Gavi

Application Form for Country Proposals

For Support to:

Routine New Vaccines Support

Submitted by

The Government of

Ghana

Date of submission: **8 September 2015**

Deadline for submission: 8 September 2015

Select Start and End Year of your Comprehensive Multi-Year Plan (cMYP)

Start Year	2015	End Year	2019

Form revised in 2015

(To be used with Guidelines of October 2014)

Please submit the Proposal using the online platform

https://AppsPortal.gavialliance.org/PDExtranet

Enquiries to: proposals@gavi.org or representatives of a Gavi partner agency. Unless otherwise specified, the documents can be shared with Gavi partners, collaborators and the general public. The Proposal and attachments must be submitted in English, French, Spanish, or Russian.

Note: Please ensure that the application has been received by Gavi on or before the day of the deadline.

Gavi is unable to return submitted documents and attachments to countries.

Gavi
GRANT TERMS AND CONDITIONS

FUNDING USED SOLELY FOR APPROVED PROGRAMMES

The applicant country ("Country") confirms that all funding provided by the Gavi will be used and applied for the sole purpose of fulfilling the programme(s) described in the Country's application. Any significant change from the approved programme(s) must be reviewed and approved in advance by the Gavi. All funding decisions for the application are made at the discretion of the Gavi Board and are subject to IRC processes and the availability of funds.

AMENDMENT TO THE APPLICATION

The Country will notify the Gavi in its Annual Progress Report if it wishes to propose any change to the programme(s) description in its application.The Gavi will document any change approved by the Gavi, and the Country's application will be amended.

RETURN OF FUNDS

The Country agrees to reimburse to the Gavi all funding amounts that are not used for the programme(s) described in its application. The country's reimbursement must be in US dollars and be provided, unless otherwise decided by the Gavi, within sixty (60) days after the Country receives the Gavi's request for a reimbursement and be paid to the account or accounts as directed by the Gavi.

SUSPENSION/ TERMINATION

The Gavi may suspend all or part of its funding to the Country if it has reason to suspect that funds have been used for purpose other than for the programmes described in the Country's application, or any Gavi-approved amendment to the application.The Gavi retains the right to terminate its support to the Country for the programmes described in its application if a misuse of Gavi funds is confirmed.

ANTICORRUPTION

The Country confirms that funds provided by the Gavi shall not be offered by the Country to any third person, nor will the Country seek in connection with its application any gift, payment or benefit directly or indirectly that could be construed as an illegal or corrupt practice.

AUDITS AND RECORDS

The Country will conduct annual financial audits, and share these with the Gavi, as requested. The Gavi reserves the right, on its own or through an agent, to perform audits or other financial management assessment to ensure the accountability of funds disbursed to the Country.

The Country will maintain accurate accounting records documenting how Gavi funds are used. The Country will maintain its accounting records in accordance with its government-approved accounting standards for at least three years after the date of last disbursement of Gavi funds. If there is any claims of misuse of funds, Country will maintain such records until the audit findings are final. The Country agrees not to assert any documentary privilege against the Gavi in connection with any audit.

CONFIRMATION OF LEGAL VALIDITY

The Country and the signatories for the Country confirm that its application, and Annual Progress Report, are accurate and correct and form legally binding obligations on the Country, under the Country's law, to perform the programmes described in its application, as amended, if applicable, in the APR.

CONFIRMATION OF COMPLIANCE WITH THE Gavi TRANSPARANCY AND ACCOUNTABILITY POLICY

The Country confirms that it is familiar with the Gavi Transparency and Accountability Policy (TAP) and complies with the requirements therein.

USE OF COMMERCIAL BANK ACCOUNTS

The Country is responsible for undertaking the necessary due diligence on all commercial banks used to manage Gavi cash-based support. The Country confirms that it will take all responsibility for replenishing Gavi cash support lost due to bank insolvency, fraud or any other unforeseen event.

ARBITRATION

Any dispute between the Country and the Gavi arising out of or relating to its application that is not settled amicably within a reasonable period of time, will be submitted to arbitration at the request of either the Gavi or the Country. The arbitration will be conducted in accordance with the then-current UNCITRAL Arbitration Rules. The parties agree to be bound by the arbitration award, as the final adjudication of any such dispute. The place of arbitration will be Geneva, Switzerland

. The languages of the arbitration will be English or French.

