Joint Appraisal Update report 2019

Country	Bangladesh
Full JA or JA update[1]	☐ full JA ☑ **JA update**
Date and location of Joint Appraisal meeting	15 November 2019, Dhaka, Bangladesh
Participants / affiliation[2]	See annex
Reporting period	1 July 2018 – 30 June 2019
Fiscal period[3]	FY2018 – FY2019
Comprehensive Multi Year Plan (cMYP) duration	2018-2022
Gavi transition / co-financing group	Preparatory transition

1. RENEWAL AND EXTENSION REQUESTS

Renewal requests were submitted on the country portal

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

2. GAVI GRANT PORTFOLIO

Existing vaccine support

Introduced / Campaign	Date	2018 Coverage (WUENIC) by dose	2019 Target		Approx. Value $ (31 Jul 2019)	Comment
			%	Children		
Penta	*2009-2020*	*98% (DTP3)*	*95*	*3,765,098*	*253,069,087*	
PCV	*2014-2020*	*97% (PCV3)*	*114*	*3,713,678*	*212,430,912*	
fIPV	*2015-2020*	*75% (IPV1)*	*95*	*3,765,098*	*20,930,409*	
Rota	*Tbc*	*n/a*	*100*	*3,262,044*	*0*	Introduction is planned from 3rd Quarter 2020
Penta routine (FDMN)	*2017-2020*	*n/a*	*95*	*63,070 (last dose)*	*1,698,026.23*	2019 target of 95% represents (FDMN) Children 0-11 months who have received Pentavalent 3 vaccine (GPF)
PCV (FDMN)	*2017-2020*	*n/a*		*63,070 (last dose)*	*2,915,000*	
fIPV (FDMN)	*2019-2020*	*n/a*		*63,070 (last dose)*	*91,000*	
MR (FDMN)	*2017-2020*	*n/a*	*95*	*63,070 (last dose)*	*505,429.13*	*2019 target of 95% represents* (FDMN) Children 0-11 months who have received MR1 vaccine (GPF)

[1] Information on the differentiation between full JA and JA update can be found in the Guidelines on reporting and renewal of Gavi support, https://www.gavi.org/support/process/apply/report-renew/
[2] If taking too much space, the list of participants may also be provided as an annex.
[3] If the country reporting period deviates from the fiscal period, please provide a short explanation.

MR c/u campaign (FDMN)	*2018-2019*	*n/a*		*136,000 (first dose)*	*194,831.61*	
Penta c/u campaign (FDMN)	*2018-2019*	*n/a*		*20,000 (last dose)*	*146,500*	

Existing financial support

Grant	Channel	Period	First disb-ursement	Cumulative financing status @ July 2019				Compliance	
				Comm.	Appr.	Disb.	Util.	Fin.	Audit
ISS	*MOHFW*	*2001 – 2017*	*20 Dec 2001*	*23,340,200*	*23,340,200*	*23,340,200*	*23,235,197 (at May '19)*	*Received*	*Outstanding for FY 2017-2018*
HSS1	*MOHFW*	*2009 – 2017*	*18 Aug 2010*	*13,671,500*	*13,671,500*	*13,671,500*	*13,659,337 (bal. 12,163)*	*Outstanding*	*Outstanding for FYs 2016-2018*
HSS2	*TOTAL*	*2016 – 2019*	*-*	*33,922,731*	*33,922,731*	*33,738,731*		*-*	*-*
	UNICEF	*2016 – 2019*	*23 Aug 2016*	*20,395,457*	*20,395,457*	*20,395,457*	*9,519,450*	*Received*	*n/a*
	WHO	*2016 – 2019*	*13 Jul 2016*	*13,175,274*	*13,175,274*	*13,175,274*	*10,666,044*	*Received*	*n/a*
	MOHFW	*2016 – 2019*	*6 Nov 2017*	*352,000*	*352,000*	*168,000*	*64,523*	*Received*	*n/a*
HSS3 – MDTF	*WB*	*2019 – 2023*	*23 Aug 2019*	*50,000,000*	*28,572,000*	*14,286,000 (after 31 Jul '19)*	*n/a*	*Not yet due*	*n/a*
HSS3 – FDMN2	*TOTAL*	*2019 – 2021*	*-*	*3,422,930*	*2,243,516*	*1,080,256.58*	*-*	*-*	*-*
	UNICEF	*2019 – 2021*	*18 Jul 2019*	*1,554,634*	*1,010,929*	*492,718*	*Not yet due*	*Not yet due*	*n/a*
	WHO	*2019 – 2021*	*23 Aug 2019*	*1,868,296*	*1,232,587*	*587,538.58 (after 31 Jul '19)*	*Not yet due*	*Not yet due*	*n/a*
HSS3 - DPA	*TOTAL*	*Tbc*	*tbc*	*tbc*	*tbc*	*n/a*	*n/a*	*-*	*-*
	UNICEF	*Tbc*	*tbc*	*tbc*	*tbc*	*n/a*	*n/a*	*n/a*	*n/a*
	WHO	*Tbc*	*tbc*	*tbc*	*tbc*	*n/a*	*n/a*	*n/a*	*n/a*
CCEOP	*UNICEF SD*	*Tbc*	*tbc*	*tbc*	*tbc*	*n/a*	*n/a*	*n/a*	*n/a*
HPV Demo cash supp	*MOHFW*	*2015 – 2017*	*18 Jun 2015*	*358,500*	*333,500*	*333,500*	*178,944 (at May '19)*	*Received*	*Outstanding for 1 Jul 2016 – 30 Jun 2018*
IPV VIG	*MOHFW*	*2014 – 2018*	*14 Aug 2014*	*2,498,000*	*2,498,000*	*2,498,000*	*1,369,221 (at May '19)*	*Received*	*Outstanding for 1 Jul 2016 – 30 Jun*

									2018
MR c/u OP	*MOHFW*	*2013 – 2014*	*30 May 2013*	*33,586,500*	*33,586,500*	*33,586,500*	*17,995,091 (at May '19)*	*Received*	*No further audits due*
M VIG	*MOHFW*	*2012 – 2013*	*4 Apr 2012*	*1,195,500*	*1,195,500*	*1,195,500*	*1,186,425 (at May '19)*	*Received*	*No further audits due*
PCV VIG	*MOHFW*	*2014 – 2015*	*14 Jul 2014*	*3,233,500*	*3,233,500*	*3,233,500*	*1,408,008 (at May '19)*	*Received*	*No further audits due*
PCV PSG	*UNICEF*	*2018 – 2019*	*15 Aug 2018*	*279,715*	*279,715*	*279,715*	*124,416 (at Dec '18)*	*Received*	*n/a*
MR f/u OP	*TOTAL*	*2019-2020*	*-*	*8,611,116*	*8,611,116*	*8,611,018*		*-*	*-*
	UNICEF	*2019-2020*	*23 Aug 2019*			*4,227,743*	*Not yet due*	*Not yet due*	*n/a*
	WHO	*2019-2020*	*6 Sept 2019*			*4,383,275*	*Not yet due*	*Not yet due*	*n/a*
Rota VIG	*tbc*	*Tbc*	*tbc*	*tbc*	*tbc*	*n/a*	*n/a*	*n/a*	*n/a*
Comments									

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	HPV	2020	2021
	OCV application to ICG for OCV campaign in Cox Bazar for FDMN and host community population. In addition, GTFCC approved Bangladesh's request for 2.4 million doses of OCV for conducting campaign in hot spot of Dhaka	2019	2019-2020

Grant Performance Framework – latest reporting, for period 2018

Intermediate results indicator (tailored)	Target (2018)	Actual (2018)	Target (2019)	Actual (Jun 2019)

[4] Providing this information does not constitute any obligation for either the country or Gavi, it merely serves for information purposes.
Countries are encouraged to highlight in subsequent sections, and particular in the Action Plan in Section 7, key activities and potentially required technical assistance for the preparation of investment cases, applications and vaccine introductions, as applicable.

Intermediate results indicator (tailored)	Target (2018)	Actual (2018)	Target (2019)	Actual (Jun 2019)
IR-T 6: % of health facilities submitting VPD surveillance data on time (HSS2)	91%	99%	92%	99%
IR-T 7: % of health facilities submitting EPI coverage on time (HSS2)	90%	90%	90%	99%
IR-T 8: % of city corporations providing surveillance reports on time (HSS2)	91%	99%	92%	99%
IR-T 9: % of districts providing surveillance reports on time (HSS2)	85%	99%	85%	99%
IR-T 10: Proportion of districts utilizing web-based system for reporting timely complete vaccine stock management (DHIS2) (HSS2)	90%	80%	95%	95%
IR-T 11: Proportion of health facilities (both urban and rural) with no stock out of vaccines for the past 6 months (HSS2)	90%	90%	95%	98%
IR-T 12: Proportion of service providers trained on revised SOP on vaccine and cold chain management (HSS2)	85%	20%	95%	98%
IR-T 13: Proportion of outreach sites using freeze-tag during vaccine transportation for vaccination session (HSS2)	75%	80%	95%	98%
IR-T 14: (FDMN) Number of EPI sessions conducted versus planned per year (HSS)	n/a	n/a	100%	98%

Comments
Cold Chain Equipment Optimization Platform (CCEOP) indicators are not included as the project has not yet commenced at June 2019.

