# Joint appraisal report

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| **Country** | **Bangladesh** |
| **Reporting period** | *October 2014 - September 2015* |
| **cMYP period** | *2014-2018* |
| **Fiscal period** | *July to June* |
| **Graduation date** | *Only relevant for graduating countries* |

## 1. EXECUTIVE SUMMARY

### 1.1. Gavi grant portfolio overview

The immunization programme enjoys strong government ownership. In terms of overall immunisation programme performance, Bangladesh is a very high performer. Immunisation coverage rates and both WHO and UNICEF estimates and country reported coverage have remained over 90% for over ten years.

Gavi supports the country since 2001 (ISS, HebB) and the currently active programmes are pentavalent (2009), PCV (2015), MSD, MR (2014), IPV (2015) and HPV (2016). Total commitments amount to US$ 450 million. The HSS grant (US$ 13.4m) is small compared to the NVS programmes in the country and has been approved in 2009. Its implementation started after initial re-programming in 2011 and experienced considerable delays. Bangladesh has applied for a new HSS grant which was recommended in March 2015 for re-submission and this revised proposal is scheduled for the November IRC. The mid-term objective of HSS support in Bangladesh is to align such programmes fully with the next SWAp which is expected to be fully prepared by 2017.

Bangladesh benefits from a Full Country Evaluation (FCE). The Evaluation provides rich content and analyses of Gavi grants and the immunisation programme in Bangladesh. With its broad scope, the studies have been particularly crucial as an input to this appraisal for understanding the achievements of the MR campaign, implementation challenges of the current HSS grant and more recently indications of progress on PCV and IPV launches.

### 1.2. Summary of grant performance, challenges and key recommendations

**Grant performance** (programmatic and financial management of NVS and HSS grants)

Achievements

- Continuous high coverage rates and equity indicators
- MR campaign implemented in 2014 with ever largest target group of 53 million in a Gavi supported programme
- Dual launch of PCV and IPV in March 2015
- Ongoing FCE with interesting results for NVS and HSS support.

Challenges

- Wastage rates of multi-dose vaccines in outreach services (e.g. measles, MR)
- Continuous delays in the implementation of the HSS grant with a request for a no-cost-extension until the end of 2016
- Cash Programme Audit (CPA) ongoing until the end of October

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| **Key recommended actions to achieve sustained coverage and equity** (list the most important 3-5 actions) |
| Monitor wastage rates and stock levels to assess whether expected improvements with PCV, IPV and MR do happen. |
| M&E: Continue dialogue on ways to address existing denominator challenges and update Secretariat on plans moving forward. |
| HSS: Submit detailed interim progress report and inform about civil works and infrastructure activities on a quarterly basis. |
| Cash Programme Audit: Follow-up on the results of the CPA as defined in the report of the auditors (finalized end of October). |

### 1.3. Requests to Gavi's High Level Review Panel

| **Grant Renewals** |
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| **New and underused vaccine support**<br>• *Pentavalent*<br>• *Pneumococcal conjugate vaccine*<br>• *Measles Second Dose (with switch to MR)*<br><br>**Health systems strengthening support**<br>• *no cost extension* |

### 1.4. Brief description of joint appraisal process

The Gavi Secretariat conducted a mission to Bangladesh End of August to review the supported programmes. Based on the inputs of MoHFW and partners the Joint Appraisal report was prepared by the Gavi Secretariat. In the beginning of the mission a meeting of the Local Consultative Group Health (HSCC equivalent) was organized to discuss the progress of the sector programme HNPSDP in Bangladesh and the re-submission of the new Gavi HSS grant application.

## 2. COUNTRY CONTEXT

### 2.1. Comment on the key contextual factors that directly affect the performance of Gavi grants.

The economy in Bangladesh has grown at nearly 6 percent per year for the past decade and the GNI p.c. (Atlas method) is at US$ 1080. As a lower-middle-income-country Bangladesh will enter Gavi's preparatory transition phase in 2016 and new co-financing requirements will start applying from 2017, after the grace year. The eligibility status of the country is not projected to change in the next five years.

The **share of health in the national budget** was decreasing until 2014 and is below 1% of GDP. Total Health Expenditure (THE) as a percent share of Gross Domestic Product (GDP) has remained stable in recent years at around 3% and Bangladesh thus is a low spender on health. Only due to economic growth rates the absolute allocation for health increased to US$ 27 p.c. annually in real terms. Out-of-pocket expenditures are very high (63% according to NHA 2015) and contribute significantly to inequities for access to health services.

The health situation of the population in Bangladesh has consistently improved since the 1990s and under the current third sector programme (Health, Nutrition and Population Sector Development Programme (HNPSDP)) which is implemented from 2011-2016.

In 2015 several reports have been finalized which update on the developments in the health sector, namely the Bangladesh Demographic Health Survey 2014, Bangladesh Facility Utilization Survey 2014, National Health Accounts 2015 and the Coverage Estimate Survey 2014. The studies confirm incremental improvements of the health indicators in Bangladesh but also point out the well-known structural deficits of the health system (e.g. HR challenges, quality deficits of the public health infrastructure compared to NGO/private facilities, high out-of pocket expenditures above 60%, insufficient reductions of neonatal mortality).

The country is on track to reach the **MDG 4** with an under-five-mortality of 46/1000 (B-DHS 2014, target 48/1000) and **MDG 5** with a maternal mortality of 170/100.000 (target 140/100.000. Source: Countdown 2015). The **neonatal mortality** is still high at 28/1000 (target 21/1000). The **nutritional status** (children under five stunting: 36%, underweight: 33%) is ameliorating but malnutrition is considered to be a major underlying cause for child deaths. **Antenatal coverage** for births has increased substantially from 58 percent in 2004 to 79 percent in 2014. The proportion of **births delivered at health facilities** has been increasing from 12 percent in 2004 to the current level of 37 percent, which is however still low. Though the mortality rates have reduced **significant disparities in utilization of services** among the wealth quintiles as well as geographic regions persist.

The **total fertility rate (TFR)** remains at 2.3 children/woman (B-DHS 2011 and 2014) but is projected to reach replacement levels soon.

The developments of the public health sector in Bangladesh are largely influenced by **Health, Nutrition and Population Sector Development Programme (HNPSDP).** The total development budget of the sector programme is US$ 2.54 billion with a share of government of US$ 1.07 billion and development partners with US$ 1.47 billion (including a Multi-Donor-Trust-Fund administered by the World Bank and parallel Direct Project Aid (DPA) financing). The government funding was projected to fall short for the sector programme with a deficit of 44% as of end of 2014. As a consequence, the allocation to the Annual Development Plan budget was increased by 17% for FY 2015/16 to fulfill the commitments of the government.

