JOINT APPRAISAL REPORT

GHANA

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Acronym

Acronym	Acronym Meaning	Acronym	Acronym Meaning
AEFI	Adverse Effects Following Immunisation	HSFP	Health System Funding Platform
ANC	Antenatal Care	HSWG	Health Sector Working Group
APOW	Annual Programme of Work	ICC	Inter- Agency Coordinating Committee
APR	Annual Progress Report	IGF	Internally-Generated Funds
ATF	Accounting Treasury and Finance	IMR	Infant Mortality Rate
BMC	Budget Management Centre	JAR	Joint Appraisal Review
BPEMS	Budget and Public Expenditure Management System	KAP	Knowledge Attitude and Practice
CHAG	Christian Health Association of Ghana	LMIS	Logistics Management Information System
CHMC	Community Health Management Committee	M&E	Monitoring and Evaluation
CHOs	Community Health Officers	MAF	Millennium Acceleration Framework
CHPS	Community-based Health Planning and Service	MDA	Ministries, Departments and Agencies
CHV	Community Health Volunteer	MICS	Multi-Indicator Cluster Survey
CMA	Common Management Arrangements	MLM	Middle Level Management
CSO	Civil Society Organisation	MMR	Maternal Mortality Rate
cYMP	Country Multi Year Plan	MOFEP	Ministry of Finance and Economic Planning
DfID	UK Department for International Development	MOH	Ministry of Health
DHIMS	District Health Information Management System	NGO	Non-Governmental Organisation
DHMT	District Health Management Team	NHIS	National Health Insurance Scheme
DMHIS	District Mutual Health Insurance Schemes	PBF	Performance Based Financing
DP	Development Partners	PFM	Public Financial Management
DVD-MT	District Vaccination Management Tool	PHC	Primary Health Care
EPI	Expanded Programme On Immunisation	PIE	Post Introduction Evaluation
EU	European Union	PPMED	Policy, Planning, Monitoring and Evaluation Department
EVMA	Effective Vaccine Management Assessment	RHMT	Regional Health Management Team
FMIS	Financial Management Information System	SARA	Service Availability and Readiness Assessment
GCNH	Ghana Coalition of NGOs in Health	SBS	Sector Budget Support
GDHS	Ghana Demographic Health Survey	TA	Technical Assistance
GDP	Gross Domestic Product	TWG	Taskforce Working Group
GHS	Ghana Health Service	U5MR	Under Five Mortality Rate
GIFMIS	Government Integrated Financial Management Information System	UNICEF	United Nation Children Fund
GOG	Government Of Ghana	USAID	United States Agency for International Development
HRHD	Human Resource For Health Development	VPD	Vaccine Preventable Diseases
HRHPS	Human Resource Policies And Strategies for the Health Sector	WHO	World Health Organization

1. EXECUTIVE SUMMARY

1.1 General

Ghana's immunisation programme has benefitted substantially from Gavi, the Vaccine Alliance support which has contributed significantly to the country's sustained high immunization coverage. Gavi has been supporting National Immunization Programme (NIP) since 2001.

Gavi's commitment to Ghana from 2001 to 2020 is about US$ $267,821,637. Between 2001 and 2015, Gavi Alliance has disbursed 224,446,150 to Ghana to support vaccines and injection safety (85%); Immunisation Service Support (ISS), Health System Strengthening (HSS) and Civil Society Organisations (CSOs). Gavi's vaccines and cash support are incorporated into the national immunization programme and are captured in the national health sector budget.

Gavi's vaccine and HSS support remains the most dominant financing source to the NIP as it accounts for between 26% and over 91% of total investment in immunization in Ghana during the period of 2009 and 2014. Gavi's proportional contribution to immunization and HSS has been increasing over the years with the introduction of new and underused vaccines in routine immunization as well as operational cost for campaigns. Other funders of the NIP are government of Ghana, WHO, UNICEF and Rotary International.

Table 1: Contributions to National Immunisation Programme as Per Major Funding Sources in US Dollars (2010-2014)

Year	Total Expenditure	GoG	%	GAVI	%	UNICEF	%	WHO	%	Rotary International	%	Others	%
2014	27,655,053	5,335,036	19	18,890,710	68	660,837	2	2,907,066	11	25,323	0	10,336	0
2013	50,889,981	4,192,006	8	43,575,000	86	625,451	1	2,477,524	5	20	0	-	-
2012	52,991,603	4,788,851	9	46,240,775	87	-	-	1,943,977	4	18,000	0	-	-
2011	21,955,016	5,273,334	24	5,694,995	26	5,530,551	25	5,361,563	24	161,239	1	-	-
2010	28,969,525	8,474,222	29	8,421,391	29	3,514,057	12	8,418,072	29	41,784	0	100,000	0

Gavi has since 2002 supported Ghana to introduce five (5) vaccines (DPT-Hib-HepB, Yellow Fever, PCV, Rotavirus and, measles-rubella) and a second dose for measles, which have all been rolled out as planned and have now been fully integrated into the routine immunization programme delivered countrywide. The planned campaign for Men A was delivered in three regions in the northern part of Ghana. HPV demonstration vaccination is being conducted in four selected districts in Greater Accra and Northern regions.

Ghana is currently receiving Health Systems Support funds from Gavi. The primary focus of this funding is to create an excellent health delivery system to support the delivery of immunization services. This support has largely contributed to the high immunization coverage of the country.

Strategies will be put in place to ensure timely release of HSS funds to districts and sub-districts. Data management challenge is to be mitigated through training of health information officers and data managers at all levels. Most newly created districts are challenged in terms of infrastructure, equipment and human resources, and are being supported with Gavi funds. To sustain high coverage, GHS is collaborating with CSOs in creating demands for service uptake especially in hard to reach and urban slums.

1.2 Summary of grant performance, challenges and key recommendations

Ghana's proposal was approved in 2014 and the first tranche was released to the country in the last quarter of 2014. Though the funds arrived late, some releases were made to regions, districts and sub-districts to conduct mop-ups. The country achieved Penta 3 coverage of 95% (JRF 2014), representing an improvement over the target of 92%.

Public Financial Management (PFM) is one of the priority areas of the MoH and plans, supported by Gavi and other Development Partners, are being implemented to address key recommendations from audit reports. Some of the key recommendations include resource tracking and coding of transactions to reflect source of funds as well as automating accounting and financial reporting systems. Addressing competing demand for staff time to implement programmes at the lower levels remains a challenge to be fully addressed.

Gavi Alliance funds for HSS supported the development of an integrated monitoring and evaluation framework including a checklist developed to harmonize all M&E activities, ensuring removal of duplication of M&E activities and further provide timely and evidence based reports for management decisions.

Recommended actions are in the areas of funding for more advocacy for government to meet its co-payment obligations, the need to intensify supervision and monitoring at all mobilization, in-service training and advocacy and communication to create demand for uptake of immunization services.

1.3 Requests to Gavi's High Level Review Panel

Renewal request for 2015 to 2019

- Measles second dose, 10 dose(s) per vial, LYOPHILISED
- Pneumococcal (PCV13), 1 dose(s) per vial, LIQUID
- Rotavirus, 1 dose(s) per vial, LIQUID
- Pentavalent, 10 dose vial, LIQUID
- Yellow Fever, 10 dose vial, LYOPHILISED
- IPV, 10 dose vial, LIQUID
- Approval of 2015 Gavi Alliance HSS Support of $3,440,096 to Ghana

1.4 Brief description of joint appraisal process

A Technical Working Group (TWG) comprising of Government and key immunization Partners (WHO, UNICEF and CSOs) was constituted to implement the JAR. In doing so, the sequence of activities was as follows;

1. A 2-day orientation workshop was organized for the TWG to review the report template and the draft report.

2. A checklist and timelines for the review process and field visits to the regions and districts were developed, discussed and agreed by the TWG.

3. Field visits were carried out in three (3) (Central, Eastern and Greater Accra) out of the ten (10) Regions to assess opinions of regional and district health staff on the implementation of NIP especially Gavi support to Ghana, achievements, future prospects, challenges and recommendations for improvement.

4. As part of the process, in-depth desk review and interviews were conducted at national, regional and district levels [(with members of the Regional Health Administration (RHA) and District Health Administration (DHA)].

5. The draft report was shared with Gavi and regional partners (WHO and UNICEF) for review.

6. The comments from Gavi and Regional Partners were incorporated into the draft report and was shared with the Health Sector Working Group (HSWG) and the Inter-Agency Coordinating Committee (ICC).

7. ICC meeting was held to present the draft report to members for comments and endorsement for submission.

2. COUNTRY CONTEXT

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

Leadership, governance and Programme Management

The Ministry of Health (MoH) provides oversight responsibility over all Agencies within the health sector. The ultimate goal of the Ghana health sector is to ensure a healthy and productive population that reproduces itself safely.

Ghana recognizes the urgent need for ensuring equitable access to primary health care for all its citizens in order to expand promotive, preventive and curative as well as rehabilitative care. Ghana's Community-Based Health Planning and Services (CHPS) is the national strategy for addressing equity gaps in access and quality health services at the community level. The CHPS close-to-client strategy has contributed to significant improvement in health outcomes especially reduction in immunization dropout rates and improvements in quality of maternal and child health services as well as improvement in immunization coverage rates in particular and access to health services at community level as a whole. It has essentially facilitated and improved referral services between communities and health facilities.

The District Health Management Teams (DHMT) have been empowered to take on full oversight responsibilities to ensure that all public health programmes and initiatives (implementation activities) are organized and synchronized in collaboration with other sectors particularly with the District Assemblies. The DHMTs through the Sub District Health Management Team (SDHMT) has been working with collaborators to provide the required support to the country's routine immunization system.

The Common Management Arrangement (CMA) guides the overall governance system including partnerships and collaboration within the health sector. The Health Sector Working Group (HSWG) also referred to as the Health Sector Coordinating Committee (in immunization circles) is made up of representatives from MOH and its agencies, Development Partners (DPs), CSOs, private sector and other stakeholders in the health sector. Some of the governance arrangements for dialogue and decision-making used under the CMA include the HSWG meetings, which are held on the first Thursday of every month, quarterly Business meetings and health summit.

