness on the importance of immunisation.
DATA QUALITY: Plan Coverage Survey and implement data quality improvement activities	MoHS, National EPI, WHO and UNICEF	2016	Planned for late 2016. EPI coverage survey under HSS2 in 2017	**In progress** EPI coverage survey is envisaged to be implemented in Q1 2018 and preliminary discussion with consultant from HQ were held from 4 – 13 July 2017 and completed the review the EPI coverage data, including the results from the recent DHS and discussed with cEPI and other stakeholders to define the survey scope and objectives. The draft concept note, including the main elements of the survey design, an estimated survey budget and a timeline would be available in early Q4 2017.
DATA QUALITY: Update target populations based on newly published census data	MoHS, EPI program	2015	Completed	**Completed** DQSA mission was conducted from 1-10 August 2017. See section 3.3 above.
HSS: Appoint HSS Officers to assist scale up of HSS & Plan for evaluation of HSS1	MoHS, Gavi HSS	2015/16	Done. Gavi HSS1.	
EQUITY/ HSS: Implement REC/planning approach for hard to reach populations and urban migrant populations as indicated in the EPI improvement plan	MoHS, National EPI, NHSC, Partners, UNICEF and WHO	2015/16	Ongoing and continuing under HSS2 in 2017. MoHS, UNICEF, WHO and other partners.	**In progress** The draft concept note on urban immunisation has been developed and also the hospital based immunisation activities have been started and scaled-up. The REC and CRASH interventions are being supported. The national EPI program with support from WHO and UNICEF will design new strategies for reaching the

				hard to reach and low performing areas.
TRAINING: Conduct Training of Public Health Supervisors contribute in the immunisation service provision especially in hard to reach areas	MoHS, National EPI	2015/16	Done. Gavi HSS1	
FINANCIAL MANAGEMENT: Need for follow up by Gavi Secretariat of Financial Management requirements (external audits HSS and new vaccine introduction grants)	Gavi Secretariat with implementing partners	2015	See section 3.4 of JA 2016 and section 4.2 above	

6. ACTION PLAN: SUMMARY OF FINDINGS, ACTIONS AND TECHNICAL ASSISTANCE NEEDS IDENTIFIED AND AGREED DURING THE JOINT APPRAISAL

Overview of key activities planned for the next year:

UNICEF and WHO as well other partners continue to contribute in the efforts being made by the Central EPI in Myanmar to strengthen the delivery of immunisation services. Some of the work to be supported in the next year will be a continuation of the work already initiated in previous year and in 2017.

UNICEF

UNICEF will continue providing the support mainly in the areas of communication and demand generation, effective vaccine and cold chain management as well as working in close collaboration with WHO to support the Ministry of Health and Sports in reaching unimmunized children in the high risk areas. During the Joint Appraisal the following key priority areas have been identified for UNICEF support in the context of TCA:

a) Communication and demand generation

- As indicated in the Gavi HSS2 proposal and as part of the performance monitoring framework, UNICEF will support the planning and implementation of the KAP survey (Deployment of TA, consultant)
- Support cEPI to accelerate the implementation of communication plan of action for routine and new vaccines through deployment of Communication for Development (C4D) Specialist.

b) Strengthening service delivery to reach underserved population and introduction of new vaccines

- To ensure unimmunized children are reached, the Ministry of Health and Sports will be supported to design new strategies (cold chain, demand generation), urban strategies and partnerships with Ethnic Health Organizations (EHOs) and CSOs (Consultants to support cEPI, capacity building, deployment of UNICEF technical staff for ongoing support to cEPI)
- Support for new vaccines introduction (rota and HPV) and MR follow up campaign (immunisation Specialist for ongoing technical support, planning and implementation support mainly to focus on cold chain expansion).

c) Vaccine Security and Financing

- Operationalization of Vaccine Independent Initiative (VII) – TA and support from UNICEF Supply Division, UNICEF Staff