The **mid-term review (MTR) of HNPSDP** was concluded in October 2014 (see Internal Appraisal Report 2014). On the basis of the review MoHFW and development partners agreed on a **Prioritized Action Plan (PAP 2014)** and Aide Memoire to guide the implementation of the programme in the areas of health services and systems with in total 46 priority actions ranging from family planning, MNCH, nutrition, HR, HMIS, health financing and stewardship and management of the SWAp. In October 2015 MoHFW presented the progress of the PAP and from the reporting this seems overall satisfactory. Challenges are in areas which require coordination of DG Health Services and DG Family Planning (e.g. recruiting, training and deploying doctors and health staff across different levels of the referral system), finalizing the HR strategy and implementing health financing reforms/ initiatives. **Internal World Bank reporting** rates the progress of HNPSDP towards achievements of the development objectives and implementation as moderately satisfactory. The **overall risk** is rated as substantial which mainly depends on substantial political & governance and fiduciary risks.

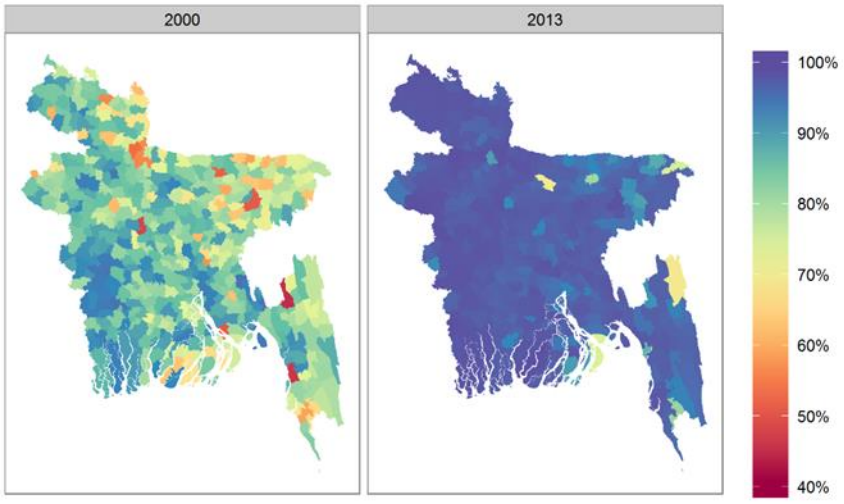
The sector programme is likely to be extended until at least the end of 2016 and for this the additional resources required are around US$ 250 million for the Multi-Donor-Trust-Fund (MDTF) administered by the World Bank. This additional allocation would also compensate for a shortfall of donor funding compared to the earlier pledges for the programme.

Government and DPs have started the process of preparing the successor SWAp which should seamlessly continue the support to the health sector.

The immunization programme enjoys strong government ownership. Gavi NVS and HSS funds are transparently included in the budget and operational plans of the MoHFW and part of the non-pooled financial resources of the HNPSDP.

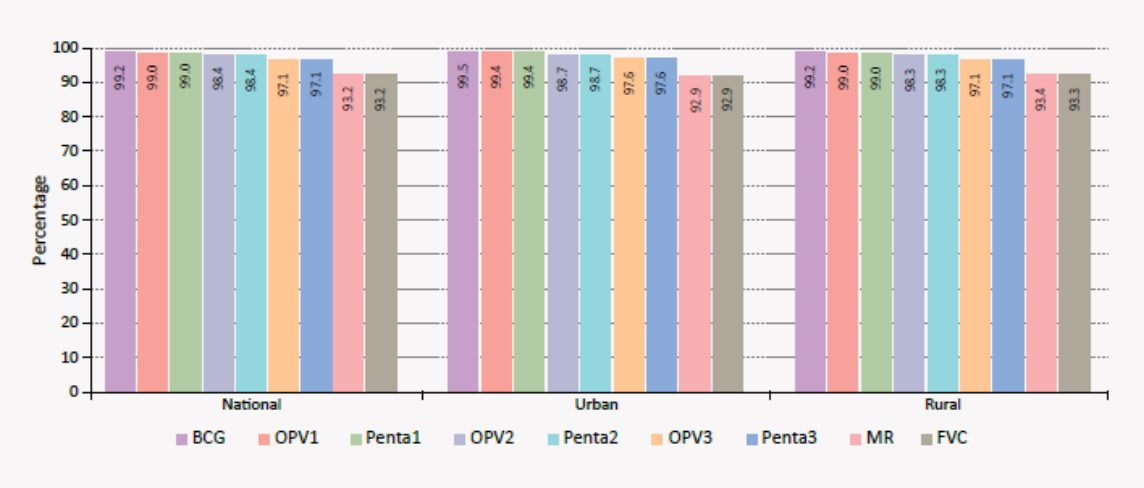
The ongoing Full Country Evaluation (FCE) provides rich content and analyses of Gavi grants and the immunisation programme in Bangladesh. With its broad scope, the evaluation has been particularly crucial as an input to this appraisal for understanding the achievements of the MR campaign, implementation challenges of the current HSS grant and more recently indications of progress on PCV and IPV launches.

In terms of overall immunisation programme performance, it is clear that Bangladesh is a very high performer. Immunisation coverage rates (both WHO and UNICEF estimates and country reported coverage) have remained over 90% for over ten years. The FCE's work has as led to a detailed understanding of areas of higher and lower coverage within the country to the Upazilla level (equivalent to district level) as shown in the graphic below. Their work, along with the annual coverage evaluation surveys the EPI programme leads with the support of partners, and the most recent DHS and MICS surveys (2014) do show certain pockets with lower coverage rates and existing inequities (notably Shlyet and Chittagong areas). Importantly these will receive more targeted support through the next HSS grant should this be approved by the IRC.




The CES 2014 reports national coverage for Penta1 at 99% and Penta3 at 97.1%; MR 93.2% and fully vaccinated child as 93.2%. There are no gender discrepancies (Penta3 coverage males 97.2% and females 97%) and not a great variation between rural and urban (97.6% for urban and 97.1% rural). This corroborates the overall excellent coverage and equity situation in Bangladesh.

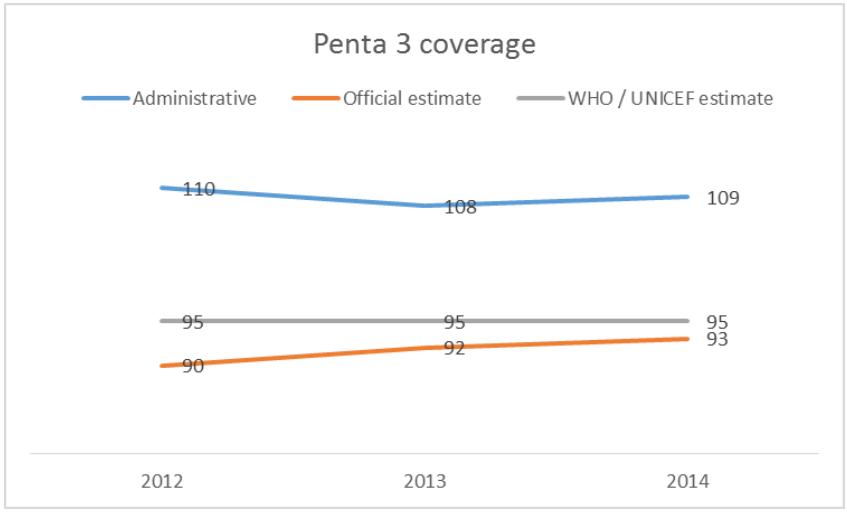
**Figure 2: Crude Vaccination Coverage by Age of 23 Months by National, Rural and Urban Areas in 2014**




*Source: CES 2014*

However, it should be noted that there are also concerns with imprecise denominators in Bangladesh, which has led to administrative coverage being reported repeatedly over 100% in recent years. During the mission, the EPI manager acknowledged this as a big concern, but highlighted that numerous workshops have recently been held to try and address this issue recently. The EPI programme has also endorsed at the national level that all districts in Bangladesh should be using the census 2011 conducted by the Bureau of Statistics numbers to project target populations till 2018 to ensure greater consistency. This may be an area that warrants further targeted technical assistance moving forward.