There is a number of Inter-Agency Coordinating Committees (ICCs) for specific programmes including immunization. Most of the ICCs meet quarterly. The Director General of the Ghana Health Service chairs the ICC on immunization. Its membership includes representatives from MOH, GHS, Ghana Coalition of NGOs in Health (GCNH) and DPs including WHO, UNICEF, USAID, JICA, Rotary Club, Latter Day Saints and Red Cross. The major role of the ICC on immunisation includes:

- Providing and coordinating support as well as overseeing technical and financial commitment to the national immunization programme

- Supporting national level to review the Comprehensive Multi Year Plan (cMYP)
- Enhancing transparency and accountability by reviewing the use of funds and other resources together with the EPI Programme at regular intervals
- Supporting and encouraging information sharing and feedback at national and implementing levels within and outside the country
- Ensuring that the Programme receives both technical and political support that helps to validate issues pertaining to EPI.
- Addressing technical issues as and when they arise such as introduction of new vaccines and strengthening immunization services.

In 2014, the ICC for immunizations met four (4) times. The meetings were held in April, May, September and October 2014. All four meetings were chaired by the Deputy Director General of the Ghana Health Service.

The meetings were primarily held to update member of the ICC on performance of routine immunization activities, inform and update members on mass vaccinations, solicit for endorsement of reports and proposals for submission to Gavi as well as approval of budgets and plans for implementation.

Specifically, the ICC endorsed Ghana's Annual Progress Report (APR) for 2014 for submission to Gavi, approved the country's application for Yellow Fever Preventive Campaign, Mini catch-up campaign for Meningitis in the three northern regions, IPV application as well as Meningitis Vaccine introduction into routine immunization.

The ICC also approved the plans and budgets for two rounds of National Immunization Days (NIDs) against polio, GAVI Human Papilloma Vaccine Demonstration (HPV) project, Child Health Promotion Week and African Vaccination Week among others.

EPI activities are integrated at the regional and district levels and forms part of the overall plans at those levels. The regional and district directors update the Regional Minister, Regional Coordinating Council (RCC) and District Assemblies respectively. There is collaboration with civil society organizations and other interest groups such as Coalition of NGOs in Health, House of Chiefs and Queens as well as Faith Based Organisations, which support specific programme of interest including immunization in the regions and district levels.

Costing and Financing

Ghana is committed to its National Immunisation Programme (NIP). Ghana's national immunisation coverage for Penta III (proxy immunization indicator) increased from 76% in 2004 to 90% in 2014 (using birth cohort). Since 2000, Ghana, with the support from Gavi has introduced six new vaccines. Ghana started co-financing of new and under used vaccines in 2003. Gavi Alliance commitment to Ghana since 2001 to 2018 is $264.47mn. Between 2001 and 2014, Gavi Alliance has disbursed $227.84million to Ghana in support of vaccines, injection safety, Immunisation Service Support (ISS), Health System Strengthening (HSS) and Civil Society Organisations (CSOs). Total vaccines and logistics (including co-financing) for new vaccines are expected to increase from $36mn in 2015 to $58million in 2019. This leaves a funding gap of about $25million unsecured (cMYP 2014).

Ghana's Human Development Index (HDI) has increased from 0.391 in 1980 to 0.573 in 2014 thereby placing it in the United Nation's medium human development category. In 2010, Ghana became a lower middle-income country with a per capita income of US$1,328, which rose to US$1,620 in 2014. Since 2012, the economy of Ghana has been under severe stress due to a combination of unfavorable factors (at global and domestic level), resulting in a reduction in the annual growth rate. As a result, Ghana has requested for economic bailout for next three years with International Monetary Fund (IMF). Notwithstanding these challenges, immunization continue to enjoy strong political and sector support within the health sector and in the national development agenda.

A greater proportion of the non-wage recurrent budget (goods and services) in the health sector is funded from external sources. There are signals that the current economic classification of Ghana as a lower middle-income country will influence a change in policy (reduction in overseas development assistance) to Ghana in the coming years.

Ghana has been fulfilling its co-financing obligation with Gavi since 2004. It first defaulted in 2014 for 2013 co-financing payments. Ghana again went into default in 2015 with 2014 co-financing payments and delayed in payment for traditional vaccines. There have been a number of discussions with key immunisation partners to ensure that the arrears are paid and Ghana does not default in 2016. Two missions from the UNICEF Supply Division to Ghana discussed options available through the Vaccine Independence Initiative (VII). Both the MoH and Ministry of Finance welcome the initiatives proposed by the UNICEF team and are willing to take advantage of the VII to address the vaccines shortage in the short term.

With Ghana now a middle-income country, discussions have started towards the development of a transitional plan to be self sufficient in financing of its vaccines procurement. The development of the transitional plan with the Gavi Alliance is receiving attention from the highest political level. The Gavi board has also approved an extension of the transitional period for Ghana from five to seven years with the hope that Ghana's economy will recover from economic downturn within the medium term.

Human Resource

With the CHPS strategy being implemented, the Community Health Officers (CHOs) are the main agents for delivering immunization services at the community level. CHOs are trained Community Health Nurses or Enrolled Nurses who undergo a 4-6 weeks orientation, assigned to a CHPS Zone and deployed to deliver close to client services to the communities within the CHPS Zone.

The main challenges faced by this strategy are the provision of base station or CHPS compound within the zone for the CHOs to operate from, equipment, logistics and operational funds for fuel, maintenance, and utilities among others. Many health staff (including CHOs) resists accepting postings to deprived communities partly due to the above challenges. These challenges affect immunization service delivery in such deprived communities.

Cold Chain

Ghana's cold chain has improved significantly with the continued support from Gavi and other Development Partners. There are however gaps at national, district and the sub district

levels.

The country conducted Effective Vaccine Management Assessment (EVMA) in October 2014. The objective was to assess vaccine management practices, identify gaps and develop plans for improvement at all levels in of the supply chain system. The assessment was done in a total of 69 sites; 1 National, 10 regions, 28 Districts, 30 Health facilities, which were selected using EVM Site Selection tool. Data was collected through interview using questionnaire with the 9 Global EVM criteria, site observation and review of relevant documents at all levels.

Ghana achieved the target for five (5) criteria. These are vaccine arrival procedures (94%), storage capacity (82%), buildings, equipment and transport (84%), distribution (83%) and vaccine management (87%). The other four (4) criteria fell below the 80% acceptable target. These are shown in the figure below;

Figure 1: Overall findings of the 2014 EVMA

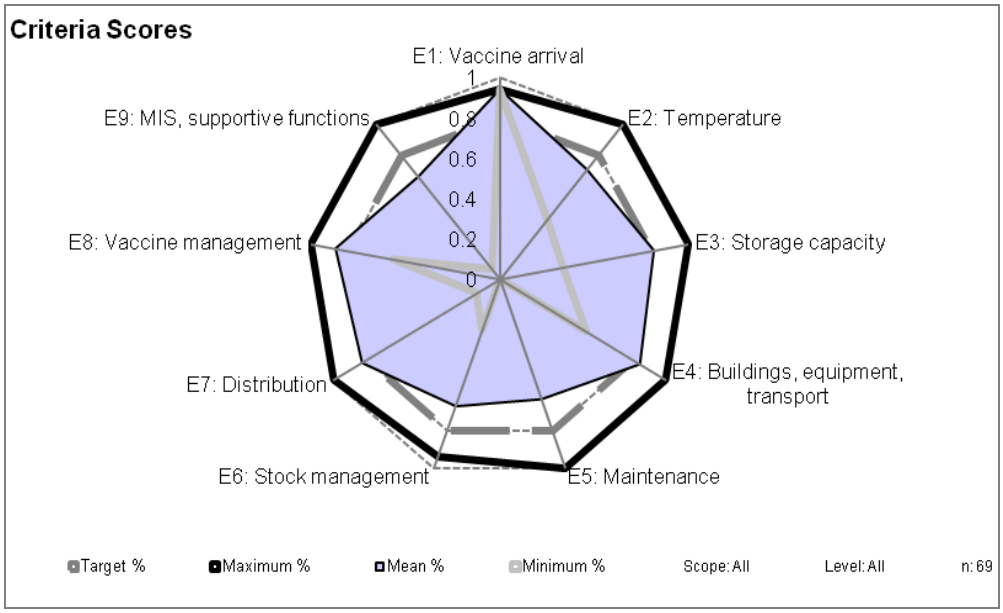


Table 1: Comparative Analysis of 2010 & 2014 EVMA in Ghana, National level

No	Criterion	Score (2010)	Score (2014)
1	E1:Vaccine arrival procedures	95%	94%
2	E2:Temperature monitoring	50%	67%
3	E3:Storage and transport capacity	93%	81%
4	E4:Buildings, equipment and transport	78%	92%
5	E5: Maintenance	62%	100%
6	E6: Stock management	73%	88%
7	E7: Distribution	75%	87%
8	E8:Vaccine management	78%	96%
9	E9:Management Information System	48%	81%

EVMA improvement plan was developed to address the gaps there were identified. With the support of the Gavi HSS funding, some of the activities in the improvement plan are being implemented. Cold chain training of community health officers has been conducted in three (3) regions already. Plans are advanced for community health officers in four (4) regions to be trained in cold chain management. Training in the remaining three (3) regions is scheduled for October 2015.

Gavi HSS funds have also been used to procure 101 units of TCW 3000 and 51 units of TCW 2000 refrigerators, which have been distributed to districts and health facilities. Spare parts for these refrigeration equipment have also been procured.

These notwithstanding, there are challenges in the implementation of the EVM Improvement Plan. The Plan, which is expected to address the cold chain needs of the country, remains largely unfunded. Apart from activities that were partly captured in the Gavi HSS Proposal, all other activities are unfunded.

Coupled with this, the inferno at the Central Medical Stores (CMS) burnt two (2) units of $40m^3$ walk-in-refrigerators which were to augment the cold chain capacity at the national level. About 594 health facilities are without vaccine refrigerators as captured in a recent Cold Chain Asset Tagging Report.

Advocacy for funding for maintenance and replacement of cold chain equipment from government sources has been intensified to sustain the NIP.

Surveillance

Vaccine preventable diseases surveillance (VPDs) constitutes a major part of the integrated disease surveillance and response (IDSR) in Ghana. Health staff at all levels are responsible for reporting all suspected cases of vaccines preventable and other priority diseases to the next hierarchical level. Over the period, the Disease Surveillance Department (DSD) monitored VPDs including diseases for which vaccines are given under the EPI.

There are three committees in Ghana to support the polio free certification process. These are National Polio Certification Committee (NCC), National Polio Expert Committee (NPEC) and the National Polio Laboratory Containment Task Force (NTF) for polio eradication activities. Plans are in place to expand Congenital Rubella Syndrome (CRS) sentinel surveillance.