PEF Targeted Country Assistance: Core and Expanded Partners at 15 November 2019

	Year	Funding (US$m)			Staff in-post	Milestones met	Comments
		Appr.	Disb.	Util.			
TOTAL CORE	2017	466K	466K	455K	2.8 out of 2.8	20 out of 20	*Values in this table do not include PSC.*
	2018	842K	842K	837K	3.1 out of 3.1	17 out of 21	
	2019	1.14mil	1.14mil	170K	2.3 out of 2.3	13 out of 13	
UNICEF	2017	152K	152K	152K	1 out of 1	10 out of 10	
	2018	225K	225K	225K	1.3 out of 1.3	7 out of 9	
	2019	246K	246K	33K	1.3 out of 1.3	1 out of 1	
WHO	2017	313K	313K	303K	1.8 out of 1.8	10 out of 10	
	2018	603K	603K	597K	1.8 out of 1.8	10 out of 12	

	2019	607K	607K	137K	1 out of 1	9 out of 9	
CDC	2018	14K	14K	14K	--	0 out of 1	
	2019	87K	87K	--	--	3 out of 3	
World Bank	2019	200K	200K	--	--	0 out of 0	
TOTAL EXPAND	2017	14K	5K	5K	--	0 out of 2	
	2018	308K	127K	127K	--	3 out of 11	
	2019	19K	81K	81K	--	2 out of 3	Expanded partner expenditure figures from Q3 – will be updated with SAP; overspend in 2019 due to budget carried forward from 2018
icddr,b	2017	14K	5K	5K	--	0 out of 2	
	2018	56K	65K	65K	--	3 out of 3	Overspend in 2018 due to budget carried forward from 2017
SPHTI	2018	236K	62K	62K	--	0 out of 8	
	2019	0K	81K	81K	--	2 out of 3	Overspend in 2019 due to budget carried forward from 2018
University of Oslo	2018	16K	16K	16K	--	0 out of 0	

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

The JA update does not include this section.

4. PERFORMANCE OF THE IMMUNISATION PROGRAMME

The JA update does not include this section.

5. PERFORMANCE OF GAVI SUPPORT

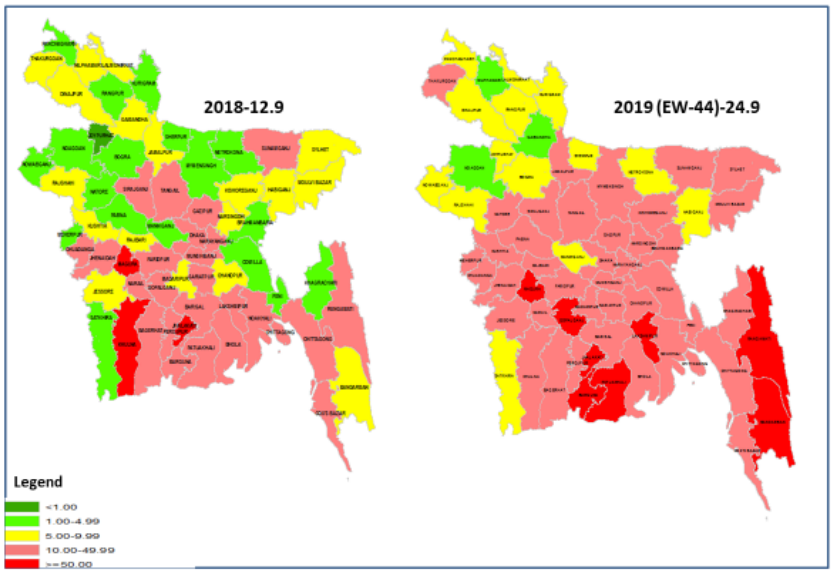
5.1. Performance of Gavi HSS support

Objective 1	
Objective of the HSS grant (as per the HSS proposal or PSR)	Strengthen VPD surveillance and its integration into HMIS
Priority geographies / population groups or constraints to C&E addressed by the objective	Nationwide

% activities conducted / budget utilisation	97% budget has been utilized as of 30 September 2019
Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption	The Immunization and Vaccine Development (IVD) Programme of WHO Bangladesh through network of Surveillance and Immunization Officers (SIMO) has been providing technical assistance to the National Expanded Programme on Immunization (EPI) since 1999. The technical assistance of WHO IVD programme in Bangladesh started mainly in polio eradication and gradually expanded to other areas including: strengthening routine immunization, VPD surveillance, measles elimination and rubella/congenital rubella syndrome (CRS) control, maternal and neonatal tetanus elimination, introduction of new vaccines, and vaccine safety and quality. WHO IVD in Bangladesh also assists the Ministry of Health and Family Welfare (MOHFW) in developing immunization and surveillance guidelines, policies and regulations. Currently there are 61 SIMOs, 7 Divisional Coordinators supported by drivers and administrative staff in the field. There are more than 700 weekly passive reporting and > 125 active reporting sites in the country. WHO received USD 13.1 million from GAVI under HSS2 to support objective "Strengthening VPD surveillance and its integration into HMIS" One of the components of the transition is to "Strengthen VPD surveillance and its integration into HMIS". WHO in collaboration with government has developed web based VPD surveillance system and trained concerned health workers on integration throughout the country. A dedicated server has been assigned under DHIS for reporting and integration of VPD surveillance. Required equipment has been procured and distributed. From 2020 onward web based VPD surveillance management system will be fully integrated with DHIS2. This will allow government to get real time data for decision making of EPI programme and maintaining data quality. One national consultant has been recruited to support integration and maintenance of the system using HSS2 funds. Renovation of NPML laboratory with upgradation to BSL2 level is underway with support of UNOPS and the renovation will be completed by March 2020. NPML continues to provide laboratory support for testing of polio and measles/rubella samples. A total of 2644 AFP, 7,581 measles, 212- CRS and 2,862 AES samples (data as of 31 October 2019) were collected and transported to NPML and IEDCR for laboratory confirmation. Surveillance of Invasive bacterial disease (IBD) is ongoing with support of Dhaka Sishu hospital. From Jan to Sep 2019, 30,102 children <5 years were admitted in 4 Hospital, among them 42.10% (12,673/30,102) were eligible and 43.37% (5,496/12,673) cases were enrolled. Bacterial etiology is detected 5.7% (313/5496) cases where S. pneumoniae was 11.8% (37/313) and N. meningitidis was 2.6% (8/313). Rota surveillance is carried out by IEDCR from 4 sites. A total of 1,340 children were enrolled out of which 762 were positive for rota (57%) (data as of Sept. 19) Coverage evaluation survey will complete by end of November 2019 and last survey was conducted in 2016. Bangladesh has achieved zero polio case since 2006 and certified as polio free together with SEAR since 2014. AFP surveillance in maintained at certification standard in the country. Bangladesh has achieved maternal and neonatal tetanus elimination in 2008 and since then maintaining the elimination status.