There are notable discrepancies in immunisation coverage rates across different data sources (as depicted in the below graph), with administrative data reporting coverage over 100% for several years. There is a 14% difference between administrative and the WHO / UNICEF estimate for 3rd dose of Pentavalent and 10% difference for 1st dose of measles containing vaccine in 2014.



There are also differences in estimated coverage rates between the B-DHS 2014 and the CES 2014: The DHS reported a DTP3 coverage at 91.3%, Measles at 86.1% and all basic vaccinations at 83.%. Overall, 78 percent of children age 12-23 months had received all the recommended vaccinations before their first birthday. The HPNSDP 2011-2016 sets a target of 90 percent coverage for measles vaccine by age 12 months by 2016 (MOHFW, 2011) and the DHS shows that 80 percent of children have received the measles vaccine by age 12 months.

The DHS report emphasizes that the proportion of children receiving all basic vaccinations by age 12 months has decreased by 5 percentage points between 2011 and 2014. This decline in immunization coverage is of concern. Rumours of sickness and death caused by immunization for measles may have contributed to this decline and resulted in vaccine hesitancy. The data shows that Bangladesh is a high-performer, but retaining that high coverage will continue to be a challenge going forward, particularly if vaccine hesitancy, for example, may be on the rise.

In terms of equity the DHS data reports that among administrative divisions, the highest level of coverage is seen in Rangpur (90 percent) and the lowest in Sylhet (61 percent). As expected, mother's education and wealth status are positively associated with children's likelihood of being fully vaccinated. For instance, 95 percent of children whose mothers completed secondary or higher education are fully vaccinated, compared with 74 percent of children whose mothers have no education. B-DHS 2014 results indicate that vaccination coverage does not vary by the sex of the child.

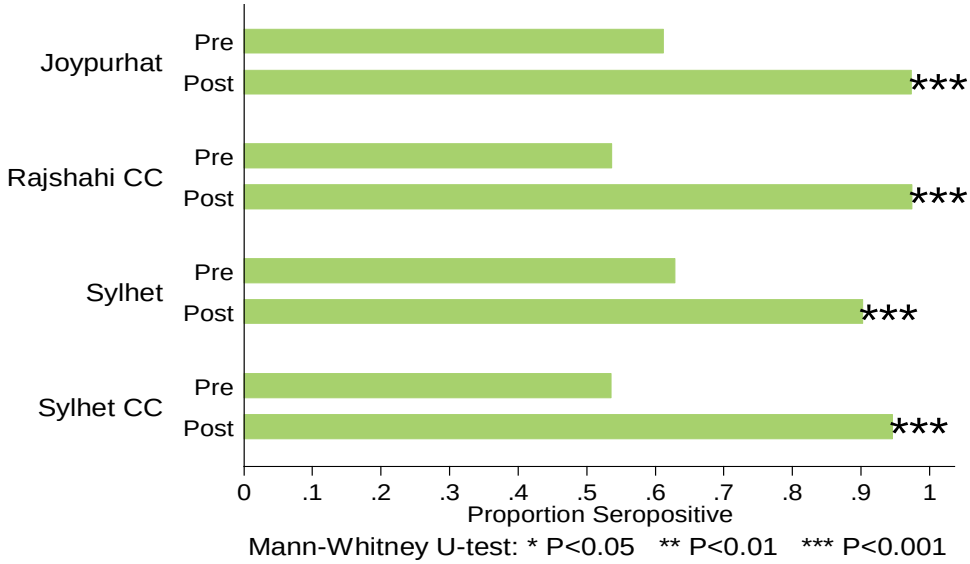
Efforts to improve data quality were discussed during the country mission. WHO and UNICEF have been facilitating the implementation of data quality self-assessments across the country and more than half of all districts have been covered in this recent effort. Trainings are provided to help orientate district managers and other immunisation managers on how to collect and report data on a quality and timely basis. In addition, Bangladesh seeks to validate these data quality self-assessments by requiring SMOs to re-conduct data quality self-assessments (minimum of two per month). Using the same methodology and sample sites, the results are then compared for consistency and issues discussed with district and immunisation managers.

# 3. GRANT PERFORMANCE, CHALLENGES AND RENEWAL REQUESTS

## 3.1. New and underused vaccine support

### 3.1.1. Grant performance and challenges

In 2014, a notable success was the national **MR campaign**. This campaign, one of the largest conducted in the world, vaccinated over 53 million children. The independent coverage survey conducted by icddr,b as part of the FCE found the campaign achieved 90% coverage and that children who attended school were 18% more likely to be vaccinated showing the success of the school-based delivery approach. All areas sampled showed significant MR antibodies prevalent post-campaign. This was all achieved during a period of several disruptions due to national elections and protests, making transport extremely challenging.




Following the campaign, Bangladesh has shifted to the MR vaccine in routine immunization and has as a consequence converted MSD to MR support.

**PCV and IPV** have been successfully introduced through a joint introduction in March 2015. The support provided by partners was highlighted as particularly important (e.g.: readiness assessment conducted by WHO in spite of political unrest and transportation challenges) and trainings were successfully conducted in 98% of clinics in time for the launch.

During the JA mission, **vaccine wastage rates** were discussed at length. Recent icddr,b health facility survey findings indicate excellent vaccine availability across nearly all antigens, whereas only recorded 70% of facilities sampled as having PCV and IPV in stock. The likely cause was highlighted as higher vaccine wastage rates for these antigens, as well as for measles. Bangladesh as yet does not apply the multi-dose vial policy and has wastage rates higher than those thresholds set by Gavi for a few antigens (notably for measles second dose which currently has a wastage rate of 64% whereas Gavi's threshold is 40%). The EPI manager flagged that they are working on addressing wastage rates and that HSS support is being used to procure new vaccine containers so that more vaccines can be safely brought back to fixed sites from outreach sessions within required temperature ranges. PCV vaccine wastage rates are expected to quickly improve once the roll-out is completed and the vaccine is routinely used. Replacement of measles second dose with MR is expected to also reduce wastage rates. This replacement is already underway and is expected to be completed once stocks of measles second dose are depleted. IPV continues to be a concern namely due to the fact that it is a five-dose vial. High wastage rates may lead to potential vaccine shortages, although these are being closely monitored by the EPI programme. Wastage will be further assessed, recommendations developed and discussed as part of the PCV and IPV joint post-introduction evaluation planned for in November 2015.