The Ghana made some improvements in key surveillance indicators. Non-polio AFP rate has improved from 1.8 in 2010 to 3.0 in 2014. Stool adequacy has also improved from 79.2% to 87% for the same period. Of the 216 districts, 179 (82.8%) reported at least one suspected measles case. Confirmed measles cases reduced from 319 in 2013 to 124 in 2014. Confirmed rubella cases also reduced from 168 in 2013 to 26 in 2014.

Though surveillance indicators have improved, there is the need to support districts and health facilities with funds to conduct periodic records review and case search.

Advocacy & Communication

There is a draft five-year communication plan to guide implementation of communication activities in the health sector. There is collaboration between the NIP and the media for public awareness and support. Advocacy takes place at all levels.

In addition, the programme engages other Ministries such as Education, Gender and Social Protection as well as the political leaders in advocacy and communication activities especially during supplementary immunization activities (SIAs). This was demonstrated when the First Lady of the Republic of Ghana launched the Gavi Human Papillomavirus (HPV) demonstration vaccination and indicated that HPV vaccination is her personal priority.

Within the year under review, a number of communication activities were implemented. Press briefings were held to outline the importance of immunization to the media and the general public. Volunteers from Red Cross moved from house-to-house to educate mothers on immunization. Text messages were sent to mobile subscribers on the importance of immunization.

The Ghana Coalition of NGOs in Health particularly organized series of durbars and dramas on immunization in communities where they have been assigned.

At the operational level, the district assemblies, traditional, religious, and opinion leaders including queen mothers, chiefs as well as the private sector supports advocacy and community mobilization activities towards improving immunization coverage.

Posters on immunization however remain absent in districts, sub-districts, facilities and communities. There is the need to solicit for support to print posters for these levels.

Other factors or events (political changes, new cMYP & programme priorities and (AEFI)

Adverse Events Following Immunization (*AEFI)*

The NIP collaborates with the Food and Drugs Authority for safety monitoring. Adverse Events Following Immunization (AEFI) is monitored at all levels using a standard protocol. A system for reporting intussusception has been established in two Teaching Hospitals – (Komfo Anokye Teaching Hospital and Korle-Bu Teaching Hospital. Noguchi Memorial Institute for Medical Research is currently conducting Vaccine efficacy and effectiveness study (VE) in seven health facilities.

Routine AEFIs have been under-reported and AEFI monitoring has been a challenge over the years. However, monitoring and reporting improved in 2014: there were 22 reports from 8 districts in three (3) Regions as against in 7 reported cases in 2013. All cases were non-serious with 100% full recovery. The mean and median ages were respectively 12.2 and 12.0 week with a range of 6 to 24 weeks.

To improve AEFI reporting and response, Vaccine Safety Trainer of Trainers (ToT) Workshop was organised in collaboration with Food and Drugs Authority (FDA) from 18-20 November, 2014. Four (4) representatives from each of the 10 regions made of the following

participated: Deputy Director of Public Health, (DDPH); Regional EPI Coordinator; a Regional Clinician; FDA Regional Pharmacovigilance (PV) Officer; National FDA Safety Dept. staff; and all national EPI staff

The training was based on the WHO Vaccine Safety Basic Training Course and funding by the UK Department for International Development (DFID) through FDA.

In all, the training was a success and participants made some recommendations including:

- Training should be cascaded to the lower levels
- Participants to prepare a roll-out plan of work for training staff involved in routine immunization at the regional, district and sub-district levels

Regional representatives (teams) were tasked to present a budget to the FDA for a rollout training to the peripheral levels in early 2015.

3. GRANT PERFORMANCE, CHALLENGES AND RENEWAL REQUESTS

3.1 New and Underused Vaccine Support

3.1.1 Grant Performance and Challenges

The NIP has benefited from Gavi support since 2001 to introduce six new vaccines. Pentavalent vaccine 3 coverage has increase from 76% in 2004 to 90% in 2014. Capacity has also been built, both material and human resource for immunization activities. The in-depth-interviews with the regions and districts have revealed that Gavi support has benefited the peripheral areas in the following ways:

- Increase immunization coverage through mop-up activities in the poor performing districts.
- Support hard-to-reach districts
- Training of new recruited staff in the districts
- Improved monitoring and supervisory visits at the regional and district levels.
- Districts use Gavi support for immunization activities and systems support at the CHPS zones.

Table 2: EPI Performance at a Glance, 2011-2014 using surviving infants of 3.8% of total population

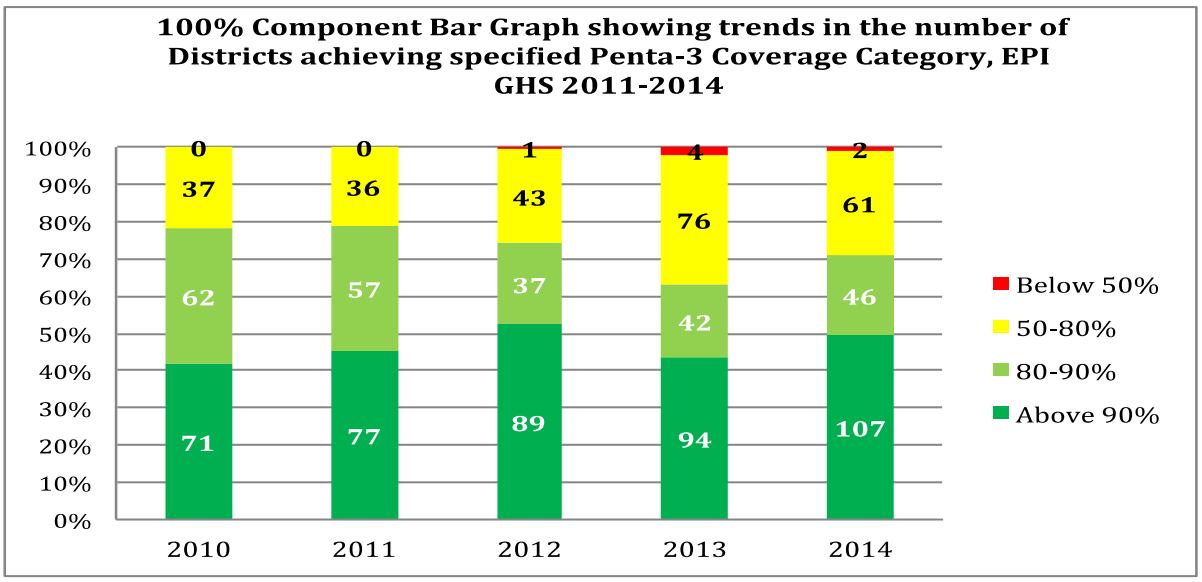
Antigens	2011			2012			2013			2014		
	Target	No Vac.	% Cov.	Target	No Vac.	% Cov.	Target	No Vac.	% Cov.	Target	No Vac.	% Cov
BCG	992,192	1,070,080	107.85	1,016,004	1,082,408	106.54	1,063,767	1,047,623	98.48	1,090,949	1,122,420	102.88
Penta3	940,981	887,086	94.27	965,204	908,821	94.16	1,010,579	912,046	90.25	1,036,402	981,952	94.75
OPV3	940,981	884,615	94.01	965,204	906,363	93.90	1,010,579	914,968	90.54	1,036,402	983,977	94.94
PCV-13-3				965,204	419,715	43.48	1,010,579	896,929	88.75	1,036,402	989,147	95.44
Rota -2				965,204	483,105	50.05	1,010,579	883,335	87.41	1,036,402	971,357	93.72
Measles-Rubella	940,981	894,546	95.07	965,204	919,825	95.30	1,010,579	898,556	88.91	1,036,402	960,406	92.67
Measles-2				965,204	523,891	54.28	1,010,579	547,495	54.18	1,036,402	695,076	67.07
YF	940,981	888,802	94.45	965,204	910,272	94.31	1,010,579	894,431	88.51	1,036,402	952,384	91.89
TT2+	992,192	773,092	77.92	1,016,004	763,182	75.12	1,063,767	756,214	71.09	1,090,949	679,344	62.27

Immunisation coverage for all antigens except TT2+ improved in 2014 compared with 2013 as shown in Table 2 above. The number of districts that achieved Penta3 coverage above 90% increase in 2014 compared with 2013. This is shown the graph 1 and Map 1 below.

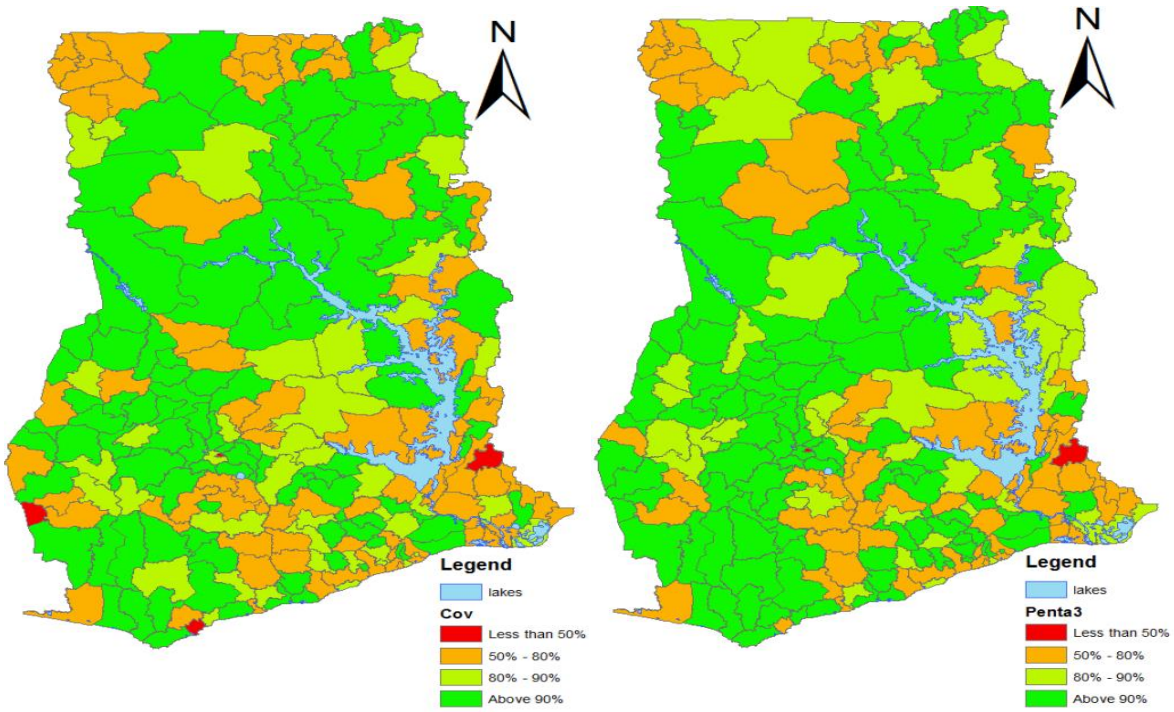
Graph 1 shows trends in the number of districts achieving Penta-3 Coverage of 90% and

above. From the graph, whilst 94 districts achieved 90% and above coverage for Penta 3 in 2013, about 107 districts achieved this in 2014.