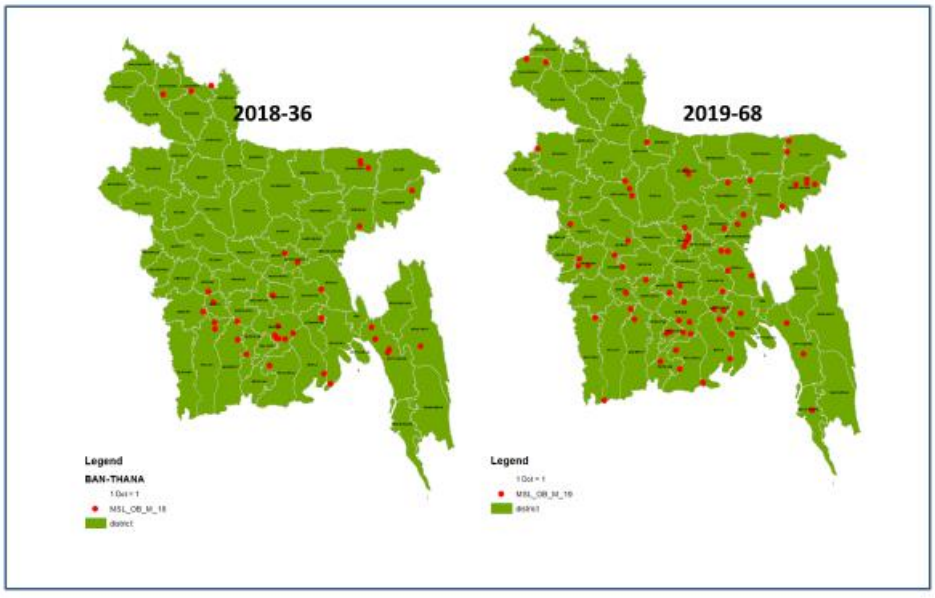
Bangladesh is targeting for elimination of measles, rubella and CRS by 2020 and has developed strategy plan to achieve the target. MR follow up campaign targeting children 9 months to 14 years was conducted in 2014. There were 36 lab confirmed measles outbreaks reported in 2018 and 68 in 2019. Around 2,000 confirmed measles and 308 rubella cases were reported in 2018 and around 3,532 measles and 122 rubella confirmed cases were reported in 2019. The incidence of measles per million population has increased from 12.9 in 2018 to 24.9 in 2019. 72% of districts achieved discarded measles rate of >2 per 100,000 population in 2018 and 80% achieved >2 in 2019.

Measles incidence per million population 2018 & 2019*



Data as of epidemiological week 44, 2019

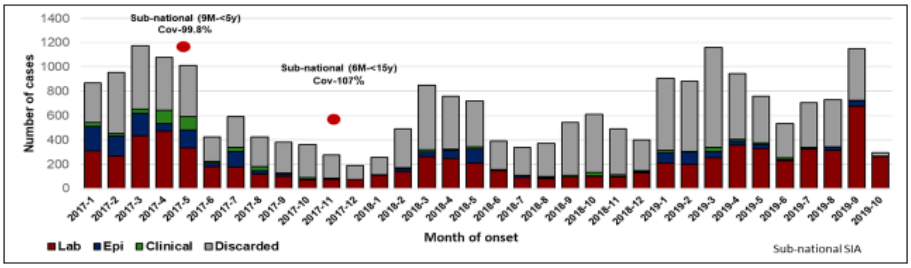
Lab Confirmed Measles Outbreak 2018 & 2019*



Data as of epidemiological week 44, 2019

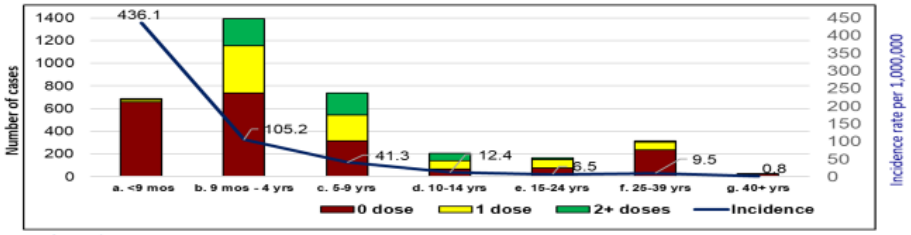
More measles cases were reported and investigated in 2017 (4001) and number went down to 2263 in 2018 and again pick up in 2019 (3,661).

Update on confirmed measles cases reported between 2017 to 2019



Year	Confirmed Cases
2006	6028
2007	15977
2008	10180
2009	15107
2010	14704
2011	4715
2012	1804
2013	292
2014	336
2015	359
2016	1069
2017	4001
2018	2263
2019*	3661

Bangladesh age distribution, vaccination status, and incidence, Jan to Oct 2019

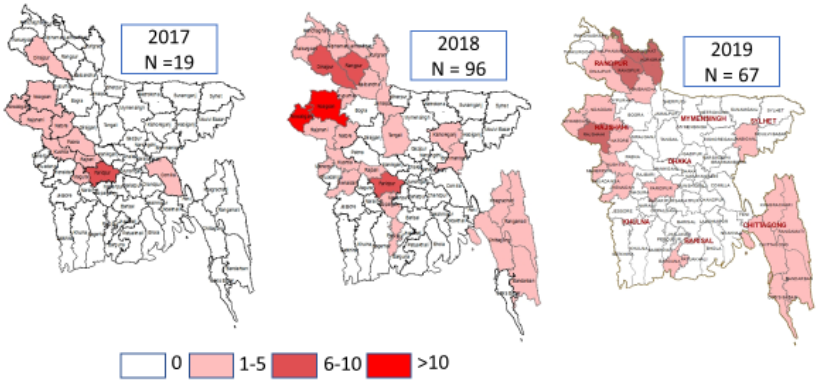


Data as of 31 October 2019

We still see significant number of zero dose children in age group 1-4 years and under 9 months of age. An effort is being made to reduce zero dose children through identification of unimmunized and left out children. Mapping of hard to reach through GIS mapping tool are carried out. Mapping of Chittagong City Corporation as an example -
https://drive.google.com/open?id=1bqcY5l4Wy9ukxG_cpCO43ynu_5mHQH0h&usp=sharing

Surveillance of Japanese Encephalitis is integrated with VPD surveillance in 2017. Ninety-six lab confirmed cases of JE were reported in 2018 and 67 JE in 2019. The JE cases are mostly distributed in 2 divisions- Rajshahi and Rangpur.

JE Cases by Districts in 2017-2018



	2017*				2018				2019**			
	Reported	Specimen Tested	JE Cases	Dengue Positive	Reported	Specimen Tested	JE Cases	Dengue Positive	Reported	Specimen Tested	JE Cases	Dengue Positive
AES Cases	249	158	19	0	1528	1520	96	9	2165	2159	67	7

*AES case with Specimen started on November 2017

**Data as of 5th November 2019

Sl. No	District/CC	JE Cases by Year 2017	2018	2019**
1	BANDARBAN		1	4
2	BARGUNA			1
3	BRAHMANBARIA		2	
4	CHITTAGONG		2	4
5	CHITTAGONG CC.			1
6	COMILLA	1		
7	COX'S BAZAR			1
8	DINAJPUR	1	10	2
9	FARIDPUR	6	7	1
10	GAIBANDHA		8	1
11	HABIGANJ			1
12	GOPALGANJ		1	
13	JAMALPUR		2	
14	JHENAIDAH		1	1
15	JOYPURHAT		2	
16	KHAGRACHARI		1	2
17	KISHOREGANJ		1	
18	KURIGRAM		5	8
19	KUSHTIA	1	1	1
20	LALMONIRHAT		2	6
21	MAGURA	1		
22	MEHERPUR		1	2
23	NATORE	1	1	1
24	NILPHAMARI		8	2
25	NOAGOAN	2	14	2
26	NOWABGANJ	1	14	5
27	PABNA	1		
28	PANCHAGHARH		1	
29	PERJOPUR		1	
30	RAJBARI	1	8	
31	RAJSHAHI	2	5	9
32	RAJSHAHI CC.	1		
33	RANGAMATI		1	5
34	RANGPUR		9	7
35	TANGAIL		1	
36	THAKURGOAN		8	
	National	19	96	67

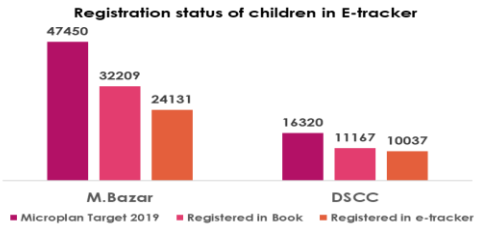
IVD supported various campaigns in Rohingya population in Cox's Bazar and continue to provide support in establishment and strengthening of routine immunization.