The **HPV demonstration project** originally intended to start in 2015 has been delayed until February 2016 to align with the new school year.

Bangladesh shows ongoing commitment to strong monitoring and evaluation of its immunisation programme. **DHIS2** is in the process of being rolled-out, with many key performance indicators for the EPI programme updated on a monthly basis. Bangladesh continues to conduct annual coverage evaluation surveys (with the most recent survey from 2014 being launched in September 2015). The last DHS and MICs surveys were conducted 2012-2013.

An **EVM assessment** has been carried out in 2014 and an EVM improvement plan was finalized in the end of 2014. The overall performance of the vaccine management is "very good" with 82% aggregated across all criteria, which is substantially better than the norm. However, there is need to implement and monitor the EVM improvement plan to address risks of parts of

the infrastructure operating at its life cycle end and capacity limits and to prepare for the introduction of new vaccines. This will require an increase of more than 70% by 2018 in storage capacity for each of the 3 tiers of the supply and cold chain if IPV, PCV, Rota and HPV are introduced. The EVM improvement plan identified investments of approx. US$ 21.9 million for the cold chain, transport, temperature monitoring, MIS, studies for waste management, TA and implementation support. Bangladesh will be one of the first countries to adopt the comprehensive EVM (cEVM) approach and it is recommended to establish an EVM secretariat or equivalent. **The support for the implementation of the EVM improvement plan is part of the next HSS grant application.**

#### 3.1.2. NVS renewal request / Future plans and priorities

- The information on the achievements in 2014 and targets for 2016 are provided in the Cover Note (copied from APR 2014). The targets are consistent with the data for previous years.
- Bangladesh is considering to apply for Rota vaccine in 2016.

### 3.2. Health systems strengthening (HSS) support

#### 3.2.1. Grant performance and challenges

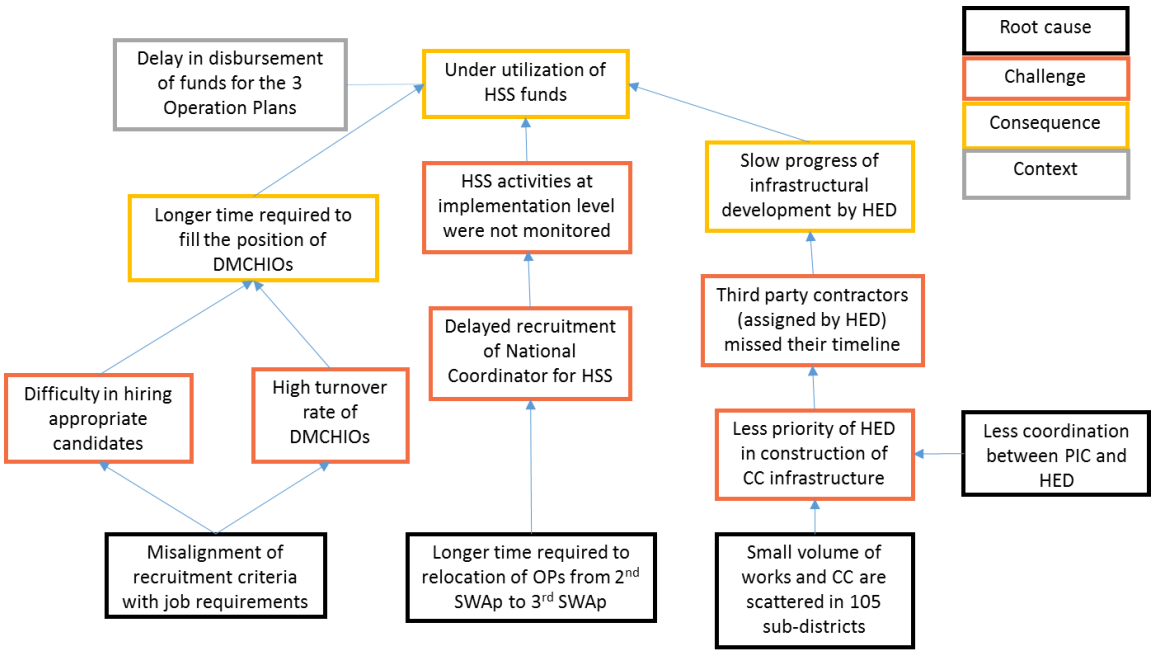
The current Gavi HSS grant was originally approved in 2009 and designed with a focus on maternal and child health. After delays (from both Gavi and the Country) and re-programming of funds with a stronger focus on immunization, implementation started in 2011 and was expected to be completed in early 2015 (Appraisal October 2014).

The programme's objectives are to recruit MCH and Immunization workers (Objective 1), improve their supervision and programme monitoring (Objective 2), close gaps in equipment and physical infrastructure (Objective 3), and improve universal MCH services delivery through strengthened human resource management (Objective 4). It originally targeted 13 low performing districts and was extending for the second phase in 2014 to an additional 19 districts.

The first tranche of US$ 7.2 million was disbursed for the financial year 2011/12 and this phase was completed in June 2013 (FY 2012/13). The residual funds amounted to US$ 1.9 million. The funds available for the second phase of the programme are US$ 6.4 million and the residual funds summing up to a total of US$ 8.3 million. The HSS funds are fully included in the Operational Plans of the MoHFW.

The implementation of the second phase was delayed because of the late submission of the external audit for FY 2011/12 which did not permit the disbursement of the second tranche by the Gavi Secretariat until April 2014. Financial management and audit issues are mentioned in section 3.4 below.

Many of the notable challenges in implementation of the current HSS grant are well-captured and documented by the icddr,b team as part of the FCE. Key challenges for slow implementation and utilization of funds have been analysed in detail, with some key aspects summarised in the root-cause analysis, graphic below.




The HSS grant in Bangladesh continues to have an extremely slow rate of implementation and fund utilisation. During the JA mission the interim progress reporting by the ministry records $5.1 million residual funds remaining as of July 2015 (financial utilization rate at 38%).

However, out of this amount US$ 3.7 million are planned to be absorbed by the end of 2015. US$ 2 million alone are for the infrastructure and civil works investments into cold and logistic rooms at District level ("New Activity 2" as defined by the grant re-programming) and these contracts have already been awarded. The remaining US$ 1.4 million will be used for training and salaries of already recruited health staff (e.g. District and MCH and Immunization Officers, Community MCH and Immunization Workers, vaccine porters), operational costs and programme management until the end of 2016.

With these objectives and schedule the MoHFW submitted a budget proposal for a no-cost extension of the HSS grant until December 2016 during the JA mission.

After the conclusion of current HSS support the HR and operational costs are envisaged to be sustained by the new HSS grant for which an application has been re-submitted by MoHFW in September 2015 following the IRC review in March. The new application proposes to transfer the funding of such operational activities to the new sector programme from 2018 onwards. This is considered to be an appropriate and risk-mitigating transition period.