Graph 1



Map 1 also shows the distribution of PENTA 3 coverage in various districts for 2013 and 2014.



2013 PENTA 3 COVERAGE 2014 PENTA 3 COVERAGE

Table 3: Equity Analysis for Penta 3 for 2008 and 2014

Percentage Of Children Age 12-23 Months Who Received Penta 3					
Background Characteristics	2014	2008	Background Characteristics	2014	2008
SEX			RESIDENCE		
Male	86.8	88.8	Urban	88.5	87.2
Female	90.3	88.8	Rural	88.5	89.8
EDUCATION			REGION		
No Education	86.7	84.5	Western	83.5	96
Primary	83.7	90.1	Central	89.5	81
Middle/JSS	90	91.8	Greater Accra	91.1	88.6
Secondary +	94.3	88.1	Volta	85.6	89.5
WEALTH QUINTILE			Eastern	89.8	91.5
Lowest	87.4	88	Ashanti	92.5	91.4
Second	86.3	86.5	Brong Ahafo	88.2	95.7
Middle	87.8	82.1	Northern	80.7	75.1
Fourth	90.1	95.8	Upper East	93.3	95.8
Highest	91.7	93.3	Upper West	96.7	94.8
			TOTAL	88.5	88.8

SOURCE: 2008 and 2014 Ghana Demographic and Health Survey

The table above shows that equity analysis for Penta 3 as reported by the Ghana Demographic and Health Survey (GDHS). From the table, there was no difference in the proportion of males and females receiving Penta 3 in 2008. However, in 2014, about 3.5% more females received the vaccine than males.

With regards to education, the 2014 report showed that caregivers who have been educated to secondary level or more stand a better chance of getting their children vaccinated. The immunization gap between those in the highest and lowest wealth quintiles reported in the 2014 DHS is 4.3%.

The 2014 DHS did not show any difference in immunization rates among residence of rural and urban areas.

IRC Recommendations

In relation to IRC recommendation, there is none outstanding. All recommendations concerning new vaccine introduction, have been addressed in APR and resubmitted.

There is a health information management system. The DHIMS 2 and e-register are electronic database software used for data capture, reporting and analysis. Data validation system has been introduced at all levels to improve data quality. Also DVDMT (WHO) is used for monthly reporting of immunization data from the district level. There are a few parallel systems still in use for reporting programme data. There are plans to reduce parallel systems to the minimum. There is a regular DHS conducted every five years the latest being 2014. There are other surveys like the MICS, and EPI cluster coverage survey.

Between 2012 and 2014, Ghana introduced Rotavirus, PCV13 and measles rubella into the routine immunization programme. There was a Meningococal A conjugate vaccine (MenAfrivac) campaign in the three Northern Regions. There is also Gavi support for

demonstration HPV programme ongoing in the country.

The PIE conducted eighteen months after the introduction of Rota, PCV13 and MCV2 has shown that planning was adequately done, the vaccines were smoothly introduced. However, IEC materials and other reference documents were not available at all health facilities for reference purposes.

Key implementation bottlenecks include:

- **Vaccine and cold chain management issues**
  Tetanus Diphtheria toxoid (Td) vaccine stock outs for one month due to delay in co-payment for vaccines by government.

- **Cold Chain Capacity at National Level**
  The national level has 4 positive walk-in vaccine cold rooms with a gross volume of 160m3. The positive storage capacity required for accommodating current vaccines and the proposed IPV in 2015 is 80m3. The fire outbreak in January 2015 at the central medical stores destroyed 80 m3 cold room capacity yet to be installed hence the need for replacement.

- **Cold Chain Capacity at Regional Level**

  Northern and Greater Accra regions have 80m3 walk-in cold rooms, Ashanti, Brong Ahafo and Central regions have 40m3 and all other regions have 30m3 walk-in cold rooms. All the ten (10) Regions have Walk-in cold rooms with capacity to accommodate the introduction of IPV and the subsequent introduction of bOPV into routine. Expansion is therefore not required at the Regional level.

- **Vaccine and Logistics Management**
  The programme has identified that there are weaknesses in vaccine and logistics management. Conditioning of ice pack is not a well-known concept. There are also issues with forecasting of vaccines leading to occasional over/under-stocking of vaccines.
  With the support of the Gavi HSS funding, some of the activities in the improvement plan are being implemented. Cold chain training of community health officers has been conducted in three (3) regions already. Plans are advanced for community health officers in four (4) regions to be trained in cold chain management. Training in the remaining three (3) regions is scheduled for October 2015.

- **Human Resource Management**
  There is weakness in deployment and retention of health workforce especially CHOs in deprived and hard to reach communities hence the need for clear policy guidelines to address the issues. There is absence of clearly defined system for measuring health worker force productivity and the need to scale up management capacity at the district and sub district level.
  The above will be addressed through the development and implementation of PBF which

will address inequity gaps. There will also be scale up in management capacity building at district and sub district level to ensure the quality of immunisation services.

- **Hard to reach areas in Volta Basin**

  The Volta Lake has created difficulties in accessing routine immunisation services especially communities within the Volta Basin catchment area leading to low coverage performance. There also exists high operational cost in terms of fuel and man-hours spent to reach these hard to reach communities. Additionally, most of these districts need to be assessed by boats so there is the need for motorized fiber boats for these. Within the HSS two fiberglass boats with accessories are being procured to support outreach activities.

- **Urban and Peri-urban unimmunized**

  Over the years there has been increasing number of unimmunized children in the urban and peri-urban communities. Mop-ups and special initiatives such as weekend service are being initiated to address the challenge.

- **Service Delivery Challenge**

  Service delivery and supervision is negatively affected by inadequate funds and transport. 200 motorbikes have been procured in the HSS to support. There is an ongoing discussion with the Ministry and other partners to support with transport.

3.1.2 NVS Renewal Request / Future Plans And Priorities

The country hereby requests an extension of Gavi support for the period 2016 to 2019 for the following vaccines:

- Measles second dose, 10 dose(s) per vial, LYOPHILISED
- Pneumococcal (PCV13), 1 dose(s) per vial, LIQUID
- Rotavirus, 1 dose(s) per vial, LIQUID
- Pentavalent, 10 dose vial, LIQUID
- Yellow Fever, 10 dose vial, LYOPHILISED
- IPV, 10 dose vial, LIQUID
- Approval of 2015 Gavi Alliance HSS Support of $3,440,096 to Ghana

The currently approved vaccines are Pneumococcal Conjugate Vaccine (PCV 13) and Rotavirus vaccine in 2012 and Measles-Rubella (MR) vaccine in 2013. The 2016 target for these antigens as provided in the Annual Progress Report (2014) is 78.95% for Measles containing vaccine 2 (MCV2) and 94% for the other vaccines. These targets are realistic and achievable given that funds for operational activities will be released on time to facilitate programme implementation.

The country is planning to switch from measles only vaccine to measles-rubella vaccine at 18 months. Measles-rubella vaccine will therefore be used for both first and second dose measles vaccination at 9 and 18months. The switch will be considered during the 2016 vaccine forecasting and quantification planning. There will be extensive training for all service

providers to build their capacity on the switch. Recording, monitoring and reporting tools will be reviewed to incorporate the new vaccine schedule

The use of MR for both first and second dose measles vaccination will reduce vaccine wastage and operational challenges of substituting one vaccine for another which may lead to a child not receiving rubella vaccine

Proposal has been approved for introduction of MenAfric vaccine into routine in the three regions in the north in 2016. The introduction will be preceded by one-time mini catch up vaccination campaign in the selected regions.

An application to introduce Men A vaccine into routine in the remaining seven regions will be submitted to Gavi for support in September 2015.

The country has also received approval for a supplementary yellow fever campaign targeting 5,474,926 by the IRC.

Inactivated Polio vaccine will also be introduced into routine immunization next year as part of global polio eradication endgame initiative.

Future consideration will be given to introduction of HPV vaccination into routine following the successful implementation of Gavi demonstration vaccination.

3.2 Health systems strengthening (HSS) support

3.2.1 Grant Performance and Challenges

Grant approval and subsequent release of funds for HSS was in August 2014 thereby limiting performance in 2014 under this new grant. Immunisation coverage for penta3 at the end of 2014 was 95% (JRF 2014) as against a target of 92% as in the proposal.

The HSS proposal was developed by a joint team from MOH, GHS, CSOs and DPs. The activities in the HSS proposal are being implemented by GHS and CSO with supervision from MoH. HSS activities are being implemented at all levels. Progress on the implementation of HSS activities is reported through the ICC and the HSWG meetings. At the GHS HQ level, the status of implementation of the Gavi funded activities are reported as part of the general programme monitoring during periodic management meetings.

Gavi support is included in the MoH Programme of Work. The existing institutional structures are used in the implementation, supervision, monitoring and reporting of Gavi Alliance HSS activities.

The joint appraisal review revealed challenges at regional and district levels which includes lack of clear understanding of the objectives and deliverables of the HSS support. This was due to the absence of clear guidelines relating to funds transferred to them. Following discussions after the Gavi cash audit, strategies (including providing clear guidelines on use of funds) are being developed to promote coordination and integration of HSS support activities at regional and district levels.