For any dispute for which the amount at issue is US$ 100,000 or less, there will be one arbitrator appointed by the Gavi. For any dispute for which the amount at issue is greater than US $100,000 there will be three arbitrators appointed as follows: The Gavi and the Country will each appoint one arbitrator, and the two arbitrators so appointed will jointly appoint a third arbitrator who shall be the chairperson.

The Gavi will not be liable to the country for any claim or loss relating to the programmes described in the application, including without limitation, any financial loss, reliance claims, any harm to property, or personal injury or death. Country is solely responsible for all aspects of managing and implementing the programmes described in its application.

1. Application Specification

Please specify for which type of Gavi support you would like to apply to.

Type of Support	Vaccine	Start Year	End Year	Preferred second presentation[1]
Routine New Vaccines Support	Meningococcal A, 10 dose(s) per vial, LYOPHILISED	2016	2019	
	If the selected vaccine is not your 1st preference, please state your preferred vaccine and presentation			If the selected vaccine is not your 1st preference, please state your preferred vaccine and presentation

[1] Gavi may not be in a position to accommodate all countries first product preferences, and in such cases, Gavi will contact the country and partners to explore alternative options. A country will not be obliged to accept its second or third preference, however Gavi will engage with the country to fully explore a variety of factors (such as implications on introduction timing, cold chain capacity, disease burden, etc.) which may have an implication for the most suitable selection of vaccine. If a country does not indicate a second or third preference, it will be assumed that the country prefers to postpone introduction until the first preference is available. It should be noted that this may delay the introduction in the country.

2. Table of Contents

3. Executive Summary

Please provide a summary of your country's proposal, including the following the information:

- For each specific request, NVS routine support or NVS campaign :
  - The duration of support
  - The total amount of funds requested
  - Details of the vaccine(s), if applicable, including the reason for the choice of presentation
  - Projected month and year of introduction of the vaccine
- Relevant baseline data, including:
  - DTP3 and Measles coverage data (as reported on the WHO/UNICEF Joint Reporting Form)
  - Birth cohort, targets and immunisation coverage by vaccines
- Country preparedness
  - Summary of EVM assessment and progress on EVM improvement plan
- The nature of stakeholders' participation in developing this proposal
  - Inter-Agency Coordinating Committee
  - Partners, including CSO involvement

The Government of Ghana has made major strides in the health of children in particular and the entire population as a whole. A number of interventions have been introduced to improve the health status of the population. Immunization has been at the forefront of interventions geared to improving child health. This was demonstrated in 2012 when the Government of Ghana with the support of GAVI and other partners jointly introduced pneumococcal and rotavirus vaccines into routine immunization. These vaccines have contributed to the decline of illnesses and deaths due to pneumonia and diarrhoea in the country.

To further improve the health status of children and adults in the country, the country will introduce Meningococcal A Conjugate Vaccine in the three northern regions which lie within the Meningitis Belt of Africa. Approval and support to introduce Meningitis vaccine in the three northern regions have been secured from Gavi.

It has become epidemiologically important that the vaccine is introduced in the seven (7) other regions in the country. Available data at the World Health Organization shows that climate variability could result in evolution of high risk areas which would eventually lead to extension of the meningitis belt as the pathogen that causes the disease is highly related to climatic conditions. Introducing the vaccine nationwide will generate higher herd immunity for the entire population as well as neighbouring countries. It is also important that the vaccine is introduced nationwide to avert any public perception about inequity which could arise as a result of different vaccination schedules in different parts of the country. Lastly having different schedules in different parts of the country might be challenging and confusing for both healthcare workers and the general population.

Ghana is therefore requesting for support from the Global Alliance for Vaccines and Immunization (GAVI) to introduce Meningococcal A (Men A) Vaccine into routine immunization in the seven regions in the southern sector. The support for Meningococcal A Conjugate Vaccine introduction into routine immunization runs from September 2016 to December 2019.

Operationally, the country will jointly introduce Men A vaccines nationwide at the same time (September) in 2016. This will help the country to compare performance across regions and also ease preparatory activities.

Considering the month of introduction (September 2016), about 300,171 surviving infants will be targeted for the first year of introduction

The 10-dose presentation of Meningococcal A conjugate vaccine is preferred. This presentation is the same as the 10-dose presentations of the pentavalent, measles and yellow fever vaccines which are already being used in the country. Vaccinators are therefore already familiar with this presentation.

The Meningitis vaccine will be introduced into routine immunization in September 2016.