- Forecasting and cost-estimates to ensure timely procurement and support in securing long term commitment for Government (UNICEF Staff support to cEPI ongoing)
- Capacity building in vaccine management: forecasting, procurement, shipment and clearance (TA, and UNICEF Staff deployment to provide ongoing support).

d) Immunisation Supply Chain and eLMIS

- Design and pilot eLMIS including cold chain management information system (enhance integration with DHIS2/HMIS, as aligned with recent draft strategic data improvement plan recommendations); TA support with UNICEF Supply Division, deployment of UNICEF staff and contracts with institutions/CSO).
- Capacity building in immunisation supply chain data use (provision of necessary tools, capacity building, and deployment of UNICEF technical staff for ongoing support to cEPI.

e) Effective Vaccine Management strengthening and cold chain support

- The challenges and gaps reported in the effective vaccine management will be mitigated through designing and provision of Simplified Standard Operating Procedures (SOPs), Job aids and also to ensure ongoing technical support to Cold Chain Key Persons (CCKPs).
- EVM Improvement plan and cold chain (TA and staff to accelerate implementation as part of Gavi HSS2 and planning for implementation of CCEOP) including the deployment plan of the cold chain equipment.
- Support Effective vaccine management assessment 2018/2019 (consultant to support mid-term review of EVM IP in 2018, and planning for EVMA in 2019).

The following are the key expected outcome of UNICEF Support through Targeted Country Assistance (TCA)

- Communication Plan of action for HSS2 grant implementation developed.
- Improved Strategies for cold chain expansion and demand generation to increasing coverage in low performing and underserved population.
- Vaccine Security and Financing ensured through Vaccine Independent Initiative (VII) and Government Long Term commitment approved.
- Cold Chain Equipment Optimization (CCEOP) implementation modalities and deployment plans developed.
- Strengthened immunisation supply chain including immunisation electronic logistics management information system (eLMIS) integrating cold chain management information systems.
- EVM improvement plan implementation accelerated

WHO Support to National Immunisation Program in 2018/2019

As the result of the continued support to the Ministry of Health and Sport, WHO will prioritize the following areas in 2018 and 2019:

a) Reaching unreached children and strengthen cross-border collaboration

- Develop, conduct and implement specific strategic plan for reaching hard to reach, migratory, peri-urban and conflict area
- Conduct national and international coordination meeting (e.g. cross border meeting) to enhance surveillance and immunisation activities in border areas

This will be achieved by developing a specific strategy for reaching children in hard to reach, migratory and conflict area in coordination with partners and local NGOs.

b) Continuous support on data quality improved plan

- EPI coverage survey (preparation and implementation)
- Data Quality Survey and assessments (DQSA) and development of data quality improvement plan.

Myanmar performed a data quality self-assessment for the National Immunization with technical assistance from WHO in August,2017 and defined a data quality improvement plan (see sections above) with specific objectives:

1. Revise targets and denominators to ensure that all children are included

The local enumerations may exclude or underestimate migrants, informal settlements, seasonal workers, urban poor, and people living in Non-Government-Controlled Areas (NGCA). That leads not just to an over-estimation of real coverage, but also to the risk that these vulnerable people are being neglected by micro-plans. The following steps can be taken to make sure that all children are included:

- Develop clear guidelines for the headcount process to include migrants in the targets, and for the monitoring and reporting, including in difficult areas (which might include projections).
- Develop mechanisms to include migrants and other vulnerable populations like the urban poor in micro-planning, including through the formulation of specific strategies, mapping and the use of GIS.
- Triangulate EPI targets with HMIS numbers, census data, previous year's achievements and campaign achievements.
- Consider using census-derived population estimates for the calculation of coverage, instead of using the reported targets for this purpose.
- Develop an advocacy and implementation plan to sensitize States and Regions of these changes.

2. Further Align EPI and HMIS

While a lot of integration has happened, and there clearly is a good degree of collaboration at all levels, this should be seen as an ongoing process, with further scope to align timelines and data flows, and to clarify roles and responsibilities for data entry, review, and access to information. In the end-state of this process, only one person should enter certain data in a single system.