The status of completion of activities under HSS 1 and 2 are shown below:

Table 6: HSS 1 activities in the 2014 reporting year

Major Activities	Planned Activity for 2014	Percentage of Activity completed (annual)	Source of information/data
Objective 1	Strengthening District and Sub-districts		
Objective 1.1	Strengthen management capacity in leadership		
Activity 1.1	Equip national and Regional in-service training centres	100	GHS PPMED 2013 Annual report
Activity 1.2	Train District directors and Senior managers in leadership and management	100	GHS HRDD 2013 Annual report
Activity 1.3	Train selected NGOs, RHMT and DDHS in teambuilding	100	GHS HRDD 2014 Annual report
Activity 1.4	Develop simplified financial management and procurement operational manual for sub districts, CHOs and NGOs	100	GHS PPMED 2011/2013 Annual report
Activity 1.5	Train sub district managers and CHOs in procurement and financial management	100	GHS PPMED 2013 Annual report
Objective 1.2	Strengthen District Health planning, prioritization and resource allocation		
Activity 1.2.1	Technical assistance to update DHA tools to support DSS sites	100	GHS PPMED 2013 Report
Activity 1.2.2	Train Senior managers including national, regional and district directors in the use of DHIP and DHA for priority setting and decision-making.	100	GHS PPMED 2013 Report
Objective 1.3	Strengthen Support & Supervision Systems		
Activity 1.3.1	Train district, sub districts and NGOs in supportive supervision	100	GHS PPMED 2013 Annual Report
Activity 1.3.2	Provide fuel and stationery to districts, sub districts and NGOs to undertake supportive supervision	100	GHS PPMED 2013 Annual Report
Objective 2	Expand functional CHPS coverage to deliver essential services especially for MDG 4 and 5		
Activity 2.1	Procure vehicles for sub districts	100	GHS HASS 2012 Report
Activity 2.2	Procurement of Service delivery kits for CHOs	100	PPMED Annual Report 2013
Objective 3	Strengthening sub-district Health Information Systems especially at the CHPS zone level using District Wide Information Management System (DWIMS)		
Activity 3.1	Procure PDA (Smart phones) for CHOs	100	GHS PPMED 2013 Annual report
Activity 3.2	Train CHOs in the use of PDA (Smart phone) equipment	100	GHS PPMED 2013 Annual report
Activity 3.3	Customise and Integrate PDA data into existing health management information system	100	GHS PPMED 2013 Annual report
Objective 4	Strengthening Information management, M&E and operational and implementation research		
Activity 4.1	Undertake operational and implementation research	100	PPMED 2015 First Quarter Report Annual Report
Activity 4.2	Support national & regional level M&E	100	GHS 2013 Annual report
Activity 4.3	Review and Evaluation of HSS support	100	PPMED 1st Quarter report

Table 6b: HSS 2 activities for the 2014 & 2015 Reporting Year

Table 6: HSS 2 activities in the 2014 & 2015 (Sept2014 - Jun2015) reporting year					
Major Activities		Planned Activity for 2014/2015	% of Activity completed (annual)	Source of information/data	Comments
OBJ 1		To strengthen and scale-up community health interventions aimed at improving access and quality of primary health care services			
1	1.1	Procure cold chain equipment to support service delivery_300 refrigerators	51%	EPI	101 units of TCW 3000 refrigerators and 51 units of TCW 2000 have been procured and distributed. The procurement process started in 2014 but the country took delivery of the equipment in 2015
2	1.2	Procure cold chain equipment to support service delivery _100 Freezers	50%	EPI	
					100 units of voltage regulator for compression refrigerators have been procured and distributed
3	1.3	Procure cold chain equipment to support service delivery_1000 Cold Boxes	40%	EPI	400 units of cold boxes have been procured and distributed
4	1.4	Procure cold chain equipment to support service delivery 5000 Vaccine Carriers	20%	EPI	1001 units of vaccine carriers have been procured and distributed
5	1.5	Procure cold chain equipment to support service delivery Temperature Monitoring Devices (1150 Fridge Tags, 20 Continuous Temp. Monitoring Device)	100%	EPI	600 units of 30 days continuous temperature loggers have been procured and distributed
6	1.6	Procure Motorbikes to support service delivery (100 Motor Bikes)	100%	EPI	200 motorbikes have been delivered. Distribution to regions and districts is currently ongoing
7	1.7	Procure Boats to support service delivery (2 Fibre Boats)	30%	SSDM	Process for procurement of fibre boats in progress
8	1.8	Procure Vehicles to support service delivery _7 (4X4) Pick UPS, 1 trekking vehicle and 2 saloons	NA		Not applicable for the reporting year
9	1.9	Procure needed logistics to support service delivery_14 Tool Kits for Regional and National Cold Chain Technicians		EPI	Process to begin
10	1.10	Procure Voltage stabilizers for refrigeration equipment (500 Voltage Stabilizers for refrigeration equipment)	NA		Not applicable for the reporting year
11	1.11	Procure Generators for regional and national cold rooms _3 Generators for Regional and National Walk in Cold Rooms)	NA		Not applicable for the reporting year
12	1.12	Procure Spare Parts for cold chain equipment maintenance	NA		Not applicable for the reporting year
13	1.13	Procure Public Address Systems (PA system) to support service delivery _120Public Address Systems)	NA		Not applicable for the reporting year
14	1.14	Procure needed logistics to support service delivery Printing of 15000 Tally Books	10%	EPI	Procurement process initiated. Contract will be awarded soon
15	1.15	Procure needed logistics to support service delivery_ 6000 Vaccine Ledger	10%	EPI	Procurement process initiated. Contract will be awarded soon
16	1.16	Procure needed logistics to support service delivery_ Printing of 300,000 Child Health Record Books	40%	EPI	Due to the CMS fire outbreak, the procurement of child health records books is in progress
17	1.17	Procure needed logistics to support service delivery_Printing 250,000 Immunization Monitoring Charts	10%	EPI	Procurement process initiated. Contract will be awarded soon
18	1.18	Construction 50 Incinerators	NA		Not applicable for the reporting year
19	1.19	Renovation of Incinerators 100 Incinerators	NA		Not applicable for the reporting year
20	1.20	Conduct Training in Waste Management for staff	NA		Not applicable for the reporting year
	1.21	Funds to support sub district health teams (including CHOs) to undertake outreach activities	100%*	PPMED	Funds transferred to Regions
22	1.22	Support National, Regional, district health teams to conduct supervision and monitoring	100%*	PPMED	Support for 2014 Regional performance reviews
23	1.23	Conduct cold chain inventory	NA		Not applicable for the reporting year
24	1.24	Conduct quarterly EPI review meeting	NA		Not applicable for the reporting year
25	1.25	Procure computers for data management	NA		Not applicable for the reporting year
26	1.26	Conduct Training in MLM for EPI Staff,	NA		Not applicable for the reporting year
27	1.27	Build capacity of Regional EPI Cold chain Technicians	NA		Not applicable for the reporting year

28	1.28	Training CHOs in Cold Chain Management	30%	EPI	Training of community health officers has been completed in 3 regions. Training in the remaining regions have been scheduled for September-October 2015
29	1.29	Upgrade eRegister to include GIS and expand its coverage to include other childhood illness and maternal health	30%	IME, PPMED	eRegister upgraded to eTracker to include all child health and maternal health services i.e. antenatal , delivery, postnatal and family planning. The child health service module now all service providers to track all children registered and are due for immunization and growth promotion in all facilities in four districts by October ending, technical team working on GIS components for the aggregated data of facilities to be easily demonstrated on maps.
29b	1.29b	Strengthen Institutional clinical governance and information	50%	IME, PPMED	MOH/GHS medical records policy reviewed
30	1.30	Conduct Child Health Promotion Week	100%*	FHD	Child Health promotion week carried out and report available
OBJ 2		To strengthen health worker capacity and distribution so as to address equity issues at the district level			
31	2.1	Develop PBF tools and manual for management		MoH	Process to begin in the last quarter of 2015 to be based on post evaluation of WB PBF pre pilot.
32	2.2	Funds for performance based financing for deprived and low performing districts	45%*	PPME	Funds transferred to Regions, Districts and Sub Districts to support their operational activities
33	2.3	Training of CHOs and SDHMT in management	NA		Not applicable for the reporting year
OBJ 3		To improve storage distribution and management of logistics and ensure the availability of potent, quality and safe vaccines, medicines and devices			
34	3.1	Supply Chain Management training for managers at all levels	NA		Not applicable for the reporting year
35	3.2	Strengthen LMIS at regional and district hospitals and link with RMS	90%	SSDM	Training for staff from nine (9) out of the ten (10) Regional Medical Stores on the ihost software has been carried out.
36	3.3	Rehabilitation of Regional Medical Stores in Volta Region	NA		Not applicable for the reporting year
OBJ 4		To empower civil society for increased demand creation for health service at the community level			
OBJ 5		To strengthen governance and health information management for improved health service delivery			
59	5.1	Strengthen planning systems at the sub district level	NA		Not applicable for the reporting year
60	5.2	Upgrade DVD-MT and integrated with DHIMS11	10%	EPI	Preparations are underway for the merger to be done by October 2015. Preparatory meetings to understand the merger have been held
61	5.3	Upgrade FMIS and integrate with DHIMS 11	70%	FD	Activity completed in 7 Regions
62	5.4	Upgrade LMIS and integrate with DHIMS 11		SSDM	Not started
63	5.5	Orientation of district and subdistrict staff in HMIS	NA		Not applicable for the reporting year
64	5.6	Support quarterly technical and financial data validation at districts and sub-district levels	100%*	FD	Funds transferred to Regions to support the sub district validation. Headquarters supported visits carried out.
65	5.7	Support operational research and document of best practices in general and particularly in immunization	NA		Not applicable for the reporting year
66	5.8	Develop sub district micro-plans	56%*	PPMED	Funds being used to support the development of integrated plans and budget for all levels (Headquarters, Regions and Districts including the sub districts)
66b	5.8b	Coordinate planning - MoH	80%	MoH	Planning process in progress. Final deliverables will be ready by end of November 2015
67	5.9	Provide technical support for the use of upgraded management information system at sub district level.	NA		Not applicable for the reporting year