In the absence of the no-cost extension the funding for HR and other operational cost would end in 2015 with no alternative external or government funding sources until at least 2017. Ending the support which such short lead time has the high risk of affecting immunization services in the 32 supported districts negatively. The appraisal 2014 recorded below average coverage rates in Districts with delays in recruitments of DMCH& Immunization Officers and this situation improved in the CES 2014.

**The no-cost extension for the HSS grant should be accepted based on the following agreements:**

- The weak quality of reporting submitted for the current HSS grant in the 2014 APR (submitted in May 2015) was discussed during the appraisal and the need to improve this going forward was strongly emphasized. Whereas financial statements and reporting have been submitted to Gavi, progress in terms of activities is not well reported with only short narrative updates provided. For example, the use of percentage completion without any narrative against many activities is largely un-interpretable.

Similarly, table 8.3 in the APR that summarizes progress against targets was left entirely blank.

- MoHFW will address these deficits and submit to the Gavi Secretariat an updated interim progress report by the end of October. This report will also explain with more detail about the scheduling and progress of the infrastructure and civil works component of the programme ("New Activity 2") which absorbs the largest portion of residual funding until the end of 2015.

The need to improve HSS grant management, monitoring and reporting was further stressed during the session conducted on introducing the new grant performance framework. Gavi emphasized that failure to report on agreed metrics and slow utilization of funds or implementation of activities would potentially have negative implications for future disbursements moving forward.

#### 3.2.2. Strategic focus of HSS grant

The HSS grant in Bangladesh supports multiple activities which are directly linked to immunization services and/ or MNCH. Coverage rates in the benefitting districts are monitored through the HMIS and CES in Bangladesh. However, the objectives of the grant do not specify specific impact improvements or outcomes. This deficit is rooted in the conceptualization of the grant in 2008/9, the re-programming in 2011 and the then valid Gavi policies and guidelines.

#### 3.2.3. Request for a new tranche, no-cost extension, re-allocation or reprogramming of HSS funding / Future HSS application plans

MoHFW has requested for a no-cost extension of the grant. This is explained in detail in section 3.2.1. .

Bangladesh resubmitted a new HSS grant application to be reviewed by the November 2015 IRC (3 year grant). The next HSS programme is expected to align with the successor of HNPSDP.

### 3.3. Graduation plan implementation *(if relevant)*

**Not relevant.**

### 3.4. Financial management of all cash grants

Since Mid-August the Gavi Secretariat (outsourced to Price Waterhouse & Coopers, PWC) is conducting a Cash Programme Audit of all cash support in Bangladesh (ISS, HSS, VIG, MR operational costs). The total volume of cash support to Bangladesh amounts to US$ xy million since (YEAR) (US$ xy million for MR operational costs). The de-briefing of the CPA is scheduled for October 20 and will then have required additional 4 weeks of work compared to the original schedule. The compilation of the required documentation with different organizational responsibilities for grant implementation across MoHFW and government and at regional levels (center, Districts, Uphazila) needed much more time than anticipated. At the time of the JA it was premature to assess the outcome of the CPA although PWC highlighted several areas of concern that will require strengthening for future grants. .

For the CPA government submitted the external audit reports of the HSS grant for the FY 2012/13 and 2013/14. They will be assessed in that context.

### 3.5. Recommended actions

| Actions | **Responsibility** (government, WHO, UNICEF, civil society organisations, other partners, Gavi Secretariat) | **Timeline** | **Potential financial resources needed and source(s) of funding** |
|---|---|---|---|
| Monitor wastage rates and stock levels to assess whether expected improvements with PCV, IPV and MR do happen. | MoHFW, WHO, UNICEF | Ongoing, with update on this expected for next JA | |
| M&E: Continue dialogue on ways to address existing denominator challenges and update Secretariat on plans moving forward. | MoHFW, WHO and UNICEF | Ongoing, with update on this expected for next JA | |
| HSS: Submit detailed interim progress report and inform about civil works and infrastructure activities on a quarterly basis. | MoHFW | End of October. Quarterly updates. | none |
| Cash Programme Audit: Follow-up on the results of the CPA as defined in the report of the auditors | MoHFW, Gavi Seretariat | To be defined in the CPA report | none |

## 4. TECHNICAL ASSISTANCE

### 4.1 Current areas of activities and agency responsibilities

The assessment of TA focuses on WHO and UNICEF as the agencies are the relevant partner for the EPI programme. The sector programme provides TA in various areas which also benefit the immunization services indirectly (e.g. HMIS improvements, development of the HR strategy, trainings, improving services in hard to reach areas, procurement system, financial management, various surveys as mentioned above).

**WHO:**

WHO Bangladesh office has been supporting the Bangladesh MoH&FW in the immunization and vaccine development programme (IVD). In the current year WHO provided technical assistance in improving and maintaining immunization coverage for all EPI vaccines, surveillance of vaccine preventable diseases, to eradicate transmission of wild poliomyelitis, to eliminate measles (specially the MR vaccination campaign and improving routine immunization coverage), to maintain maternal and neonatal tetanus elimination, to introduce new and underutilized vaccine (PCV, IPV introductions and preparatory work of HPV demonstration project), to transfer technology for the laboratory diagnosis of Vaccine Preventable Diseases and to strengthen national regulatory authorities.

These activities are being implemented in Bangladesh through network of WHO staffs at national, regional and district levels. Currently, two international and three national staffs are working under

IVD Bangladesh program. In addition there are 37 divisional coordinators and surveillance medical officers working in the divisions and districts.

**UNICEF:**

UNICEF Bangladesh has been supporting the MoH&FW in strengthening immunization, vaccine procurements, cold chain improvements, capacity building of service providers and communication activities focusing on equity. In the current year technical assistance is provided in improving and maintaining immunization coverage in low performing districts & urban areas focusing on equitable access to all, procurement of EPI vaccines with no stock outs, introduction of new and underutilized vaccines (PCV, IPV introductions and preparatory work of HPV demonstration project), EVM assessment & implementation of EVM-IP, mass communication campaign targeting low performing areas and new vaccines and conduction of coverage evaluation survey (CES). These activities are being implemented through UNICEF staff at national & regional levels including a cold chain consultant for the improvement of cold chain management.

## 4.2 Future needs

The future needs assessment focuses on the needs which could be covered by WHO and UNICEF. Additionally, Bangladesh should consider support by other partners to prepare and support the introduction of the HPV programme. The discussion of the prioritized TA needs funded through the PEF is in its initial stages and needs to be followed-up in the month of October.

**WHO:**

The existing network of staff is being supported by polio eradication and measles elimination grants received by WHO. However, WHO would require additional support for maintaining the adequate level of technical support to the country.

1. **Three 'WHO National Professional Officers (NPOs)' for two years for the following areas;**

a. NPO, Immunization: to prevent the morbidity and mortality from vaccine preventable diseases by increasing routine immunization coverage and introduction of HPV, Rota and Hepatitis birth dose.
b. NPO, Surveillance: to maintain the surveillance indicators for vaccine preventable diseases, to supervise the Divisional Coordinators and Surveillance Medical Officers and improve data management, to assist in Japanese encephalitis, Invasive Bacteria disease and rota virus surveillance.
c. NPO, Vaccine safety and quality, improve EVSM and vaccine management, AEFI surveillance especially in the context of new vaccine introduction, injection safety and health care waste management.