The country has a good routine immunization programme. In 2014, the coverage for DTP-3 in these regions was 92%. The coverage for measles second dose was however lower (67%). Steps are being taken to improve the coverage.

Effective Vaccine Management Assessment (EVMA) was conducted in the country in October 2014. The country achieved the EVM target of 80% and above for five (5) out of the nine (9) EVM criteria. An improvement plan was developed to ensure optimal vaccine management practices in the country. Steps have already been taken to implement the plan as a number of cold chain equipment and monitoring devices have been procured.

The World Health Organization and UNICEF provided both technical and financial support in the preparation of this proposal. The Ghana Coalition of NGOs in Health supported the Social Mobilization Sub-committee in the preparation of the advocacy and social mobilization plan. The Food and Drug Authority (FDA) were instrumental in the development of the Strategies for Monitoring and Management of Adverse Events Following Immunization (AEFI). Other partners, particularly, those on the ICC supported in discussions and finalization as well as the endorsement of the proposal for submission.

The estimated cost of introducing meningococcal A conjugate vaccine into routine immunization in the seven (7) southern regions of Ghana is $ 922,384. The VIG to be provided by GAVI ($ 758,325) will cover 82.2% of the estimated cost. The remaining $ 164,060 will be provided by the Government of Ghana and partners.

4. Signatures

4.1. Signatures of the Government and National Coordinating Bodies

4.1.1. Government and the Inter-Agency Coordinating Committee for Immunisation

The Government of Ghana would like to expand the existing partnership with the Gavi for the improvement of the infants routine immunisation programme of the country, and specifically hereby requests Gavi support for:

Meningococcal A, 10 dose(s) per vial, LYOPHILISED routine introduction

The Government of Ghana commits itself to developing national immunisation services on a sustainable basis in accordance with the Comprehensive Multi-Year Plan presented with this document. The Government requests that the Gavi and its partners contribute financial and technical assistance to support immunisation of children as outlined in this application.

Table(s) 6.2.4 in the NVS Routine section of this application shows the amount of support in either supply or cash that is required from the Gavi. Table(s) 6.2.3 of this application shows the Government financial commitment for the procurement of this new vaccine (NVS support only).

Following the regulations of the internal budgeting and financing cycles the Government will annually release its portion of the co-financing funds in the month of **February**.

The payment for the first year of co-financed support will be around **November 2016** for Meningococcal A, 10 dose(s) per vial, LYOPHILISED.

Please note that this application will not be reviewed or recommended for approval by the Independent Review Committee (IRC) without the signatures of both the Minister of Health and Minister of Finance or their delegated authority. These signatures are attached as DOCUMENT NUMBER : 1 and 2 in Section 10. Attachments.

Minister of Health (or delegated authority)		Minister of Finance (or delegated authority)	
Name	Dr Sylvester ANEMANA	**Name**	Major (RTD) M. S. TARA
Date		**Date**	
Signature		**Signature**	

This report has been compiled by (these persons may be contacted in case the Gavi Secretatiat has queries on this document):

Full name	Position	Telephone	Email
Dr George BONSU	National EPI Manager/Ghana Health Service	+233244326637	gybonsu@yahoo.com
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Dr. Daniel YAYEMAIN	Child Health Specialist, UNICEF-Ghana	+233244606315	dyayemain@unicef.org
Mr Fred OSEI-SARPONG	EPI Programme Officer/Ghana Health Service	+233244716379	foseisarpong@gmail.com
Mr John Frederick DADZIE	Deputy EPI Manager/Ghana Health Service	+233243206102	jfdadzie@yahoo.co.uk
Mr Stanley DIAMENU	EPI Focal Point, WHO-Ghana	+233244312896	diamenus@who.int

4.1.2. National Coordinating Body - Inter-Agency Coordinating Committee for Immunisation

Agencies and partners (including development partners and NGOs) supporting immunisation services are co-ordinated and organised through an inter-agency coordinating mechanism (ICC, Health Sector Coordinating Committee (HSCC), or equivalent committee). The ICC, HSCC, or equivalent committee is responsible for coordinating and guiding the use of the GaviGavi NVS routine support and/or campaign support. Please provide information about the ICC, HSCC, or equivalent committee in your country in the table below.