Major activities planned for upcoming period (mention significant changes / budget reallocations and associated **changes in technical assistance**[5]	VPD surveillance will continue to meet surveillance performance indicators. Information generated through surveillance will be used for program action. Integration of VPD surveillance into HMIS will be initiated from first quarter of 2020 and will be monitored and supported. Integration was delayed but from 2020 onward VPD surveillance data have started reporting through the web-based system. It will take time for the system to maturate. New vaccine application, introduction, monitoring and evaluation will be supported to the government. Application will be submitted for introduction of HPV vaccine in January 2020. NITAG is reviewing possible introduction of HPV situation vaccine in the country and plan to make recommendations on 24 December 2019 meeting. The government has formed a technical committee to review rota vaccine introduction. The committee will submit its recommendation to MoHFW by January 2020. Discussion is held on possible introduction of other vaccines typhoid and JE vaccines into routine immunization. Technical support is provided by WHO to generate evidence related to vaccine introduction.
Objective 2:	
Objective of the HSS grant (as per the HSS proposal or PSR)	Improve cold chain and supply chain management system performance
Priority geographies / population groups or constraints to C&E addressed by the objective	Nation-wide as well as targeted 52 districts for EPI store and cold chain system improvement plan
% activities conducted / budget utilisation	80% of activities implemented and 78% of fund is utilized as of 30 September 2019

Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption	Bangladesh is one of the few countries with one data system for Routine EPI report, Micro-plan, VLMIS, Cold Chain Information and VPD Surveillance integrated within the DHIS2. DHIS2 is upgraded with real-time Immunization Supply Chain and Logistics (ISCL) information, which includes data for vaccine, cold-chain equipment, storage, temperature, distribution, vaccination coverage, and surveillance. The cold chain and logistics MIS were implemented across the country since 2016, and all the cold-chain equipment is part of this database and monitored. All divisional, district, city-corporation and sub-districts level health managers and statistician are trained and using the data for program monitoring. Improved District level EPI cold and dry store capacity through construction and renovation EPI store and 29 districts are having functional cold room through installation of 51 Walk-in Coolers (WIC). With installation of all WICs, additional 600cm3 vaccine storage capacity increased which will facilitate to introduction of new vaccine in future. In addition, sub-national level EPI storage capacity improved by completion of construction and renovation of 51 districts stores. The current capacity of the central cold room is 173m3, which is inadequate for the current program and the current warehouse lacks space for installation of the new cold rooms. The construction of the new warehouse at the central level for accommodating needs, in addition to new cold rooms (8 WIC & 2 WIF, 40m3) are under the progress. The demolition of existing 2-storied build has been completed and the pilling work for new building is started. All existing cold and freezer rooms were equipped with remote continuous temperature monitoring systems and are functioning well. In addition, continuous temperature monitoring devices (30DTR) have been installed on all refrigerators across the country, including SP level since 2016. GoB completed nation-wide training of CCT and MT-EPI on revised SOPs of vaccine and logistics management. Vaccine container and irreversible freeze indicator are now being used in all outreach sessions to reduce vaccine wastage. GoB has conducted urban EVM assessment and implemented improvement plan in three (Dhaka north and south and Chittagong) City Corporations. Renovation of 38 EPI sites in three CCs has been initiated EPI, DGHS also completed the study on use of long-range vaccine carrier and cool pack for freeze sensitive vaccine and disseminated the preliminary result. In addition, GOB participants were attended the Regional Immunization Supply and Cold Chain Management training course. **Implementation of Immunization Individual Tracking System (e-tracker):** Government of Bangladesh developed an online registration system for individual tracking of child immunization status through DHIS2-based android app with both offline and online functionality, and with availability of system generated SMS services to remind mothers and care-givers for due and overdue vaccination. The e-Tracker is an effective and reliable registration system of children that can monitor unvaccinated, partially vaccinated and fully vaccinated children. EPI, DGHS with support from UNICEF and WHO has been piloting the e-tracker in Moulvibazar District and 1 zone of Dhaka South City Corporation (DSCC) since May 2019, which aims to ensure full valid vaccination to every registered child and eventually to support achieving EPI target of 95% valid full vaccination coverage. The objectives of e-tracker are: a) introduction of an effective and reliable online registration system to monitor unvaccinated, partially vaccinated and fully vaccinated children, b) registration of every child soon after birth in a catchment area and fixation of accurate target children, c) reminding next due dose of vaccine or dropout through SMS system to mother for timely vaccination and to reduce dropout and d) Reduction of invalid doses through SMS alert and correction.

A two days long National Training of Trainers (TOT) on EPI e-tracker for core national trainer team organized in April 2019. Total 22 participants from national core training team received national TOT who then facilitated all the training at District, Upazila and City Corporation level. Total 14 batches of Upazila level training were conducted for field level EPI worker and supervisor of all Upazila of Moulvibazar District and 3 Municipalities. Total 378 EPI worker including MT-EPI, HI, AHI, HA, Statistician, municipality vaccinators and supervisor were trained on individual training system. In addition, one Batch of District level training was organized for Managers and supervisors and 24 participants received training.

For City Corporation level one batch training was organized for CHO, HO, AHO and supervisor from DSCC and NGOs and 27 participants received training in June 2019. Subsequently, four Batches zonal level training for vaccinator and supervisor organized at Zone- 5 of Dhaka South City Corporation in September.



All the children born in 2019 are registered in the EPI e-tracker system, to cover full yearly target by EPI e-tracker. Progress for EPI e-tracker implementation in terms of registration and vaccination up to October show that 75% registered children in register book are registered in e-tracker in Moulvibazar and 90% registered in e-tracker at Zone-5 of DSCC. Process-documentation as well evaluation of individual tracking of children for vaccination in Moulvibazar District and zone- 5 of Dhaka South City Corporation is planned at least after six months of implementation for future scaleup.

Refresher training were organized at upazila level to resolve some SIM & Tab related problems that was reported form field. Also training for manager and EPI field supervisor was organized to develop capacity on how to monitor EPI E-tracker implementation at field and through data analysis.

One District level review meeting was organized to review progress and implementation of E-tracker and two batches of informal review meeting organized at Zone-5, DSCC to review implementation status and to resolve some issues and capacity developed to create EPI E-tracker dashboard to use in monitoring and in monthly meeting for review. All Upazila and District already developed their own dashboard in DHIS2. Join monitoring visit was organized to provide on-the job technical assistance to address the trouble shooting related to online system.

Result: The objective of implementation of EPI e-tracker is to increase valid coverage through reducing drop-out and invalid dose. Till October 2019, Moulovibazar reduced Penta1 -Penta3 drop-out to 2.0 from 3.1 in 2018 and reduced invalid dose with corrected 10 invalid 1st dose and 14 invalids 2nd dose. Zone-5 of DSCC also reduced drop-out from 1.3 to 0. An in-depth evaluation is planned.

Result	Moulvibazar		Dhaka South CC	
	2018	2019	2018	2019
Penta1- Penta3 dropout	3.1	2.0	1.3	-1.5
Invalid doses Corrected	0	24	0	2

EQUIST Application in Bangladesh: Directorate of Planning, Monitoring and Research (PMR) leading the equity analysis around MNCAH services including immunisation using the Equitable Impact Sensitive Tool (EQUIST). UNICEF has contracted CSF (Community System Foundation), a non-profit organisation applying information technology for sustainable development for capacity building of the directorate PMR and MIS to use the EQUIST tool and host the tool in-country for periodic analysis of recent data to guide Operational Plans and Health Sector Plan. This is initiation of capacity building of MOH, PMR, MIS and program focal from MNCAH, EPI, NNS on the EQUIST tool and setting country administrator/ ownership of the tool for further use. In this initial phase recent survey data (MIC 2019, BDHS 2017, CES 2019, HFS 2017 etc) are being used for situation analysis and identify equity gap by division, rural urban and wealth quintile. CSF has been working closely with DGHS to provide support on the uploading and data management of the latest data from District Health Information System (DHIS2), BDHS 2017-18, MICS 2019, and Effective Basic Social Services (EBSS) 2018, CES 2019 and Health Facility Surveys 2017 data on the EQUIST. A steering committee and a core-technical committee are formed to guide indicator mapping, selection of right data sources and holding bottleneck analysis at divisional and district level during the period of October 2019 to February 2020. Through bottleneck analysis using EQUIST tool equitable strategies will be developed and be presented to the Mid Term Review of the Health, Population, Nutrition Sector Program in Bangladesh.