**2. One International Medical Officer, Immunization System Strengthening**

The TOR for this position is to provide technical support in planning, organizing and development of vaccine preventable disease control activities with special focus to strengthen immunization system for new vaccine introduction and surveillance of vaccine preventable diseases. In addition, there is Medical officer EPI and communicable disease control who will be is spending 60% time on EPI and will be supported by WHO funds.

**UNICEF:**

The existing staffs are supported by UNICEF's other resources. However, UNICEF would require additional funding for providing adequate level of technical support to the country:

a. One National Officer to support the implementation of the comprehensive EVM improvement Plan, reviewing coverage targets in the cMYP and the new vaccine introduction plans, improving visibility of the Gavi support in the sector programme. Currently UNICEF is providing temporary support for cold chain improvement plan. However, this position needs to work with the MoHFW in facilitating the implementation of Gavi supported activities.
b. National Consultant Adolescent Health: UNICEF is currently supporting the implementation of evidence based planning for adolescent friendly health services in selected City Corporations. UNICEF is the lead TA for the adolescent health intervention assessment as well as planning for its integration. UNICEF in collaboration with WHO and UNFPA developed a planning tool kits to facilitate the country planning process for integration of an adolescent health intervention. This work stream identifies and consolidates existing government and partner platforms and resources available to support the integration of services in the demo districts. UNICEF will provide intensive technical support for the completion of the adolescent health assessments and prioritization of a feasible adolescent health intervention for integration with HPV demonstration programme.
c. International professional for ensuring the standard the construction and procurement of cold room at sub-national level. According to EVMIP, the MoH is planning to install cold rooms in 29 districts for future introduction of ROTA and HPV vaccine, which will require a huge work on timely completion of construction work. At present a construction specialist is supporting MOHFW for renovation/construction of Special Care Newborn Unit (SCANU) at district level, 60% time of the specialist will be allocated for future cold room construction in first year and full time for next year.

## 5. ENDORSEMENT BY ICC, HSCC OR EQUIVALENT & ADDITIONAL COMMENTS

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| Brief description of how the joint appraisal was endorsed by the relevant national coordination mechanism:<br><br>No formal endorsement was requested from the Local Consultative Group Health. The LGC has endorsed the APR and discussed Gavi related matters frequently in the context of the submission of the new HSS grant application. |
| Issues raised during debrief of joint appraisal findings to national coordination mechanism:<br><br>n.a. |
| Any additional comments from<br><br>• Ministry of Health:<br>• Partners:<br>• Gavi Senior Country Manager:<br><br>None. |

## 6. ANNEXES

*[Please include the following Annexes when submitting the report, and any others as necessary]*

- **Annex A. Key data**
  **See Cover Note.**

- **Annex B. Status of implementation of the key actions from the last joint appraisal and any additional High Level Review Panel (HLRP) recommendations**

| Key actions from the last appraisal or additional HLRP recommendations | | Current status of implementation |
|---|---|---|
| **Topic** | **Action Point** | |
| HSS | Resolve audit issues; submit past due external audit report for FY2012/13 as soon as possible and for FY2013/14 by December 2014. | **Audit reports submitted for the Cash Programme Audit (September-October 2015)** |
| HSS | Implement HSS grant in FY2014/15 as planned and submit "end of grant" report, including all assessment findings, with new HSS grant application. | **Implementation delayed. FCE HSS report available** |

- **Annex C. Description of joint appraisal process** (e.g. team composition, how information was gathered, how discussions were held)

The Gavi Secretariat conducted a mission to Bangladesh End of August to review the supported programmes. Based on the inputs of MoHFW and partners the Joint Appraisal report was prepared by the Gavi Secretariat. In the beginning of the mission a meeting of the Local Consultative Group Health (HSCC equivalent) was organized to discuss the progress of the sector programme HNPSDP in Bangladesh and the re-submission of the new Gavi HSS grant application.

- **Annex D. HSS grant overview**

| **General information on the HSS grant** | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1.1 HSS grant approval date | | | 2009 | | | | |
| 1.2 Date of reprogramming approved by IRC, if any | | | 2011 | | | | |
| 1.3 Total grant amount (US$) | | | 13.4 million | | | | |
| 1.4 Grant duration | | | 2009 - 2016 | | | | |
| 1.5 Implementation year | | | 2009 - 2016 | | | | |
| (US$ in million) | **2008** | **2009** | **2010** | **2011** | **2012** | **2013** | **2014** |
| 1.6 Grant approved as per Decision Letter | | 13.4 | | | | | |
| 1.7 Disbursement of tranches | | | | 7.0 | | | 6.4 |
| 1.8 Annual expenditure | | | | | | | |
| 1.9 Delays in implementation (yes/no), with reasons | | | Yes. Re-programming necessary before implementation to align objectives. Low capacity to implement. Complicated infrastructure improvements. Delays in recruitments. | | | | |
| 1.10 Previous HSS grants (duration and amount approved) | | | n.a. | | | | |

1.11 List HSS grant objectives

- recruit MCH and Immunization workers (Objective 1)
- improve their supervision and programme monitoring (Objective 2)
- close gaps in equipment and physical infrastructure (Objective 3)
- improve universal MCH services delivery through strengthened human resource management (Objective 4).

The programme originally targeted 13 low performing districts and was extending for the second phase in 2014 to an additional 19 districts.

1.12 Amount and scope of reprogramming (if relevant)

The total amount of US$ 13.4 million was re-programmed in 2011 (alignment of objectives and activities) before the actual implementation started.

- **Annex E.**
    - **CES 2014 coverage data**
    - **B-DHS 2014 coverage data**