Profile of the ICC, HSCC, or equivalent committee

Name of the committee	EPI Inter-Agency Coordinating Committee
Year of constitution of the current committee	2001
Organisational structure (e.g., sub-committee, stand-alone)	Stand-alone
Frequency of meetings	Quarterly and Emergencies

The Terms of Reference or Standard Operating Principles for the ICC, including details on the ICC membership, quorum, dispute resolution process and meeting schedules is attached as DOCUMENT NUMBER : 4.

Major functions and responsibilities of the ICC/HSCC:

There is a continued need by government and partners to co-ordinate technical and material inputs to the immunization program. In light of current and future support, increased technical co-ordination would ensure efficient use and greater impact of technical, material and financial resources. To this effect a National Inter-Agency Coordinating Committee (ICC) was established in order to serve as an advisory body to the Ministry of Health (MOH) through the Public Health Division of the Ghana Health Service with the following objectives:

- To foster solid partnership by collating all available inputs and resources from inside and outside the country in order to maximize resources for the good of the child
- Support national level to review and support work plans such as NIDs, EPI annual plans, EPI 5 year plans, surveillance plan etc
- Enhance transparency and accountability by reviewing use of funds and other resources together with the EPI Programme at regular intervals
- Support and encourage information sharing and feedback at national and or implementing levels within the country and interested partners outside the country
- Ensure that the Programme Manager receives both technical and political support that helps to validate his or her authority on issues pertaining to EPI
- Address technical issues as and when they arise such as introduction new antigens, strengthening immunization services etc

Please describe how partners have provided support in preparation of the proposal:

Partners provided support in the preparation of this proposal. The World Health Organization and UNICEF provided both technical and financial support in the preparation of this proposal. The Ghana Coalition of NGOs in Health supported the Social Mobilization Sub-committee in the preparation of the advocacy and social mobilization plan for the Yellow Fever Campaign, Meningitis Preventive Campaign as well as the routine introduction of meningitis vaccine. The Food and Drug Authority (FDA) were instrumental in the development of the Strategies for Monitoring and Management of Adverse Events Following Immunization (AEFI). Other partners, particularly, those on the ICC supported in discussions and finalization as well as the endorsement of the proposal for submission.

4.1.3. Signature Table for the Coordinating Committee for Immunisation

We the members of the ICC, HSCC, or equivalent committee *[1]* met on the **03/09/2015** to review this proposal. At that meeting we endorsed this proposal on the basis of the supporting documentation which is attached. The minutes of the meeting endorsing this proposal are attached as Document number 5. The signatures endorsing the proposal are attached as Document number 6 (please use the list for signatures in the section below).

Please refer to Annex C of the 'Gavi HSS and NVS General Guidelines' for more information on ICCs.

Function	Title / Organisation	Name	Please sign below to indicate the attendance at the	Please sign below to indicate the endorsement of

			meeting where the proposal was endorsed	the minutes where the proposal was discussed
Chair	Director General/Ghana Health Service	Dr Ebenezer APPIAH-DENKYIRA		
Secretary	National EPI Programme Manager/Ghana Health Service	Dr George BONSU		
Members	Deputy Director Policy Planning Monitoring and Evaluation/Ministry of Health	Dr Maureen MARTEY		
	Director Policy Planning Monitoring and Evaluation/Ghana Health Service	Dr Erasmus AGONGO		
	Deputy Director General/Ghana Health Service	Dr Gloria Quansah ASARE		
	Chairman/Ghana National Polio Plus Committee of Rotary International	Mr. Sam WORENTETU		
	Chairman/Coalition of NGOs in Health	Mr Gabriel Gbiel BENARKUU		
	Immediate Past EPI Manager	Dr K. O. ANTWI-AGYEI		
	Director for Public Health/Ghana Health Service	Dr Badu SARKODIE		
	WHO Representative/World Health Organization	Dr Magda ROBALO		
	UNICEF Rep/UNICEF	Ms. Susan Namondo NGONGI		
	Head, Public Health and Reference Laboratory/Ghana Health Service	Dr Joseph OPARE		
	Financial Controller/Ghana Health Service	Mrs Ramatu Ude UMANTA		
	Maternal and Child Health Specialist/USAID	Mrs Salamatu FUTA		
	Health Coordinator/Ghana Red Cross Society	Thomas AAPORE		
	Paediatrician/Paediatric Society of Ghana	Dr. Victoria M. ADABAYERI		

By submitting the proposal we confirm that the quorum has been met. **Yes**

The minutes from the three most recent ICC meetings are attached as DOCUMENT NUMBER : 7.