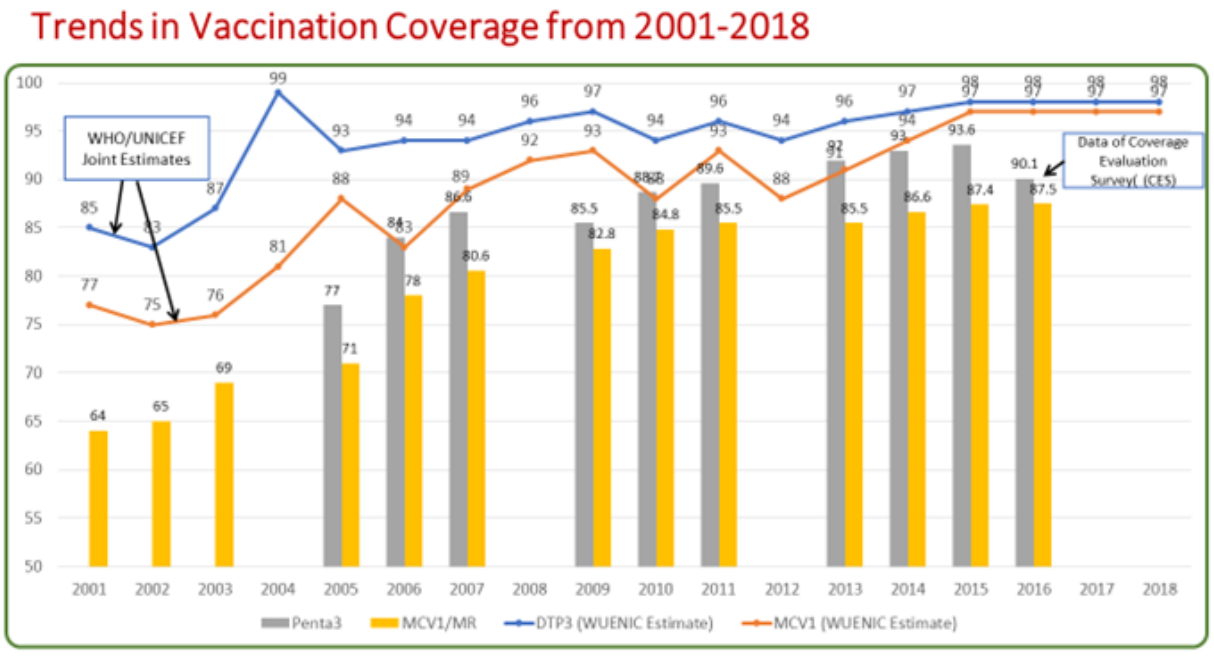
Leadership Development Program: UNICEF in partnership with John Hopkins University (JHU) and Bangabandhu Sheikh Mujib Medical University (BSMMU) has developed a leadership course for health managers. The curriculum and modules of this course is approved by Curriculum endorsement committee under Medical Education and In-service Training Unit of DGHS, facilitated by Directorate Planning, Monitoring and Research, DGHS. One batch of executive leadership workshop (16 participants) was conducted for program managers, and other health managers working nationally. Now this course is being expanded to national and subnational level covering Health Managers such as Directors, Civil Surgeons and Deputy Director/FP of 64 Districts. A total 120 Health Managers including national and district level managers are trained on 5-day Leadership Development Program jointly by BSMMU and JHU. A post evaluation of training findings will be prepared and shared by JHU in December 2019.

Current Implementation against HSS2 Targets of Objectives 2:

SN	Indicator	Target	Status 2016	Status 2017	Status 2018	Status 2019
1	Increase in total volume of central storage capacity	246	NA	NA	NA	NA
2	Number of district level cold rooms functioning	29	9	9	15	29
3	Proportion of districts utilizing web-based system for reporting timely complete vaccine stock management (DHIS2)	90%	54	80	80	95%
4	Proportion of health facilities (both urban and rural) with no stock out of vaccines for the past 6 months	90%	80	85	90	98%
5	Proportion of outreach sites using freeze-tag during vaccine transportation for vaccination session	75%	0	10	80	98%
6	Proportion of service providers trained on revised SOP on vaccine and cold chain management	85%	0	0	24	98%

	Issues/Concerns: UNICEF Bangladesh total expenditures amounted to US$ 15,974,017 (or 78% of total disbursed funds), the low expenditure is due to slow progress of central EPI store and delay in procurement of central EPI cold chain equipment which is linked with the construction of central store. The reason for delayed of central EPI store construction was due to long procedural barrier for approval of Central EPI store design and complex setting took longer time for demolishing the existing building at central level. Hence, it will be challenging to complete the project on time, UNICEF requested for no-cost extension for another 6 months to complete the project with the remaining balance for this period. Gavi has approved the grant extension till 31 July 2020.
Major activities planned for upcoming period (mention significant changes / budget reallocations and associated **changes in technical assistance**[5]	The government of Bangladesh with the support of UNICEF will continue the implementation of the EVM IP, including data system improvements and program efficacy for Routine EPI report, Micro-plan, VLMIS, Cold Chain Information and VPD Surveillance. The Ministry of Health and Family Welfare (MOHFW) EPI will continue the implementation of urban cold chain improvement plan and expansion of district store's construction for 20 districts and installation of cold rooms in 24 districts. The central cold chain expansion plan will be completed by next year. The government will continue the implementation of e-trackers and e-LIMIS in Moulvibazar district and one zone of Dhaka South City Corporation. MoH will conduct the process-documentation and lesson learn of individual e-tracking of children for vaccination (E-tracker) implemented in Moulvibazar district and Dhaka South City Corporation of Bangladesh and scaling up the e-tracking system in targeted 16 districts and 4 city corporations with HSS3 support until June 2020. MoH will strengthen the service delivery system for improving coverage and equity of immunization services in 16 target districts and 4 target city corporations, implement cold chain and logistics rehabilitation and expansion plan (CCEOP) and conduct Effective Vaccine Management (EVM) assessment & implement EVM improvement plan 2020. Other priority activities are capacity building on Equity analysis using EQUIST tools, establishment of National training center on cold chain equipment and SCANU and Implement high quality nation-wide MR campaign The grant has been extended till 31 July 2020.
Objective 3:	
Objective of the HSS grant (as per the HSS proposal or PSR)	Project management
Priority geographies / population groups or constraints to C&E addressed by the objective	
% activities conducted / budget utilisation	

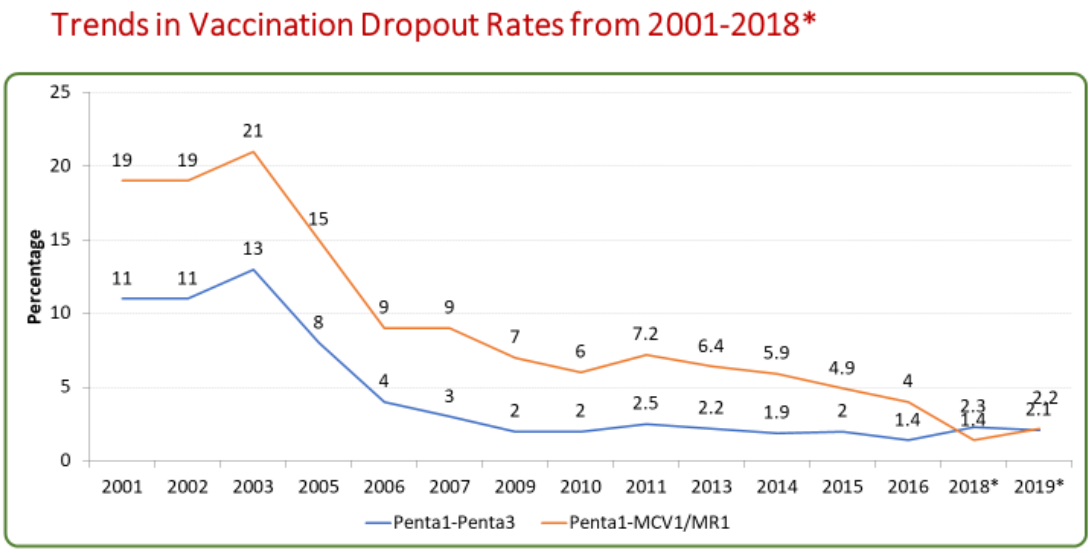
Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption	PIC of Gavi, led by HSD conducted several meetings to monitor & review the progress of HSS2 activities without utilizing Gavi fund. The fund available under objectives-3 will be transferred to in country Partners (UNICEF, WHO).
Major activities planned for upcoming period (mention significant changes / budget reallocations and associated **changes in technical assistance**[5]	PIC will continue to oversee the HSS activities with financial support by in country partners.



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

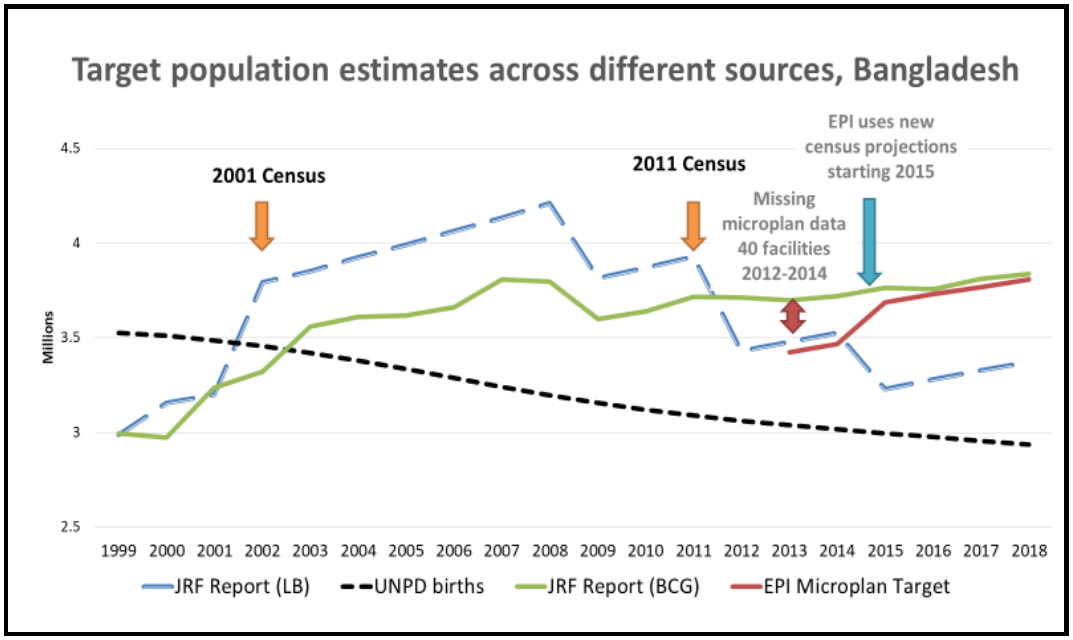
Bangladesh continues to maintain high routine immunization coverage. The CES 2016 Penta3 national coverage is > 90% and MCV at 88% and 82% fully vaccinated child. WUENIC coverage estimated are well above 94% for Penta3 and >90% for MCV1. Forty-nine out of 64 districts achieved > 80% FIC coverage.