68	5.10	Build capacity in planning, project management, monitoring and evaluation at national level	NA		Not applicable for the reporting year
69	5.11	Organize and coordinate standardized training programme for district and sub district health teams and technical managers	90%*	HRDD	HR Hearing, Human Resource Information Systems (IHRIS) training and sensitization workshop
69b	5.11b	Monitor HR training and capacity building programmes		MoH	Process not started
70	5.12	Develop health account	95%	PPMED	2013 HA final report writing in progress
71	5.13	Support GHS and other providers in joint annual sector performance review.	NA		Not applicable for the reporting year
72	5.14	Support overall MTDP monitoring and evaluation of the MoH and joint annual sector reviews with partners sector at MoH level MoH	50%	MoH	MTDP monitoring conducted as well as one joint monitoring visit
73	5.15	Review and revise existing records management information system (manual and electronic) and expand the use of the hospital electronic information software	NA		Not applicable for the reporting year
74	5.16	Conduct Service Availability and Readiness Assessment survey (SARA) MoH	10%	MOH	Preparatory work on the revision of the tools and team meetings has taken place. Outstanding is the training and fieldwork.
75	5.17	Conduct EPI cluster survey	100%	EPI	EPI Cluster Survey was conducted in March 2015. The report is available
76	5.18	Evaluation of HSS grant MoH	NA		Not applicable for the reporting year
77	5.19	Programme management		PPMED	Support the development of APRs

* % Activity relates to monetary expense based on the 2014 funding received for HSS 2

Table 6c: HSS 2 CSO component

Table 6: HSS 2 activities in the 2014 & 2015 (Sept2014 - Jun2015) reporting year					
Major Activities		Planned Activity for 2014	Percentage of Activity completed (annual)	Source of information/data	Comments
OBJ 4		**To empower civil society for increased demand creation for health service at the community level**			
37	4.1	Quarterly Monitoring of CSO activities by National Secretariat	NA		
38	4.2	Organize annual CSO Health Forum	100%	GCNH	COMPLETED
39	4.3	Coordination of CSOs by National Secretariat		GCNH	TO BE COMPLETED
40	4.4	Train implementing NGOs in project management, community entry, mobilization and reporting	100%	GCNH	COMPLETED
41	4.5	Sensitize community leaders and men on importance of immunization and to support their families.	100%	GCNH	COMPLETED
42	4.6	Partner District Assemblies, DHMTs, Women's' Groups and Traditional Leaders to identify and select satellite points implementation	100%	GCNH	COMPLETED
43	4.7	Provide logistical supports to satellite activities	NA		
44	4.8	Provide resources to support volunteers' activities at satellite sites and community levels	100%	GCNH	COMPLETED
45	4.9	CSOs to participate in Regional and DHMT quarterly and annual review meetings		GCNH	
46	4.10	Support CSO to participate in NIDs and other immunization campaigns	100%	GCNH	COMPLETED
47	4.11	CSOs Regional and District Coordination activities	NA		
48	4.12	Contract retired/private midwives and private community health nurses to support project implementation	NA		
49	4.13	Provide logistical support to trained retired/private midwives and private community health nurses to support project implementation	100%	GCNH	COMPLETED
50	4.14	To carry out quarterly community outreach activities	100%	GCNH	COMPLETED
51	4.15	Engage in quarterly community durbars, advocacy activities	100%	GCNH	COMPLETED
52	4.16	Develop IEC materials to support community level activities	100%	GCNH	COMPLETED
53	4.17	Conduct quarterly review meetings with Traditional leaders and community volunteers	100%	GCNH	COMPLETED

54	4.18	Identify and train traditional leaders as immunization advocates at community levels	NA		
55	4.19	CSOs at peripheral levels undertake quarterly monitoring activities	100%	GCNH	COMPLETED
56	4.20	Procure Vehicles to support CSOs activities at national and also for established satellite sites 3 (4x4) Pick Ups	NA		
57	4.21	Support vehicle running activities		GCNH	TO BE COMPLETED
58	4.22	Provide logistics for CSOs satellite sites and community level activities	100%	GCNH	COMPLETED

Evaluation of Gavi Support

The last HSS, ISS and CSO evaluation was commissioned by the Ministry of Health in collaboration with the GHS in 2014. The report of the evaluation is yet to be finalized and received. However initial discussion on findings has been held and has contributed to the recommendations in this appraisal.

The health sector has the required capacity to manage the Gavi Alliance HSS cash support. The MoH has experience in managing all the funds coming to the health sector. Currently the Director General of GHS manages the Gavi funds in trust for MoH. The oversight responsibility for managing the implementation of all Gavi HSS activities lies with the MoH.

Financial performance and challenges:

Ghana has some outstanding funds for the HSS 1 implementation. For the HSS 2, an amount of US$4,299,400 was received in August 2014 for the period ending December 2014 (according to proposal work plan and timelines submitted). The total expenditure on the HSS1 amounted to US$ 2,307,108.16 for 2014 and for the HSS 2 an amount of US$1,462,090 was expended in 2014.

Overall, the legal and institutional framework for a performing Public Financial Management (PFM) system for the health sector has been put in place. There has been some improvement in the PFM accountability of the MoH with the completion of the revised ATF and DPs' interest in the internal audit function, external audits and reporting have resulted to these elements performing very well. However, planning and budget execution is weak especially at sub-national levels partly as a result of lack of automation and partly because of the erratic nature of cash releases to BMCs. There was however no mis-procurement or misuses of funds. Two accounts are used to manage the Gavi HSS funds- a cedi and a dollar account at UNIBANK Ghana Limited. The dollar account is a receiving account in which the funds are lodged. The Cedi account is the operational account. Funds are transferred from the dollar account to the cedi account for transactions.

The Gavi Alliance cash audit took place in May 2015. The Gavi audit team is finalizing the final draft report. The MoH through the PFM plan and with other partners intends to strengthen financial management capacity at the district levels and below.

3.2.2 Strategic Focus of HSS Grant

The goal of the health sector is to have a healthy and productive population that reproduces

itself safely. In order to achieve these goals from a system perspective, the HSS 2 grant will be used to achieve the following five objectives.

1. To strengthen and scale-up community health interventions aimed at improving the quality of primary health care services (Service Delivery)
2. To strengthen health worker capacity and distribution so as to address equity issues at the district level. (Workforce and Human Resources)
3. To improve storage, distribution and management of logistics and ensure the availability of potent, quality and safe vaccines, medicines and devices (Procurement, Logistics and Health Technologies)
4. To empower civil society for increased demand creation for health services at the community level (Empower Communities and local actors)
5. To strengthen governance and health information management for improved health service delivery

One of the key strategies to address the disparities in access to maternal and child health services is to strengthen and accelerate the CHPS implementation to complement other efforts on service delivery and health financing. The GAVI/HSS support will build on efforts initiated by the MoH in using the CHPS strategy to reduce geographical barriers to health care. With a focus on deprived and remote areas, the strategy brings services closer to clients and uses community-based health structures that are familiar with the socio-cultural environment.

These objectives align adequately with the systemic bottlenecks to achieving and sustaining high immunisation coverage. The key health system challenges confronting the Ghanaian health sector are in the areas of governance (weak coordination, ineffective inter-sectoral collaborations, participation and integration); gaps in geographical and financial access to quality health care, inadequate and inequitable distribution of critical staff mix. .

There are plans for early release of HSS funds to support service delivery at the district and sub-district level quarterly. Provision has been made to train health information officers and data managers at all levels. Integrated supportive supervision is being implemented at all levels and there are plans to strengthen its implementation. Newly created district, which are challenged in terms of infrastructure, equipment and human resources, are being supported with Gavi funds. GHS is collaborating with CSOs in creating demands for service uptake especially in hard to reach and urban slums.

WHO, UNICEF, Rotary international and Latter Day Saints provide funding and technical support for immunisation services. In addition UNICEF provides vaccines.

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

Ghana is implementing its second Gavi Alliance HSS cash support proposal (2014-2018). Objective 3, Activity 3 proposes a budget of US$250,000 for renovation of the Volta Regional Medical Stores. However, the January 2015 fire outbreak at the country's only Central Medical Stores (CMS), affected EPI supplies, thereby leading to some major sector decisions. Government intends to construct a new CMS and refurbish all Regional Medical Stores. In view of the funding being sought for the activity which is already programmed for, the Ministry is therefore requesting that the funds earmarked for the Volta Regional Medical Stores

for 2016 be reprogrammed and released in 2015 to renovate the store rooms for EPI logistics and offices for the EPI programme. Government will ensure the stores are insured with government funds.

3.3 Transitional Plan

Ghana's transition was initially planned for 2017 – 2021. However due to current economic challenges, Ghana's request for an extension of the transitional period from five to seven years (2016-2022) has been accepted by Gavi. Discussions and work with Gavi Alliance has started on the development of a transitional plan for Ghana to be weaned off the current Gavi support.

3.4 Financial Management of All Cash Grants

Cash utilization performance and financial capacity constraints

There is a broad financial management system, which is not limited to DP specific reporting. In addition partner funds can easily be tracked at the national level but below the national level program activities (based on disease burden) become more visible whiles the specific partner financial information becomes less visible. The platforms for transactions processing, financial information storage and reporting are largely manual below the national level. Real time financial information generation and reports across levels are therefore almost non-existent. Financial monitoring and supervision at all levels has been very low mainly due to the lack of logistics to facilitate such activities.

Modifications, if any, made to the financial management arrangements

The MoH is working to ensure that the introduction of automated accounting system at all levels to ensure improved accountability. This has already been discussed at the HSWG and a committee chaired by the Financial Controller of MOH has been formed as part of the health sector Public Financial Management arrangements to address the issue.

Any major issues arising from Cash Programme Audits or Monitoring Reviews

Gavi Alliance just completed a cash audit and has submitted its draft report to the MoH for their comments. There are key findings and recommendations which the MoH welcomes and will take forward in the implementation of the new Gavi cash grant. Significant among the issues are the visibility of sources of funds at all levels, ensuring advances transferred to lower levels of the service are recorded by source to enable reporting and considering tax exemptions for goods procured with Gavi funds.

Degree of compliance with Financial Management Requirements (Annex 6 of Gavi's Partnership Framework Agreement) and outstanding issues

One key outstanding issue in the Partnership Framework is the provision of tax exemption for goods and services procured with Gavi Alliance funds. This has not been complied with in the

past. However with Ghana signing the Partnership Framework Agreement, MoH will engage with MoF to ensure tax exemption of goods and services procured with Gavi Alliance funds in the current support.

3.5 Recommended actions

1. Funding

- More advocacy for government to meet its co-payment obligations.
- Explore other domestic avenues for resource mobilization.
- Explore innovative financing facilities available for vaccines and immunization financing

2. Advocacy and communication

Generate enough demand, for uptake of immunization services.

3. Training

There is need for more in-service training in MLM for district managers and immunization in practice training for those at the sub district level.

4. Supervision and monitoring

There is the need to intensify supervision and monitoring at all levels.