4.2. National Immunization Technical Advisory Group (NITAG)

Has a NITAG been established in the country ? **No**

In the absence of a NITAG, countries should clarify the role and functioning of the advisory group and describe plans to establish a NITAG. This document is attached as **(Document Number: 10)**

5. Immunisation Programme Data

5.1 Background information

Please complete the table below, using data from available sources. Please identify the source of the data, and the date. Where possible use the most recent data and attach the source document.

- Please refer to the Comprehensive Multi-Year Plan for Immunisation (cMYP) (or equivalent plan) and attach a complete copy (with an Executive Summary) as DOCUMENT NUMBER 11. Please attach the cMYP costing tool as DOCUMENT NUMBER 12.
- Please attach relevant Vaccine Introduction Plan(s) as DOCUMENT NUMBER : 14
- Please refer to the two most recent annual WHO/UNICEF Joint Reporting Forms (JRF) on Vaccine Preventable Diseases
- Please refer to Health Sector Strategy documents, budgetary documents, and other reports, surveys etc, as appropriate.
- Please refer to the attached risk assessments in the case of yellow fever and meningitis A mass preventive campaigns.

Please use the most recent data available and specify the source and date.

	Figure	Year	Source
Total population	27,955,567	2015	PPME-GHS
Birth cohort	1,118,223	2015	PPME-GHS
Infant mortality rate (per 1000)	41	2014	DHS-KIR Ghana 2014
Surviving infants*[1]*	1,062,312	2015	PPME-GHS
GNI per capita (US$)	1,600 %	2014	World Bank
Total Health Expenditure (THE) as a percentage of GDP	3 %	2010	Ghana National Health Account
General government expenditure on health (GGHE) as % of General government expenditure	57 %	2010	World Bank

[3] Surviving infants = Infants surviving the first 12 months of life

5.1.1 Lessons learned

Routine New Vaccines Support

If new or under-used vaccines have already been introduced in your country, please give details of the lessons learned from previous introduction(s) specifically for: storage capacity, protection from accidental freezing, staff training, cold chain, logistics, coverage and drop-out rates, wastage rate, etc., and suggest action points or actions taken to address them. Please refer to previous Post Introduction Evaluations (PIE), if applicable. If they are included in the Introduction Plan, please cite the section only.

Lessons Learned	Action Points
Storage Capacity The storage capacity of the country was expanded to accommodate the introduction of vaccines for pneumonia, rotavirus diarrhoea as well as measles second dose. Walk-in cold rooms were installed for all regions. TCW 3000 were also procured and distributed to all districts. The expansion was completed well ahead of time before the vaccines were introduced. Though, efforts were made to repair all broken down refrigerators at the health facility level, there were still some malfunctioning refrigerators at the time of introduction. Baskets for storing vaccines in refrigerators were usually removed.	The country is constantly updating the cold chain inventory and has also established maintenance protocols to ensure non-functioning but serviceable refrigeration equipment are repaired on time. The country, as of May 2015, procured 100 units of TCW 3000 and 52 units of TCW 2000 together with stabilizers which have been distributed to districts and health facilities across the country. Four hundred and eight (408) cold boxes have also been procured and distributed. The 81 districts that had inadequate cold chain capacity have all had their capacity expanded in view of the planned vaccine introductions (IPV, Yellow Fever, Men A) Plans are also in place to use part of the vaccine introduction grants for inactivated polio vaccine (IPV) to procure additional cold chain