The dropout rate among Penta1 and Penta3 and Penta1 and MCV1 is low (<2%). But the coverage is low in urban areas and 2 divisions (Sylhet and Chattogram).



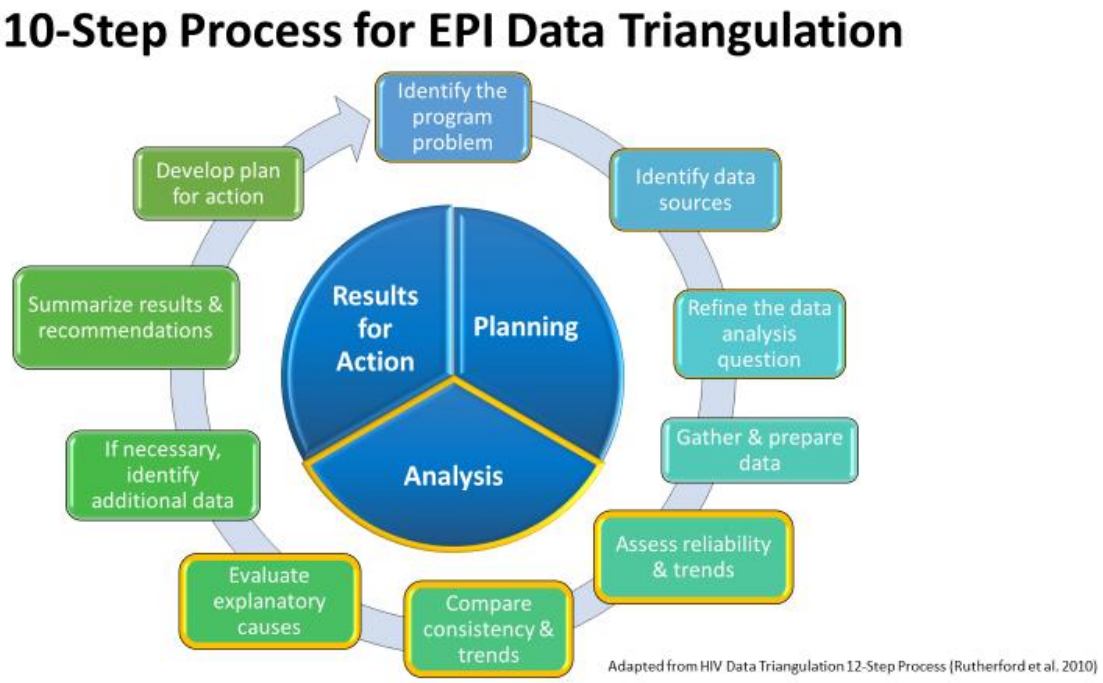
Data Source: CES (Coverage Evaluation Survey)
*Data from DHIS2, Dated : 11th Nov 2019

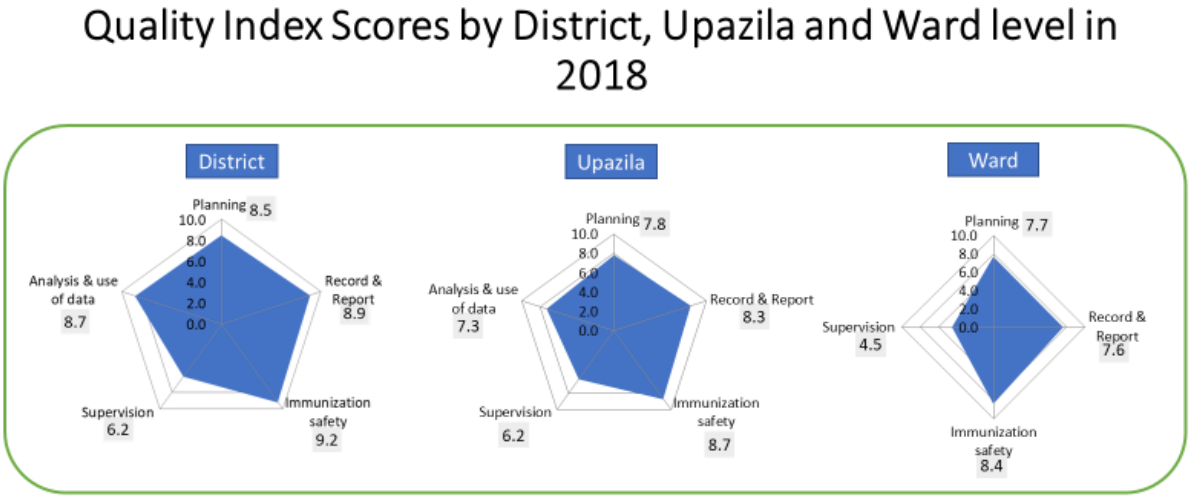
Denominator has been an issue in Bangladesh. Census was conducted in 2011. Projection data based on census, UNPD birth data, JRF report and micro planning targets are different. There is no one right answer. Government carries out review of micro plan every year and target are set at local level. Sometime there is no uniformity among upazilas and districts.



Several attempts were made to improve denominator. Data improvement plan has been developed and implemented. In-depth desk reviews were carried out at all level, data quality review workshop conducted, data quality assessment, surveillance and EPI review, data monitoring and supervision and capacity building of managers and health workers and recruitment of International and national consultants to provide technical support in strengthening data quality.

Data triangulation with support of CDC is ongoing and by end of year national and sub-national tools will be developed to conduct data triangulation at both level. Number of digital interventions as e-tracker, electronic registration, tracking vaccination centers are being implemented to improve coverage and drop-out. In 2020 a robust evaluation of new innovative strategies will be carried out to see the impact and further expansion.





Although immunization coverage is > 95% in all districts (JRF) but there are number of districts with high number of under-immunized children. There may be many reasons for such under-immunized children such as problem with denominator, migration and others. SIMOs will be involved to carry out postmortem of such districts in 2020 to find out the reason and identify under immunized children for intervention. The districts with highest coverage still have high incidence rate of measles.

Data improvement plan will be revised based on input from CDC and consultants. A data team will be placed in EPI to strengthen capacity both in immunization data and logistics management system through TCA support. New innovative activities will be conducted to improve data quality (the data improvement plan has been updated based on data triangulation exercise and suggestions from consultant). Out of 9 indicators under objectives one, 8 indicators have been achieved except measles incidence rate.

Bangladesh started analysis of vaccination report comparing with vaccine uses through DHIS2. In DHIS2, EPI reporting data set for routine immunization and also vaccine stock data set with vaccine used in vials are available at any stage and any level, which can easily be comparable. EPI is using vaccine demand and supply as per vaccination of previous month and present stock. In routine EPI online reporting through DHIS2, provide the opportunity to create GIS map based on use/stock of any vaccine with district boundary scaling with number of vials.

Based on current phase of urbanization and followed by challenges to reach target children government is initiating several activities such as electronic registration, evening and Friday session for working mothers, experience sharing visit among City Corporation, mobilization of professional organizations, mobilization of local leaders toward full immunization and mapping of hard to reach using GIS mapping tool and slum areas to strengthen routine immunization and data triangulation exercise and use of data at local level for action. GoB is targeting 4 densely population city corporations for intervention using GAVI HSS3 support. Urban immunization strategy has been developed and approved by MoHFW and development of costed action plan is underway. EPI is working on maintaining data quality and use of data at local level for action. Data triangulation exercise with technical support of CDC-US and WHO is ongoing. Capacity building of government staff through leadership and management training has been conducted. Data quality assessment is ongoing in district, Upazila and ward level.