3. Advance e-HMIS and e-LMIS integration

A plan has been developed to use a single platform (DHIS2) for all EPI data, with single data entry at township level. This 18 month plan was endorsed, and it was noted that it should include:

- The development of EPI specific modules for logistics and dashboard / analytics (18 month plan)
- The exploration of existing modules for EPI reporting, dashboard, and data quality

4. Ensure the availability of reporting forms and vaccination cards

Availability of vaccination cards among the community was low during recent coverage evaluation surveys, and this assessment found insufficient availability of tools at the health facilities that were visited. To remedy this situation, the team recommends to :

- To include these tools in e-LMIS, and indent forms, just like the vaccines and other supplies
- Estimate stock requirements bottom-up
- Keep buffer stocks at S/R and townships

5. Update and consolidate SOP's for use of all tools

- Develop Handbook for data recording, reporting, review, analysis and use
- Develop a standardized feedback template for use at all levels

6. Integrate data quality in supervision practices

- Include data quality checks in supervisory checklists
- Develop protocol for rapid coverage checks (LQA, RCA or similar)
- States and regions to conduct in-depth data quality self-assessment for their townships periodically (e.g. annually or every two years)

7. Develop a comprehensive training strategy

There will be training needs for the new unified system (DHIS2), the handbook, and target setting. To ensure qualitative training:

- Review methodology for training (cascade training)

- Consider building a central training team, as well as cross-cutting teams in the states and regions
- Develop a training curriculum (holistically covering all EPI needs)

8. Consider recruitment of a designated data analyst at State and Region level
These analysts would be in charge of analysis, feedback, and capacity building for data.

9. Organise technical working group review meetings
To evaluate coverage, logistics, surveillance, and other programme data, and develop action plans for corrective action. This should be done at national and state and regional level, with flexibility to (re-)allocate budgets as required. It should also involve partners beyond EPI.

10. Data Quality Improvement Plan
Based on the these recommendations, the technical working group for EPI would translate recommendations into a data quality improvement plan with time-bound deliverables, allocate budget for its implementation (Gavi HSS as a potential source) and request endorsement by ICC.

c) Catch-up campaign and New Vaccine to introduced to Routine Immunisation Programme with support from GAVI

- Providing technical support in developing proposal for measles rubella (MR) follow up campaign
- Support the Ministry in planning for introduction of more new vaccines including technical support in the development of proposal for introduction of rotavirus vaccine and HPV.

To continuously provide the needed technical support, WHO will deploy International consultancy support and technical support at country level through Technical Officer (EPI, WHO) and short-term national consultant (MR SIA/campaign).

d) Health System Strengthening and increase capacity in planning

- Support to develop the quarterly implementation plan and high-level oversight (DG and/or Minister)

e) Strengthening VPD surveillance system

- Support for invasive bacterial diseases (IBD) and Rota Surveillance.
- Support in conducting VPD surveillance and disease burden studies.

f) Support National EPI program in operational research

- Identifying key technical areas for operational research.
- Conducting operational research

Key finding 1	**Data quality and the lack of a recent coverage and equity survey constrain the assessment of the EPI programme performance and evidence based decision making.**
Agreed country actions	Follow-up on the Data Quality Assessment and improvement plan to provide reliable data on the coverage and equity improvements and challenges of the EPI programme. Plan and implement CES in early 2018.
Associated timeline	Ongoing and until Q1 2018
Technical assistance needs	Included in PEF-TCA and HSS2
Key finding 2	**HSS2 provides essential support to operationalize activities to improve coverage and equity of the immunization programme and should be implemented as soon as possible**