	equipment for the country.
Protection from freezing Prior to the introduction of the new vaccines, the comprehensive trainings which were conducted across the country had a dedicated section on vaccine management. Health staff were made to understand the heat/freeze sensitivity of vaccines and how they should be arranged in a vaccine refrigerator. Conditioning of icepacks was also stressed to ensure that freeze sensitive vaccines are not frozen.	Funds from the Gavi HSS Support have been used to implement some of the activities outlined in the improvement plan following the 2014 Effective Vaccine Management Assessment (EVMA). Training of community health officers in cold chain management has commenced. Training of community health officers has been completed in three (3) out of the ten (10) regions in country. Trainings for four (4) more regions will be conducted in August/September 2015. The remaining three (3) regions will be covered by October 2015. In addition to this, a detailed training plan will be developed to ensure all health staff are trained before the meningitis vaccine is introduced into routine immunization. Just as was done for PCV and rotavirus vaccines, staff will be taken through heat/freeze sensitivity of vaccines. Conditioning of icepacks to prevent freezing will feature prominently at the lower levels.
Staff Training Among the sub-committees that were set up to plan the introduction of PCV and Rotavirus vaccines in the country was the Training and Material Development Sub-committee. This committee was tasked to develop a comprehensive training plan for all health workers. Standardized presentations were prepared for training at various levels. The cascaded nature of the training ensured that all staff were trained before the vaccines were introduced. A training manual was also developed to guide trainings at various levels	The Training and Material Development Sub-committee which was set up prior to the introduction of PCV and rotavirus vaccines will be re-activated. A similar training plan that ensure successful introduction of the two vaccines will be developed. Also training manual and fact sheet will also be developed. The training for meningitis vaccine introduction will be cascaded.
Cold chain The cold chain needs of the country were assessed and addressed prior to the introduction of the new vaccines. A functional system for reporting broken down cold chain equipment was also established. This ensured timely servicing of non-functional but serviceable equipment. Refrigerated trucks were also procured for each region to facilitate the transport and distribution of vaccines.	The systems that were put in place prior to the introduction of vaccines for pneumonia and rotavirus diarrhoea will be strengthened to ensure optimal performance. Plans are underway for regional cold chain maintenance officers to be re-orientated. The country has also procure continuous temperature loggers for installation in walk-in cold rooms in the country.
Logistics Before the two new vaccines were introduction, all recording materials were reviewed and printed ahead of time with the exception of child health records book and tally sheet book. As a result, there were some challenges with the accurate tallying and recording of vaccine administered in the child health records. Samples of the vaccine also delayed and as a result they were not available for demonstration during training.	Review of all EPI recording materials have been completed. Plans are underway for the printing of these recording materials. Efforts will be made to ensure that all logistics needed for the successful introduction of the vaccine are available at the point of use before introduction. Follow ups will be made at the UNICEF supply division to ensure the vaccines are delivered as planned.
Coverage and Drop-out rate Though the coverage for PCV and Rotavirus vaccines have been very good, there still remain a challenge with measles second dose. The gaps between the second doses of PCV/Rota and Penta is below 10%. The drop-out rates among these vaccines (PCV, Rota and Penta) are also low. However, there is a wide drop-out rate between the first dose of measles and the second dose.	The proposed routine introduction of meningitis vaccine will be administered to children aged 18 months old - the same time as measles second dose. Already, the coverage for measles second dose is low. However, advocacy and communication efforts are being made to ensure improved coverage. Moreover, the EPI Programme has partnered with the Red Cross Society of Ghana to sensitize and mobilize caregivers for second dose measles vaccination. HSS funding support for CSO will also help in this regard. It is also expected that since meningococcal disease is feared among the populates, uptake of the Meningitis Vaccine will be high. This is expected to increase the coverage of measles second dose especially in the northern part of the country.

5.1.2 Health planning and budgeting

Please provide information on the planning and budgeting cycle in your country

Until January 2009 there was a five-year planning and budgeting cycle for the health sector which is led by the Minister of Health with the support of health partners. The first Programme of Work (POW) was from 1997-2001. The second POW was from 2002-2006 and the third POW spanned from 2007-2011. However,

from January 2009 the planning cycle was changed to 4 years. The first four-year plan was developed for the period 2010 - 2013. The current plan for the Ghana Health Service is from 2014 - 2017.

Please indicate the name and date of the relevant planning document for health

The planning document for health in Ghana is the Health Sector Medium Term Development Plan. The plan is for the period 2014 - 2017.

Is the cMYP (or updated Multi-Year Plan) aligned with the proposal document (timing, content, etc.)

The EPI cMYP (2015 - 2019) is aligned with the Health Sector Medium Term Development Plan (2014 -- 2017), however, the cMYP covers a 5-year period whereas the health sector planning document is for 4 years. With regards to the content, the cMYP has been updated to incorporate the introduction of Yellow Fever Vaccine for Preventive Campaign in high risk areas as well as the catch-up campaign for meningitis and subsequent introduction in routine immunization. The introduction of inactivated polio vaccine (IPV) is also in the cMYP.

Please indicate the national planning budgeting cycle for health

The national planning and budgeting is prepared annually between May - October each year for the ensuing year

Please indicate the national planning cycle for immunisation

A 5-year comprehensive Multi-Year Plan (cMYP) is developed to guide the immunization programme. The current cMYP covers 2015 - 2019. Annual plans are also developed in the last quarter of each year for the ensuing year.