- **Annex F.**
    - **Table with proposed WHO and UNICEF Technical Assistance**

## Table 1: Findings of Key Indicators

| Indicators | | BCG | OPV1 | PENTA1 | OPV2 | PENTA2 | OPV3 | PENTA3 | MR | FVC |
|---|---|---|---|---|---|---|---|---|---|---|
| Crude Vaccination Coverage by Age of 23 Months | National | 99.2 | 99.0 | 99.0 | 98.4 | 98.4 | 97.1 | 97.1 | 93.2 | 93.2 |
| | Urban | 99.5 | 99.4 | 99.4 | 98.7 | 98.7 | 97.6 | 97.6 | 92.9 | 92.9 |
| | Rural | 99.2 | 99.0 | 99.0 | 98.3 | 98.3 | 97.1 | 97.1 | 93.4 | 93.3 |
| | Male | 99.2 | 99.0 | 99.0 | 98.4 | 98.4 | 97.2 | 97.2 | 93.5 | 93.5 |
| | Female | 99.3 | 99.1 | 99.1 | 98.3 | 98.3 | 97.0 | 97.0 | 92.8 | 92.8 |
| *By Division* | Barisal | 99.8 | 99.7 | 99.7 | 98.6 | 98.6 | 97.2 | 97.2 | 93.9 | 93.9 |
| | Chittagong | 98.8 | 98.8 | 98.8 | 98.1 | 98.1 | 97.0 | 97.1 | 92.9 | 92.9 |
| | Dhaka | 99.3 | 99.0 | 99.0 | 98.3 | 98.3 | 96.8 | 96.8 | 92.3 | 92.2 |
| | Khulna | 99.7 | 99.5 | 99.5 | 98.7 | 98.7 | 97.5 | 97.5 | 93.4 | 93.4 |
| | Rajshahi | 99.7 | 99.5 | 99.5 | 99.3 | 99.3 | 98.5 | 98.5 | 96.8 | 96.8 |
| | Rangpur | 99.9 | 99.9 | 99.9 | 99.3 | 99.3 | 98.3 | 98.3 | 93.9 | 93.9 |
| | Sylhet | 97.5 | 96.9 | 96.9 | 95.4 | 95.4 | 92.7 | 92.7 | 88.6 | 88.6 |
| Valid Vaccination Coverage by Age of 12 Months | National | 99.2 | 95.8 | 92.6 | 95.1 | 93.3 | 92.7 | 93.0 | 86.6 | 81.6 |
| | Urban | 99.3 | 96.4 | 92.1 | 95.5 | 93.3 | 92.3 | 93.5 | 84.7 | 78.8 |
| | Rural | 99.2 | 95.6 | 92.7 | 95.1 | 93.3 | 92.9 | 92.9 | 87.1 | 82.3 |
| | Male | 99.2 | 96.0 | 92.6 | 95.4 | 93.6 | 93.0 | 93.1 | 86.8 | 81.6 |
| | Female | 99.2 | 95.5 | 92.5 | 94.9 | 93.0 | 92.4 | 92.9 | 86.3 | 81.6 |
| *By Division* | Barisal | 99.7 | 96.7 | 93.1 | 95.7 | 93.7 | 93.5 | 94.0 | 87.8 | 82.6 |
| | Chittagong | 98.8 | 94.9 | 91.9 | 94.3 | 92.5 | 92.5 | 92.8 | 85.9 | 81.0 |
| | Dhaka | 99.3 | 95.7 | 92.6 | 95.2 | 93.1 | 92.1 | 92.5 | 84.4 | 79.4 |
| | Khulna | 99.6 | 96.3 | 92.7 | 95.5 | 94.4 | 93.2 | 93.0 | 86.9 | 81.9 |
| | Rajshahi | 99.7 | 97.4 | 94.9 | 97.0 | 94.9 | 95.4 | 95.6 | 91.8 | 87.0 |
| | Rangpur | 99.9 | 96.7 | 93.4 | 96.3 | 94.3 | 94.1 | 94.5 | 86.4 | 81.5 |
| | Sylhet | 97.4 | 91.5 | 89.1 | 90.4 | 89.6 | 87.0 | 87.1 | 82.1 | 78.6 |

| | National | Urban | Rural | Barisal | Chittagong | Dhaka | Khulna | Rajshahi | Rangpur | Sylhet |
|---|---|---|---|---|---|---|---|---|---|---|
| Drop-out Rate | | | | | | | | | | |
| * Penta1-Penta3 | 1.9 | 1.8 | 1.9 | 2.5 | 1.7 | 2.2 | 2.0 | 1.0 | 1.6 | 4.3 |
| * Penta1-MR | 5.9 | 6.5 | 5.7 | 5.7 | 5.9 | 6.8 | 6.1 | 2.8 | 6.0 | 8.6 |
| Incidence of Invalid Dose | | | | | | | | | | |
| * Invalid Penta1 | 3.4 | 4.6 | 3.1 | 3.9 | 3.3 | 3.4 | 3.6 | 2.6 | 3.6 | 2.6 |
| * Invalid Penta2 | 5.5 | 7.0 | 5.2 | 6.3 | 5.5 | 5.6 | 4.8 | 4.9 | 5.6 | 4.0 |
| * Invalid Penta3 | 6.8 | 8.3 | 6.4 | 7.4 | 6.4 | 7.3 | 6.4 | 5.8 | 6.7 | 5.3 |
| * Invalid MR | 3.4 | 4.2 | 3.3 | 3.1 | 3.2 | 4.3 | 3.3 | 3.2 | 3.6 | 3.3 |
| Card Retention Rate | 83.4 | 75.8 | 85.6 | 82.9 | 82.7 | 76.9 | 86.2 | 86.8 | 91.1 | 84.9 |
| | | | | | | | | | | |
| Measles Second Dose (MSD) Vaccination Coverage among 18-29 Months Old Children | | | | | | | | | | |
| * Crude MSD Coverage | 80.5 | 82.0 | 80.2 | 84.5 | 77.9 | 80.2 | 81.9 | 88.2 | 79.7 | 71.1 |
| * Valid MSD Coverage | 70.4 | 67.6 | 71 | 74.7 | 70 | 69.1 | 72.6 | 77.9 | 68.1 | 62 |

## Bangladesh Demographic Health Survey 2014 – Vaccination Results

Table 24 Vaccinations by background characteristics

Percentage of children age 12-23 months who received specific vaccines at any time before the survey (according to a vaccination card or the mother's report), and percentage with a vaccination card seen, by background characteristics, Bangladesh 2014