5.2. Performance of vaccine support

MR campaign: Bangladesh is planning to conduct MR campaign to achieve at least 95% of targeted children 9 months to 9 years (33,917,221 children) in first quarter of 2019. The campaign will be conducted in 3 weeks, first week in educational institutions and second and third week in the community (outreach and fixed sites). Several sub-committees have been formed - Management, coordination, budget, supervision, monitoring & evaluation and documentation, Micro-plan, innovation, Training, and workshop, Communication & SBCC, Vaccine, Logistics & Cold Chain and Vaccine safety, AEFI & Risk management. Preparedness status at national level as of 10 December is >80%. Selective vaccination will be piloted in two districts. Bangladesh will use MR campaign as an opportunity to strengthen routine immunization such as mapping of hard to reach and unimmunized children, improved communication and cold chain, capacity building of health workers etc. A RI plan is being developed and there is plan for evaluation of RI strengthening intervention through use of third party.

The Ministry of Health is allocating funds for the procurement of all traditional vaccines and co-finance vaccines used in the country. The continued commitment of MoH&FW in vaccine purchases is also demonstrated by the expected increased budget allocation in the operational plan of MNCAH. However, certain key issues such as quarterly budget release and transition period between two fiscal years preventing further improvement of coverage rates. Although the vaccine and logistics management systems are fully online, however regular monitoring and feedbacks needs further improvement.

5.3. Performance of Gavi support to refugee populations

The largest influx of refugees started on last week of August 2017. A total of one million FDMN reside in Ukia and Teknaf upazila. Expecting the possibility of outbreaks of vaccine preventable diseases in an emergency due to low vaccination coverage, crowed living condition, malnutrition, and low hygiene and sanitation in the camps, the government immediately decided to conduct immunization response. Ten mass vaccinations campaigns were conducted from September 2017 till May 2018 providing more than four million doses of vaccines against cholera, polio, measles, rubella, diphtheria and tetanus to children, adolescents and adults preventing major disease outbreaks like measles, cholera and saving thousands of lives among the displaced population. The completion of mass campaigns as part of immunization response was not possible without generous support from WHO, UNICEF, GAVI and mobilization of community leaders, Majhis, NGOs, camp management teams, security forces and other partners in the camps. All required logistics including vaccine was made available on time. Strong monitoring system was in place supported by national and international monitors including post campaign evaluation and making immediate course corrections to ensure high coverage. There were several challenges faced during the implementation of campaigns like social and cultural beliefs about vaccines, multiple priorities and mobile population. These challenges were overcome through massive communication and social mobilization, effective mobilization of partners, local community, Imams, teachers and others before and during campaign. Not to forget are the untiring effort of the security personals, camp managers and the local teams that worked in unison to ensure that all support are required to vaccinate all children during each campaign despite of other competing priorities of basics of life like food, cloth and shelter.

In addition to campaign **routine Immunization** has been established delivering lifesaving vaccines to children and pregnant women across the FDMN camps. There are > 72 outreach sites and 58 fixed EPI sites providing routine vaccination. Around 240 vaccinators are supporting the vaccination to children and pregnant women. Around 1500 immunization sessions are held each month. More than 64,270 children under 2 years of age and > 43,000 pregnant women receive routine vaccination and newborn cohort is >30,000. There are challenges with routine vaccination - Awareness gap, Poor health seeking behavior, Significant dropout, Compliance is not well enough in regard to complete vaccination, Card retention is not satisfactory and Injection anxiety and fear of AEFI. There are efforts put in place to improve the coverage - Periodic program review established at camp, Upazila and district level, Monitoring established in camps through field monitors, Social mobilization efforts are ongoing through Community health workers/volunteers and Lab based VPD surveillance strengthened, Strengthen demand generation of vaccine through community engagement, Introduction of e-tracker for online registration of children, defaulter tracking and reporting, Strengthen supportive supervision with involvement of partners , Data quality improvement through existing platform i.e. DHIS2, EWARS, Capacity building of vaccinators and supervisors through on the job and refresher training and Periodic intensification of routine immunization (PIRI).

Early Warning and Reporting System (EWARS) for intensive disease surveillance was established which helped to conduct evidence-based responses

5.4. Financial management performance

Please refer to section 2 above for utilization rates on Gavi cash support.

Annual Technical report and quarterly financial reports are submitted from WHO and UNCIEF to MOHFW and Gavi. Audit are conducted as per WHO and UNICEF procedures.

MOHFW refunded the audit reimbursement amount of $417,759.00 to Gavi HQ on 02 January 2020. Regarding the residual fund, MOHFW is planning in-country transfer to WHO Country Office in both local and foreign currency as those are deposited in Bank account.

Regarding the outstanding external audits, recruitment of consultant by WHO is in process to carry-out the financial audit, expected to complete the audit by June 2020.

Ten actions related to Grant Management Requirements (GMRs) has been met, seven actions are not initiated or waived as it's related to MOHFW decision of future fund acceptance and rest of the actions are ongoing.

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

Bangladesh is still in the Gavi Preparatory Transition phase.

In line to global polio eradication and end game strategy plan, Bangladesh has developed polio transition plan for smooth transition of function and assets of surveillance network to the government. The Polio Transition Plan was developed through a series of consultative meetings and workshop with participation of relevant government agencies and departments including programme management and monitoring unit (PMMU), IEDCR, EPI, IPH and development partners. The government has approved the plan. The Transition plan has 3 phases: 1st phase (2016-2019), 2nd phase (2019-2022) and 3rd phase (2022-2026). Implementation of phase 1 transition is on track (Government has reflected transition activities in revised OP 2019, ToR of SIMO changed, Web based VPD surveillance in progress, upgrading of NPML ongoing). A consultant has been recruited to support transition of activities.

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

WHO - TA supports were instrumental in carrying out developing strategies to improve immunization coverage and equity, piloting of innovations, mobilization of community and professional organizations. The milestone set in PEF were achieved. The government has initiated innovative approaches/ strategies to strengthen routine immunization in term of coverage and quality.

Mapping of hard to reach population and use of innovative strategies to strengthen routine immunization is ongoing in Rangpur and Rajshahi City Corporation. Rangpur City Corporation has been implementing different activities focusing with the slogan "Rangpur City Corporation - Model of Urban Immunization" to improve immunization coverage. Geographic Information Systems (GIS) have been used for proper mapping of the slums and identifying areas uncovered by the routine vaccination. The full immunization initiative has been implementing since November 2018 in selected Upazilas and Municipalities of different Districts for community mobilization and build ownership. So far, six Upazilas have already declared as EPI model and implementation has been continuing another six upazilas and one municipality. Leadership and management coursed have been completed. An activity plan of action following the training has been developed and will be evaluated at the end of year. The electronic immunization registration has been implemented in Rajshahi and Rangpur City Corporation. With support of Bangladesh Pediatric Association (BPA) advocacy meeting on measles and rubella elimination was conducted in low performing 9 districts and 3 City Corporations in first quarter of 2019. The NITAG committee has been approved by Ministry in last June 2019. The National Orientation workshop on strengthening capacity of newly nominated National Immunization Technical Advisory Group (NITAG) Members has been completed. Technical support is provided to other advisory bodies. With support of CDC data triangulation tools has been developed and finalized for national and subnational level in coordination with EPI and other partners, training of SIMOs on data triangulation methods and tools have been conducted. Data improvement plan has been revised with input from David (GAVI) and CDC team.

No challenges were encountered during implementation of TCA support. WHO will continue strengthening of RI activities using innovative approaches and evaluation of current intervention for further expansion with TCA 2020 support.

TA support through **UNICEF** facilitated in finalization of National Urban Immunization Strategy (NUIS) and development of draft detailed implementation plan in consultation with government different officials and endorsement of Vaccine Independence Initiative (VII) agreement by Ministry of Health and Ministry of Finance. Under the VII agreement, Government of Bangladesh can access $4.5m credit line for vaccine procurement which will ensure continuous supply of vaccine through reducing the funding gap of vaccine

procurement. With UNICEF's technical support, Government of Bangladesh developed a Social and Behaviour Change Communication (SBCC) Strategy for Improving Routine Immunization and Measles-Rubella (MR) Campaign Coverage and endorsed by MOHFW. Both the Web and android version of e-tracker has been developed in DHIS2 and field tested in both rural and urban setting, through android version data can be entered in both offline and online option. The e-tracker model is now piloting in one district and one zone of urban areas. Facilitated in established functional dashboard on EPI Reporting, Cold Chain, Vaccine and Logistic management system in national live dashboard portal of DGHS and EPI data is fully management in DHIS2. The progress against all TCA milestones has been provided in portal reporting.