Agreed country actions	Comment and finalize PCA report, agree on Grant Management Requirements (GMR), negotiate and agree grant agreements with partners. Revise HSS2 budget (with US$60m ceiling and residual funds) which requires an update since the March 2016 IRC review.
Associated timeline	October 2017
Technical assistance needs	As required, additional TA for financial management should be explored to accelerate the up-take of HSS2 activities under the responsibility of government
Key finding 3	**Accelerate EVM improvement plan implementation**
Agreed country actions	With the conclusion of the necessary agreements for HSS2 the implementation of the EVM-IP should be accelerated as much as possible. Preparations are already ongoing and should proceed to ensure a swift start of this HSS2 component which is mainly supported by UNICEF.
Associated timeline	Q4 2017 and first half of 2018.
Technical assistance needs	Included in UNICEF PEF-TCA and HSS2 budget
Key finding 4	**Transition planning for Polio assets and surveillance network needs to be operationalized**
Agreed country actions	Continue to develop a transition plan based on WHO assessment, operationalize and mobilize (national and external) funding for the plan.
Associated timeline	Q1 2018
Technical assistance needs	Included in PEF-TCA for WHO
Key finding 5	**Improve budgeting process for EPI and increase government financing share**
Agreed country actions	Endorse VII and increase transparency for budgeting for cEPI. Follow-up on relevant EPI Review recommendations.
Associated timeline	October 2018 (VII) and budget process for FY 2018/19
Technical assistance needs	Included in PEF-TCA for UNICEF and WHO
Key finding 6	**Improve financial reporting and auditing of Gavi supported programmes**
Agreed country actions	Submit outstanding financial and external audit reports as soon as possible. Support and conclude Gavi Programme Audit (field work 9/2017)
Associated timeline	Until the end of 2017 for external audit reports and first draft of Gavi programme audit report
Technical assistance needs	-

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

The Joint Appraisal mission was conducted from 26-30 June 2017 in Myanmar.

A **briefing** for JA participants was held to agree on mission objectives and discuss progress of vaccine programmes, HSS1, eLMIS and Targeted Country Assistance.

Field Visits were made to Mandalay, Magway, Bago and Yangon to observe immunisation systems, cold chain infrastructure, health workforce, hospital-based immunisation sessions, and urban population outreach. Teams were divided to each region and reported back their finding and recommendations to all JA participants.

Participatory group and plenary discussions led to the development of the JA presentation based on the sections of the JA report. EPI and HSS teams presented data/findings and incorporated recommendations and suggestions from JA participants. Observations and recommendations from the field visits were also incorporated into the JA presentation.

The Minister of Health was provided a de-brief of the JA mission and shown a selection of the key slides of the JA presentation, including performance of the EPI and HSS programmes.

An ICC meeting endorsed the findings of the JA mission and presentation on 30 June 2017. As per the minutes and attendance list, a quorum was met. The ICC was chaired by the Permanent Secretary, Professor Dr Thet Khine Win.

8. ANNEX 1

Compliance with Gavi reporting requirements

	Yes	No	Not applicable
Grant Performance Framework (GPF) reporting against all due indicators	Yes		
Financial Reports			
Periodic financial reports	Yes		
Annual financial statement	Yes		
Annual financial audit report		No *Refer to table in section 4.2*	
End of year stock level report	Yes		
Campaign reports	Yes (MR campaign)		
Immunisation financing and expenditure information	Yes		
Data quality and survey reporting	Yes		
Annual desk review	Yes		
Data quality improvement plan (DQIP)	In progress		
If yes to DQIP, reporting on progress against it			
In-depth data assessment (conducted in the last five years)	Yes		
Nationally representative coverage survey (conducted in the last five years)		No	
Annual progress update on the Effective Vaccine Management (EVM) improvement plan	Yes		
Post Introduction Evaluation (PIE)		*PIE for PCV is expected in March 2018*	
Measles-rubella 5 year plan			NA
Operational plan for the immunisation program			
HSS1 end of grant evaluation report		*Refer to table in section 4.2*	
HPV specific reports			NA
Transition Plan			NA

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.

9. ANNEX 2

Joint Appraisal 2017 Participants

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