4. TECHNICAL ASSISTANCE

4.1 Current Areas of Activities and Agency Responsibilities

WHO and UNICEF have been of great support to the programme. The support provided were technical support and funding for the following:

- Polio NID – support with training, fieldwork, transportation, communication and social mobilization
- Data management, Surveillance, operational research,
- Support for routine and supplementary immunization activities.

The current Gavi grant commenced late 2014 and there is yet to be need for technical assistance

4.2 Future Needs

Future TA needs: Prioritization of technical assistance needs

No.	**TA need**	**Justification / Actions**	**Intended outcome**	**Modalities (long term or short TA, trainings, workshop etc.)**	**Possible provider WHO, Unicef or other partner**	**Included in HSS**
1.	High-level advocacy (Parliament, Cabinet, traditional leaders etc.)	In the areas of vaccine co-financing	Secured funding for vaccines	Both long term and short term	Gavi, WHO, UNICEF	No
2.	DHIMS/DVDMT merger	Enhanced data quality	Data reporting tools harmonised	Short term	WHO, Gavi	Yes
3.	Service Availability Readiness Assessment (SARA).	Model new to the country	To address gaps in service delivery and readiness	Short term	WHO	Yes

4.	Data quality audit (DQA)	New models for DQA introduced	Establish data consistency and accuracy	Short term	WHO	No
5.	Congenital Rubella Syndrome (CRS) surveillance	Surveillance systems established	CRS disease burden containment after Rubella vaccine introduction	Short term	WHO	No (Proposal sent to WHO)
6.	Introduction of IPV	In the areas of AEFI surveillance	AEFI system established prior to the introduction of IPV	Short term	WHO	No

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

The draft Joint Appraisal document was emailed to all members of the ICC and the HSWG for their review and comments before the endorsement of the final.

ICC meeting was held on 18 June 2015 to present and discuss the draft Joint Appraisal Report (JAR). Members present unanimously accepted the report. Attached is the minute and participants' list.

6. ANNEXES

Annex A. Key data (this will be provided by the Gavi Secretariat)

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
Vaccine extension Since the ICC endorsed the vaccine extension to 2017 and not 2019, the country should submit ICC endorsement for extension till 2019.	An ICC meeting has been scheduled for 8 October 2015. The rationale for the meeting is to seek ICCs approval for the budget of the October Polio SNIDs. The extension of vaccine support will also be tabled for endorsement.
Co-payment The country should ensure that appropriate budget allocation is made for co-financing this & coming years.	It was agreed at the country's graduation plan meeting that budget allocation for co-financing will be ring-fenced to ensure timely payment. Allocation for vaccines will also be separated from the general budget for the ministry's goods and services.
HSS targets achieved Complete the progress on targets achieved for the HSS grant during the life of the grant to include achievements not simply the 2013 target and baseline.	Annual reports to Gavi will include an updated M&E framework which will indicate the performance in relation to set targets. Target for subsequent years may be reviewed if need be
Financial management Gavi to scrutinize the financial statements and audit reports submitted by the country and plan for a cash program audit, if needed	CPA was conducted by Gavi in 2015. Recommendations are being used to strengthen financial management in the service.
Financial Sustainability The country is expected to enter the graduation process in 2015 and needs to start working on a financial sustainability plan	The Transition plan, which has a section on financial sustainability, is being developed and will be submitted to Gavi by end of Sep 2015
New Vaccines The country is scheduled to submit NVS application to introduce Meningococcal Conjugate A Vaccine in routine EPI together with mini catch up campaigns to reach the unimmunized cohort. The country will need to submit introduction plans to meet the application deadlines	Application for mini catch-up campaign and routine introduction in the northern sector of Ghana have been submitted and recommended for approval by IRC. Another application to introduce this vaccine in the remaining seven (7) regions in the middle and southern sectors of the country was submitted on 8 September 2015.
New Vaccines The country is planning to submit an NVS application seeking additional support for yellow fever mass preventive campaigns to cover the at risk population not reached during the previous campaigns conducted in 2012	Application submitted and recommended for approval by IRC. Funds are expected to be released by Gavi for preparatory activities to commence.

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

1. The Ministry of Health initiated the Joint appraisal process. The country informed Gavi of the date for the joint appraisal to be conducted in May and June 2015. As agreed the deadline for the submission of the Joint Appraisal is 20th June 2015.
2. The Chief Director MoH was the lead person in the JA process. The MoH selected key senior officials to be involved in the JA discussions.
3. The discussions and dialogue were done at the various review meetings including, EPI Annual Review, Regional Bottleneck Analysis Workshops, Regional and National Annual Performance Reviews and the 2014 Health Summit
4. A letter was sent to relevant national and DP stakeholders involved in the JA discussions. The JA team in country included technical staff with relevant expertise from the MoH, MoF, GHS (PPMED, PHD, Finance, FHD, RDD), Development Partners (WHO, UNICEF, USAID, JICA), GCNH, SPH and College of Physicians and Surgeons and former EPI programme manager.
5. All relevant data as listed in the guidelines were provided to all stakeholders.
6. There was a field trip to three selected Regions (Greater Accra, Central and Eastern) to assess the opinions of health staff on immunisation services especially pertaining to Gavi support and this is incorporated in the report. Discussions were held with regional and districts teams during the visits.
7. The country built on existing country processes and results of other reviews during the JA process.
8. The stakeholders involved in the discussions were able to identify recommendations for the JA process

Annex D. HSS grant overview

Previous HSS Grant Amount and Duration

General information on the HSS grant								
1.1 HSS grant approval date			July 2007					
1.2 Date of reprogramming approved by IRC, if any			2011					
1.3 Total grant amount (US$)			**$9,670,000**					
1.4 Grant duration			2007 – 2011 extended to 2013					
1.5 Implementation year			2008 – 2014					
(US$ in million)	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	
1.6 Grant approved as per Decision Letter	1035500	3615250	0	2509625	2509625			
1.7 Disbursement of tranches	1035500	3615250	0	2509625	2509625			
1.8 Annual expenditure	2,173,378.18	354787	1559539	1112730	2312828	1422076	2307108.16	
1.9 Delays in implementation (yes/no), with reasons			Yes, Although the Gavi proposal was approved in 2007, the first tranche of funding was received in 2008.					
1.10 Previous HSS grants (duration and amount approved)								

1.11 List HSS grant objectives

1. Strengthening District and Sub-districts
2. Expand functional CHPS coverage to deliver essential services especially for MDG 4 and 5
3. Strengthening sub-district Health Information Systems especially at the CHPS zone level using District Wide Information Management System (DWIMS)
4. Strengthening Information management, M&E and operational and implementation research

Current HSS Grant Amount and Duration

General information on the HSS grant								
1.12 HSS grant approval date				10 June 2014				
1.13 Date of reprogramming approved by IRC, if any								
1.14 Total grant amount (US$)				18,059,296.00				
1.15 Grant duration				5 years				
1.16 Implementation year				August/2014 – July/2019				
(US$ in million)	**2014**		**2015**	**2016**	**2017**	**2018**		
1.17 Grant approved as per Decision Letter	4,299,400		3,440,096	3,439,650	3,440,000	3,440,150		
1.18 Disbursement of tranches	4,299,400							
1.19 Annual expenditure	HSS1	HSS2						
	2,307,108.16	1,462,090						
1.20 Delays in implementation (yes/no), with reasons				Yes, Funding was received in August 2014				
1.21 Previous HSS grants (duration and amount approved)				9,670,000 2007-2014				

1.22 List HSS grant objectives

5. To strengthen and scale up community health interventions aimed at improving access and quality of primary health care services
6. To strengthen health worker capacity and distribution so as to address equity issues at the district level.
7. To improve storage distribution and management of logistics and ensure the availability of potent, quality and safe vaccines, medicines and devices
8. To empower civil society for increased demand creation for health services at the community level
9. To strengthen governance and health information management for improved health service delivery

1.23 Amount and scope of reprogramming (if relevant)

A request is being made for approval for reprogramming of US$ 250,000 planned for 2016 to be made available in 2015.

Annex E. EVM, PIE and EPI Review findings

THE EFFECTIVE VACCINE MANAGEMENT (EVM) ASSESSMENT

The last effective vaccine management (EVM) assessment was conducted in October 2014 with support from WHO and UNICEF. The final result is summarized in the annex**.** The average score for each criterion is 80%. The major challenging area is temperature monitoring (E2) which scored below the minimum average of 80% at all level of the supply chain ranging from 61% at regional level to 74% at district store level

The key Effective Vaccine Management (EVM) findings are as follows:
The assessment covered 9 criteria:

(i) E1: Vaccine arrival reports (at national vaccine store only),
(ii) E2: Temperature monitoring
(iii) E3: Storage capacity
(iv) E4: Buildings, equipment and transport
(v) E5: Maintenance
(vi) E6: Stock control
(vii) E7: Distribution
(viii) E8: Vaccine management and
(ix) E9: Supportive services. The minimum score required for each criterion is 80%.

Table 4: Effective Vaccine Management (EVM) findings in October 2014

Level of Store	E1	E2	E3	E4	E5	E6	E7	E8	E9
PR-National Store	94%	67%	81%	92%	100%	88%	87%	98%	81%
SN-Regional Store		61%	90%	83%	79%	83%	68%	94%	82%
LD-District Store		74%	84%	87%	62%	73%	79%	91%	67%
SP-Service Point		71%	77%	82%	59%	57%	92%	81%	60%

From the table above, (i) temperature monitoring is the most ineffective at all levels including national (ii) Maintenance of equipment is also poorly managed from regional to the facility points. (iii) Storage capacity is inadequate at district and service delivery points whilst (iv) facilitative supervision is inadequate at the district and sub-district levels.

Observation for the low score on temperature monitoring - The store managers have great knowledge of correct temperatures for storing vaccines and have received regular training on how to look after vaccines. Manual temperature recording is in place for all walk in cold and freezer rooms. However, systematic temperature monitoring study has not been carried out within the past 5 years. There are no temperature recorder traces and/or temperature logger printouts for each and every walk-in cold rooms, freezer room and refrigerated vehicles throughout the review period. The temperature recording devices in the cold rooms, freezer room and refrigerated vehicles have not been calibrated in the last 12 months.