| Background characteristic | BCG | Pentavalent | | | Polio | | | | Measles | All basic vaccinations[2] | No vaccinations | Percentage with a vaccination card seen | Number of children |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 0[1] | 1 | 2 | 3 | | | | | |
| **Sex** | | | | | | | | | | | | | |
| Male | 98.3 | 96.9 | 95.4 | 90.4 | 20.0 | 97.5 | 95.4 | 90.9 | 63.8 | 85.9 | 83.6 | 1.5 | 74.0 | 862 |
| Female | 97.5 | 97.1 | 95.5 | 92.3 | 22.3 | 97.4 | 95.6 | 92.0 | 68.7 | 86.4 | 84.1 | 2.5 | 73.8 | 772 |
| **Birth order** | | | | | | | | | | | | | |
| 1 | 98.9 | 97.7 | 96.3 | 92.2 | 22.1 | 98.5 | 96.5 | 92.0 | 66.7 | 88.5 | 85.9 | 1.0 | 70.4 | 660 |
| 2-3 | 97.8 | 97.4 | 95.8 | 92.8 | 21.8 | 97.5 | 95.8 | 92.7 | 65.9 | 86.7 | 84.8 | 2.1 | 76.4 | 767 |
| 4-5 | 97.9 | 95.9 | 92.7 | 88.0 | 18.9 | 95.7 | 92.5 | 89.2 | 67.2 | 79.0 | 76.6 | 2.1 | 76.3 | 151 |
| 6+ | 87.8 | 87.1 | 87.1 | 67.3 | 6.2 | 87.1 | 87.1 | 71.6 | 57.5 | 69.1 | 64.9 | 12.2 | 75.0 | 55 |
| **Residence** | | | | | | | | | | | | | |
| Urban | 98.9 | 98.5 | 97.2 | 93.6 | 26.0 | 98.6 | 97.5 | 93.0 | 71.8 | 90.0 | 87.6 | 1.0 | 74.3 | 423 |
| Rural | 97.6 | 96.5 | 94.8 | 90.4 | 19.4 | 97.0 | 94.8 | 90.8 | 64.1 | 84.8 | 82.5 | 2.3 | 73.8 | 1,210 |
| **Division** | | | | | | | | | | | | | |
| Barisal | 97.8 | 97.0 | 95.1 | 91.6 | 32.6 | 97.5 | 95.6 | 88.2 | 71.8 | 87.5 | 81.5 | 1.8 | 78.7 | 92 |
| Chittagong | 96.9 | 96.3 | 92.7 | 88.3 | 22.9 | 96.7 | 92.7 | 88.9 | 65.8 | 87.6 | 83.3 | 2.9 | 69.1 | 349 |
| Dhaka | 99.1 | 98.4 | 98.2 | 93.9 | 16.9 | 98.7 | 98.2 | 93.9 | 65.0 | 88.4 | 87.4 | 0.9 | 72.6 | 624 |
| Khulna | 98.9 | 98.1 | 95.1 | 92.0 | 26.0 | 98.1 | 95.7 | 92.6 | 69.1 | 86.2 | 85.5 | 1.1 | 78.2 | 129 |
| Rajshahi | 98.3 | 97.8 | 95.1 | 93.0 | 25.5 | 97.7 | 95.0 | 92.9 | 71.0 | 86.0 | 83.6 | 1.7 | 77.5 | 163 |
| Rangpur | 100.0 | 99.5 | 99.0 | 97.9 | 26.9 | 100.0 | 99.0 | 97.9 | 75.3 | 90.3 | 90.0 | 0.0 | 85.6 | 146 |
| Sylhet | 91.3 | 87.5 | 86.0 | 76.0 | 11.5 | 89.0 | 86.6 | 77.9 | 48.4 | 65.6 | 61.1 | 8.3 | 67.7 | 129 |
| **Educational attainment** | | | | | | | | | | | | | |
| No education | 93.9 | 92.7 | 87.1 | 80.1 | 17.2 | 92.9 | 87.3 | 80.8 | 61.5 | 75.6 | 73.8 | 6.1 | 74.2 | 209 |
| Primary incomplete | 97.8 | 96.8 | 95.2 | 87.7 | 22.4 | 97.1 | 95.0 | 87.5 | 68.0 | 78.5 | 75.2 | 2.2 | 79.9 | 234 |
| Primary complete[3] | 96.4 | 95.1 | 93.9 | 88.4 | 7.2 | 95.5 | 94.2 | 89.7 | 56.9 | 79.1 | 76.2 | 3.2 | 71.5 | 225 |
| Secondary incomplete | 99.1 | 98.1 | 97.1 | 94.2 | 22.2 | 98.8 | 97.3 | 94.5 | 66.1 | 89.7 | 87.9 | 0.8 | 72.8 | 701 |
| Secondary complete or higher[4] | 99.4 | 99.4 | 99.0 | 97.9 | 32.0 | 99.2 | 98.9 | 96.4 | 75.8 | 97.5 | 94.8 | 0.6 | 73.4 | 264 |
| **Wealth quintile** | | | | | | | | | | | | | |
| Lowest | 96.4 | 93.8 | 90.2 | 81.1 | 15.8 | 94.1 | 90.3 | 81.4 | 60.2 | 72.7 | 69.1 | 3.6 | 75.0 | 363 |
| Second | 97.7 | 97.9 | 97.4 | 92.9 | 14.7 | 98.1 | 97.5 | 93.2 | 59.6 | 85.8 | 82.9 | 1.9 | 73.7 | 286 |
| Middle | 97.7 | 96.5 | 93.9 | 92.9 | 18.2 | 97.5 | 94.1 | 93.2 | 65.5 | 88.1 | 87.2 | 2.3 | 70.0 | 302 |
| Fourth | 98.3 | 97.7 | 96.9 | 94.1 | 23.3 | 98.3 | 97.0 | 94.9 | 70.4 | 93.0 | 90.8 | 1.5 | 74.6 | 324 |
| Highest | 99.5 | 99.4 | 99.1 | 96.3 | 32.0 | 99.4 | 99.1 | 95.3 | 73.9 | 92.0 | 90.4 | 0.5 | 75.6 | 359 |
| Total | 97.9 | 97.0 | 95.4 | 91.3 | 21.1 | 97.4 | 95.5 | 91.4 | 66.1 | 86.1 | 83.8 | 2.0 | 73.9 | 1,633 |

**Annex F: Technical Assistance proposed for PEF**

**Prioritization of technical assistance needs**

| **Country:Bangladesh** | | | | | | | |
|---|---|---|---|---|---|---|---|
| | TA need | Justification | Intended outcome | Possible modalities i.e. staffing requirement, duration etc. | Funding source leveraged if applicable i.e. bilateral donors; core resources by WHO, UNICEF; Gavi HSS grant or other cash grant | Possible provider | Source of needs identification i.e. cMYP, EVM, PIE, coverage / equity improvement plan, complement to HSS grant etc. |
| **1** | **National Professional Officers (NPO's) Immunization, surveillance and NRA** | **To provide technical support to Divisional coordinators and SMO's** | **Improved immunization coverage** | **3 NPO's for two years** | **WHO-Gavi** | **WHO-Gavi** | PIE,Coverage/euity improvement plan |
| **2** | **Medical Officer ,Immunization System Strengthening** | **Technical support to improve immunization system strengthening** | **Improved immunization coverage** | **MO,ISS for two years** | **WHO-Gavi** | **WHO-Gavi** | Coverage /euity improment plan |
| **3** | **Medical Officer , IVD** | **Overall supervision and coordination of EPI and** | **Improved immunization coverage and control of communicable** | | **WHO** | **WHO** | cMYP |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | **Communicable diseases** | **diseases MO-IVD** | | | | |
| **4** | **National Supply & Cold Chain Manager** | **To support development and implementation of comprehensive supply chain management plans as per recommendation of EVMIP** | **Improved supply chain and ensure reflection of Gavi support in the Sector Prgoramme** | **NPO for 3 years** | **UNICEF, Gavi** | **UNICEF** | EVM |
| **5** | **National Consultant Adolescent Health** | **To provide intensive technical support for the completion of the adolescent health assessments and prioritization of a feasible adolescent health intervention for integration with HPV demonstration programme** | **Improve immunization Coverage through implementation of selected adolescent health interventions with HPV** | **Consultant for one years** | **UNICE, Gavi** | **UNICEF** | cMYP |
| **6** | **Procurement & Construction Specialist** | **To provide technical support in** | **New vaccine introduced with ensuring** | **IP for two years** | **UNICEF, Gavi** | **UNICEF** | EVM |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | **implementation of sub-national level cold room expansion following standards.** | **proper supply chain management** | | | | |