UNICEF will continue the technical support for strengthening routine immunization focusing on coverage & equity and of HSS activities and implementation of immunization e-tracker through DHIS2.

6. UPDATE OF FINDINGS FROM PREVIOUS JOINT APPRAISAL

In 2018, Joint National and International EPI & VPD surveillance review was conducted and this was taken as part of JA. The recommendation from review in explained below

Prioritised actions from previous Joint Appraisal	Current status
National Oversight Bodies: review the composition of the NCIP to ensure the independence of the committee's advocacy and monitoring functions, review the committee's TOR	The government constituted independent NITAG committee in June 2019 with new ToR. The committee has met 4 times since June 2019. An induction training was conducted for newly constituted committee.
Demand generation: Revise existing SBCC materials and revise old materials based on behaviour and appetite analysis, including any information available from knowledge, attitude and practices (KAP) surveys	Social Behaviour Change Communication (SBCC) strategy plan has been developed and in process of revising IEC materials
HR: Advocate for EPI-dedicated staff in City Corporations and municipalities, fulfil vacant position	Advocacy meeting with City Corporations has been conducted, experience sharing visit to highly performing City Corporation from other CCs has been conducted. No concrete initiation has been taken from CC to fulfill vacant position (55-60). NGOs are supporting vaccination in Dhaka CC, other have limited number of health workers except Rajshahi.
Urban Immunization: Endorse UIS and ensure necessary human and financial resources for full and immediate implementation	Urban immunization strategy has been developed and approved by MoHFW. A costed action plan for strengthening immunization is being developed based on approved UI strategy by May 2020 (delay due to MR campaign). HSS3 funding will be used to support implementation of costed activities.
Data quality: Resolve denominator inconsistencies through conducting an in-depth review in selected upazilas to determine the reasons for discrepancies between the denominator generated through national projections and that generated through data derived from micro plans, and data triangulation between supply and	There is continuous effort in resolving denominator issues. Data triangulation exercise is ongoing with support of CDC-US. in-depth review in selected 4 upazilas to determine the reasons for discrepancies between the denominator generated through national projections and that generated through data derived from micro plans

administered dose data	has been completed, new guidance has been given from center while determining new denominator. Data improvement plan has been revised with input from DAVI (GAVI) and CDC data triangulation team and will be implemented with TCA 2020 support.
Polio - Bangladesh should initiate implementation of the transition plan	GoB has approved polio transition plan and is phase of implementation. The activities outlined in phase 1 of transition has been implemented, phase 2 implementation is ongoing. A national consultant has been recruited to support the implementation of transition taking into consideration of availability GAVI funding support for 1.5 years. The National Polio Certification Committee has expressed their worries on transition within 2 years.
Measles, Rubella and CRS - Use campaigns to achieve > 95% coverage with MR vaccine consistently and uniformly and Transition to rash-fever surveillance following the SIA, when the number of cases should have decreased substantially	MR campaign is scheduled in first quarter of 2020. Every effort is being made to have highest quality campaign and use this as an opportunity to strengthen routine immunization. Measles surveillance guideline has been revised to incorporate new rash-fever case definition after the completion of the SIA.
Maternal and neonatal tetanus - Replacement of TT with Td	Replace of TT with Td has completed from March 2019
New vaccine introduction - Introduction of rota vaccine	Rota vaccine was supposed to be introduced in 2018 but due to global shortage of rota vaccine, introduction is shifted to 3rd quarter of 2020.

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

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

Activities, indicators and milestones to support immunization programme in Bangladesh has been identified and proposed under HSS3 and TCA 2020 Gavi grant.

Key finding / Action 1	Finalization of urban immunization strategy and costed activity plan
Current response	Urban immunization strategy is approved by the MoHFW
Agreed country actions	Finalization and approval of UIS and costed activity plan
Expected outputs / results	Approved Urban immunization strategy and costed activity plan available
Associated timeline	2019 -2020
Required resources / support and TA	TA to support finalization of costed urban action plan
Key finding / Action 2	Recruitment and fulfilling the vacant post of vaccinators
Current response	Process of recruitment not yet started

Agreed country actions	Advocate at highest level for initiation of recruitment
Expected outputs / results	At least 90% of vacant post fulfilled
Associated timeline	2019-2020
Required resources / support and TA	WHO and UNICEF coordinate with EPI
Key finding / Action 3	Identification of unimmunized and left out children
Current response	Mapping of hard to reach area ongoing, MR SIA will be taken as an opportunity to identify unimmunized children, mapped the area and plan to reach them, e-tracker and electronic registration piloted in few area, full immunization initiation ongoing as pilot basis
Agreed country actions	Complete mapping and identification of unimmunized children, continue new innovation and conduct evaluation of initiations for further expansion
Expected outputs / results	Unimmunized children identified and mapped
Associated timeline	2019-2020
Required resources / support and TA	TA support required to identify, and complete mapping followed by action plan to reach the unreached, support new innovative approaches and evaluation at the end of year for further expansion
Key finding / Action 4	Problem with denominator
Current response	Various activities ongoing as per data improvement plan – data triangulation, in-depth review of data, monitoring of DHIS2 and creation of dashboard, review micro planning as per new guideline, review of data improvement plan
Agreed country actions	Further consultation is planned
Expected outputs / results	Data improvement plan revised and implemented
Associated timeline	2019-2020
Required resources / support and TA	TA support required for implementation of DIP
Key finding / Action 5	New vaccine introduction
Current response	Generate data and provide support to newly constituted NITAG for right decision-making process for introduction new vaccine like rota, HPV, TCV, JE, cholera and others, preparation and submission of application to GAVI
Agreed country actions	WHO and UNICEF will provide support to government and NITAG in decision making process for introduction of new vaccine and followed by introduction
Expected outputs / results	New vaccines introduced into RI
Associated timeline	2021-2022
Required resources / support and TA	TA support for generation of required information for introduction of new vaccines continues
Key finding / Action 6	Effective and reliable online registration system to monitor unvaccinated, partially vaccinated and fully vaccinated children
Current response	The e-tracker model is now piloting in one district and one urban areas
Agreed country actions	UNICEF will support for planning, monitoring and evaluation of immunization e-tracker through DHIS2 in selected districts and city corporations
Expected outputs / results	Scale-up plan for implementation of immunization e-tracker
Associated timeline	2021-2022
Required resources / support and TA	TA support for evaluation and document lesson learned from implementation of e-tracker

Based on the above action plan, please outline any specific technology or innovation demand that can be fulfilled by private sector entities or new innovative entrepreneurs.

Support in negotiating with the mobile operator for free SMS for smooth scaling up and to ensure services to every mother and child with Realtime monitoring system

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

The JA was developed in-consultation with key stakeholders and subsequently reviewed by Program Implementation Committee.

9. ANNEX: Compliance with Gavi reporting requirements

	Yes	No	Not applicable
End of year stock level report (due 31 March) *****	✓		
Grant Performance Framework (GPF) * reporting against all due indicators	✓		
Financial Reports *	*See reporting in section 2 above*		
Periodic financial reports			
Annual financial statement			
Annual financial audit report			
Campaign reports *			
Supplementary Immunisation Activity technical report			✓
Campaign coverage survey report			✓
Immunisation financing and expenditure information	✓		
Data quality and survey reporting			
Annual data quality desk review	✓		
Data improvement plan (DIP)	✓		
Progress report on data improvement plan implementation	✓ October 2019		
In-depth data assessment (conducted in the last five years)	✓		
Nationally representative coverage survey (conducted in the last five years)	Completed, Report will be available by end of January '20		
Annual progress update on the Effective Vaccine Management (EVM) improvement plan	✓		
CCEOP: updated CCE inventory			✓
Post Introduction Evaluation (PIE) (specify vaccines):			✓
Measles & rubella situation analysis and 5 year plan	✓		
Operational plan for the immunisation programme	✓ (2019)		
HSS end of grant evaluation report			✓
HPV demonstration programme evaluations			
Coverage Survey	✓		
Costing analysis	✓		
Adolescent Health Assessment report	✓		
Reporting by partners on TCA	✓		

10. ANNEX: Participant List

1. Dr. A. E. Md. Mohiuddin Osmani, Joint Chief, Planning Wing, Health Services Division, MOHFW
2. Mr. Mujibur Rahman, Deputy Chief, Planning Wing, Health Services Division, MOHFW
3. Line Director, MNCAH, EPI Bhaban, DGHS, Mohakhali, Dhaka
4. Additional Chief Engineer (Health), PWD, Segunbagicha, Dhaka
5. Deputy Chief, Health Services Division, MOHFW, Bangladesh Secretariat, Dhaka
6. Deputy Chief, (PMMU), Health Services Division, Azimpur, Dhaka
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