Recommendations to improve the situation - (i) Conduct a cold chain monitoring study in accordance with WHO/IVB/05.01 study protocol at the NVS and other levels following the vaccine supply chain (3 data loggers, two days training, follow-up cost, data analysis and report) (ii) Conduct a temperature mapping for all freezer rooms and cold rooms; Freezers and Refrigerators used for storing vaccines (iii) Install a continuous monitoring device at the NVS and regional stores. Repair and replace temperature loggers in all cold chain equipment storing vaccines at all levels (iv) Calibrate all temperature recording devices in all cold rooms and freezer rooms, freezers and refrigerators annually to comply with the specified level of accuracy.

POST-INTRODUCTION EVALUATION OF NEW VACCINES (PIE) - 2013

The post introduction evaluation (PIE) of the PCV, Rota and MSD introduced into the routine immunization programme in 2012 was conducted in August 2013. Partners involved were CDC, UNICEF and the GAVI Secretariat. The assessment was conducted in 12 districts in 4 regions to document lessons to guide future new vaccines introduction programmes.

Key findings included: (i) There was an early planning process which started in 2011 and gave ample time for bench marking before the initiation of the vaccines into the routine immunization program and strong partnership which involved majority of stakeholders. Working groups were also established around the same time. (ii) Series of cascaded training were organized targeting different EPI cadres at all levels of the health system to build capacity for the new vaccines introduction and management. Training materials were developed early enabling trainings to be done on time and (iii) It was observed that health workers have adopted good safe injection practices in the great majority of the health facilities visited

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Key lessons- The decision to introduce multiple vaccines in one year and in particular the launching and introduction of pneumococcal and rotavirus vaccines simultaneously was generally a positive one. It took determination, strong partnership, proper coordination, adequate planning and training, effective social mobilization, and logistics forecasting to achieve the desired results. It is equally important to point out that the complexity of Gavi approval process (during the application stage), delay in receiving vaccines for training and piloting, inadequate cold chain capacity for the large volume of vaccines, staff response and funds for preparations can negatively affect the success of the programme if not properly planned.

The addition of MCV2 to the EPI programme brings with it the challenge of reaching a new target of children for immunization in Ghana: those over 1 year of age. Ghana was able to successfully reach older children through integration of EPI services with the nutrition and malaria programmes, which have established contact with 18-month old children for distribution of vitamin A and insecticide treated nets (ITNs). Still, missed opportunities were observed during the last PIE mostly due to inadequate training of healthcare workers regarding the age eligibility for MCV2 and for guidance on catching up missed doses of infant vaccines.

Recommendation – These included the following:

1. **Training** – (i) This evaluation identified high staff turnover and poor availability of written guidelines as potential obstacles for sustaining a strong programme in Ghana (ii) All documents related to new vaccines (MCV2, PCV, and rotavirus) should be made available at all levels (iii) There is a need for continuous refresher training for new and old staff on all components of the immunization programme

   Status of implementation: Refresher training on various components of immunisation is ongoing and there are plans in the HSS budget to further train staff in EPI Mid-Level management modules. Opportunity is also taken during supplemental immunization days (SIAs) to re-orientate staff on immunization. The reference materials that were developed prior to the introduction of these vaccines have been shared with all levels (both hard and electronic copies).

2. **Monitoring/ Supervision** (i) Strengthening the supervision component of the EPI programme is needed in order to maintain the effective implementation of immunization activities (ii) Supervisors should provide written feedback during visits; Standardize supervisory checklists to include EPI.

   Status of implementation: Funds were disbursed to regions and district to support monitoring and supportive supervision at the operational level. The frequency of supervision at the national level has also improved. The programme has developed a standard supervisory checklist which is being used at all level. The frequency of the supervision is being hampered by inadequacy of funds and availability of transport especially at the district and sub-district levels.

3. **Vaccine management** (i) Vaccine wastage should be tracked and reported in monthly reports (ii) Ensure implementation of the national policy for diluent temperature (iii) Guidelines on vaccine management currently in the training manual should be put in a document of its own and disseminated.

4. **Status of implementation:** The WHO District Vaccination Data Monitoring tool (DVD-MT) which is used by the national and regional levels has indicators for monitoring vaccine wastage. These indicators have also been incorporated in the web-based District Health Information Management system.

COMPREHENSIVE EPI REVIEW - 2012

The last comprehensive EPI review was conducted from 1-29 March 2012. Key findings, recommendations and status of implementation of the recommendations as tabulated below:

Table 3: Key findings, recommendations and status of implementation

System Component	Key Findings	Recommendations	Status of Implementation

System Component	Key Findings	Recommendations	Status of Implementation
Programme Management	Some health facilities did not have the updated EPI policy document	Distribute updated EPI Policy and Field guide to all districts and facilities	The EPI policy and field guide have been updated, printed and distributed to districts. However, they will be reviewed to include IPV and Men A introduction
	Poor quality micro-plans at some sub-district levels for achieving target of reaching every child	All districts and HFs should develop and use micro plans to streamline their actions to reach all children and women in Ghana with special emphasis on hard to reach communities	Districts and Health facilities have been orientated through campaign trainings on Micro Plan development. The PPMED is currently developing Planning manual for all levels to improve planning
	Lack of systematic supportive supervision	The Ministry of Health/GHS should prioritize allocation of funds for integrated supportive supervision to improve the quality of implementation of services. Technical programmes to share resources for integrated supportive supervision. Careful selection of each programme priorities is essential for an effective integrated supervision package	An integrated monitoring and evaluation checklist has been developed by PPME and is in use. Funds are periodically released to regions and districts to conduct supportive supervision. Frequency of supportive supervision has also improved at the national level.
Service Delivery	Potential of CHPS not fully utilized for integrated service delivery at community level to enhance EPI performance	Maximize integrated services using CHPS as entry points to enhance EPI	Currently, CHPS are being provided with cold chain facilities and other service delivery kits to improve performance
	Limited Services to hard-to-reach areas due to high cost	Ring fence funds for hard to reach areas	Funds for hard to reach areas have been earmarked in the GAVI HSS support
	Routine vaccination not conducted daily in most facilities, leading to missed opportunities	Reorient staff on daily immunization	Adequate staff are now available at the peripheral level to conduct outreach services and daily static immunization services

System Component	Key Findings	Recommendations	Status of Implementation
Logistics and Cold Chain	Vaccine stocks are not properly monitored at some facilities	Provide vaccine ledger and reorient staff on its use	Updated vaccine ledgers have been printed and distributed. A survey on vaccine wastage is being done to establish baseline data on vaccine wastage
Surveillance	Adverse events following immunization (AEFIs) not always documented nor investigated for routine immunization	Reorient staff on vaccine safety and AEFI reporting and provide job aides and other tools	Vaccine safety and AEFI monitoring training done for some staff during the MR campaign. National level training of training has been completed in collaboration with the Food and Drugs Authority. Trainings are expected to be rolled-out in 2016. AEFI Field manual has also been shared with all levels. Reported forms have been printed and distributed.
	There is weakness in surveillance data analysis and use for timely action at district and lower levels	Continuous training in data analysis of staff	Quarterly data analysis and reviews are conducted at all levels though it needs strengthening
	Poor timeliness of reporting from health facilities to district level and district to region level	Institute measures to improve timeliness of reporting at the peripheral level	Nationwide rollout of DHIMS has improved the timeliness of data reporting
Advocacy, Communication and Community Participation	Insufficient participation of international and national agency heads in ICC meetings.	Participation of the MoH in the ICC needs to be secured at the highest level so as to ensure formal linkage between the ICC and other MoH partners' fora. Key partners in immunization should be represented at the highest level in the ICC to enhance its decision making power. The creation of the National Immunization Technical Advisory Group (NITAG) in Ghana is another option that could be considered.	Efforts are being made to ensure representation of key partners to the ICC meeting. Concept paper for the creation of NITAG has been developed and submitted to the Minister of Health. The Programme is awaiting inauguration of NITAG.

System Component	Key Findings	Recommendations	Status of Implementation
	Inadequate dissemination and implementation of EPI integrated communication plan.	Ensure the dissemination of EPI Communication plan	Communication plan has been updated to include new vaccines and disseminated to key partners for comments
	NGOs and private sector involvement in NIDs and SIAs is not sustained for routine EPI.	Strengthen involvement of NGOs and private sector in routine EPI	Private Midwives have been trained to provide immunization services. There is sustained funding support through the GAVI HSS platform for NGOs(Coalition of NGOs in Health) to support immunization activities
	Weak capacity of district staff in area of communication which hampers efforts to change people's behavior.	Orient staff on behaviour change communication at the district level	District Staff are oriented on Communication for EPI
	Teachers at training institutions lack training and reference material on current information on EPI	Orient staff at Health Training institutions on EPI and provide updated reference materials on EPI	There is strong collaboration between EPI and Health Training Institutions. The curriculum for health training institutions has been updated and teachers have been trained on MLM. Plans are underway for the curriculum of basic schools to be updated

Annex F: Extent to which the current HSS grants is being used to address challenges

I. Inadequate funds at the operational level for conducting service delivery and supervision

The measures in the current HSS support to address this challenge are to develop and implement performance based financing to improve health service delivery.

II. Poor Data Management and documentation

The HSS support to address this challenge are to scale-up management capacity building in data management and documentation at district and sub district levels; support the development of health accounts and joint annual performance review; strengthen data management and M&E systems and upgrade management information system (DHIMS, FMIS and LMIS)

III. Weak supportive supervision due to capacity and inadequate funding

To address this challenge, the HSS would support national, regional, districts and sub district team in supervision and monitoring. There would also be capacity building of health information officers and CHOs to undertake quarterly technical and financial data validation at district and sub-district levels.

IV. Creation of more districts without provision of corresponding infrastructure and human resource

The measures to address this challenge include: procure logistics to improve transport capacity, build capacity at sub-district and CHPS Zones in micro-planning, and undertake community outreach activities. Retired midwives would be recruited to support service delivery in hard-to- reach communities in the selected 20 districts.

V. Poor social mobilization and community participation

The national level of Ghana Coalition of NGOs in Health (GCNH) would be strengthened to coordinate CSOs activities in health. Capacity of CSOs would be developed to better support community level services, including mainstreaming gender. Also the capacities of five satellite sites for CSOs would be strengthened to support community service delivery and recruit/train retired Community Health Nurses and Midwives to partner CSOs to operate in the established satellite sites in hard to reach communities.

VI. Cold chain expansion and maintenance

A total of 101 units of TCW 3000 and TCW 2000 refrigerators have been procured and distributed to districts and sub-districts. Spare parts have also been procured for maintenance.

VII. Transportation

A total of 200 unit of motorbikes with spare parts and accessories have been procured and distributed.