5.1.3 Preparatory activities

Please provide an outline of all **preparatory** activities for vaccine(s) introduction or campaigns. If they are included in detail the Introduction Plan and/or Plan of Action, please cite the sections only.

Ghana's outline for all preparatory activitiesare as follows:

- ICC Technical Sub-committee meeting
- Preparation of briefing notes for ICC and keystakeholders
- Preparation and completion of applicationdocuments
- Meeting with ICC and HSCC for endorsement
- Briefing and subsequent endorsement by MoH andMoFEP
- Submission of proposal to GAVI
- Formation of Yellow Fever Campaign Planning Committee and Sub-committees
- Sub-committees meetings
- Training/Orientation of health workers
- Advocacy, Communication and Socialmobilization
- Press briefing
- National Launching
- Campaign Implementation
- Coverage Survey by Independent monitors

- National Review of Vaccination Campaign

5.1.4 Gender and equity

Please describe any barriers to access, utilisation and delivery of immunisation services at district level (or equivalent) that are related to geographic, socio-economic and/or gender equity. Please describe actions taken to mitigate these barriers and highlight where these issues are addressed in the vaccine introduction plan(s).

The Ghana Demographic and Health Survey (2014) shows that there are no barriers to immunization with regards to socio-economic and gender barriers. This is evidenced by the measles coverage of 88.2% for males and 90.3% for females and Penta-1 coverage of 95.9% for males and 97.3% for females in the report. There is also no disparity in immunization rates with regards to mother's education, wealth quintile, region or residence (rural/urban).

Discuss how equity issues (geographic, socio-economic and/or gender) are being taken into account in the design of social mobilisation and other strategies to increase immunisation coverage. Highlight where these issues are addressed in the vaccine introduction plan(s).

Evidence from previous campaigns have shown that coverage levels among different geographical locations, socio-economic levels as well as gender is evenly distributed. It must however be pointed out that different strategies are used in different geographical location which have cost implications. Special budgetary allocations are made for communities on island and riverine areas. In such areas, camp-out teams are transported to these communities using boats. They stay in the communities and vaccinate all eligible populations before they are transported back. In slums, especially, urban slums, mobile vans are sent out to deliver key messages on the campaign. At the same time, volunteers and health workers also move from house to house to inform and educate caregivers on the campaign. Again, during campaign implementation, mobilizers move from house to house to mobilize people to the vaccination site. There is no disparity in immunization with regards to gender.

Please indicate if sex disaggregated data is collected and used in immunisation routine reporting systems.

Data on routine immunization is not disaggregated by sex

Is the country currently in a situation of fragility (e.g. insecurity, conflict, post-conflict, refugees/and or displaced persons and recent, current or potential environmental disaster, such as flooding, earthquake or drought or others)? If Yes, please describe how these issues may impact your immunisation programme, planning for introduction of routine vaccines or campaigns and financing of these activities.

No. The country is safe and poised to plan and successfully introduce these vaccines.

If available, please provide additional information and documents on subnational coverage data, e.g. comparing urban/rural districts or districts with highest/lowest coverage, etc.

The district level coverage as reported in the 2013 WHO-UNICEF Joint Report (JRF) shows that Asokore Mampong District recorded the lowest coverage of 21%. This is a peri-urban district. On the other hand, Bia District which is a rural district recorded the highest coverage of 290%. Though this may be as a result of the unrealistic denominator, rural-urban dichotomy does not significantly affect immunization coverage.

Please describe what national surveys take place routinely in country to assess gender and equity related barriers. Highlight whether this application includes any activities to assess gender and equity related barriers.

The Demographic and Health Survey is conducted every four (4) years to assess the quality and coverage of health interventions. With regards to immunization, the survey disaggregate data by gender and wealth quintiles. The Multiple Indicator Cluster Survey which is conducted every five (5) years also assesses these indicators. At the programme level, annual EPI Coverage surveys are conducted to validate the administrative vaccination data. The results are disaggregated by sex.

5.1.5 Data quality

Please attach a data quality assessment (DQA), report if one has been completed within the previous 48 months (DOCUMENT NUMBER: 13). If available, an improvement plan and progress report on the implementation of the improvement plan should also be submitted (DOCUMENT NUMBER: 16, DOCUMENT NUMBER: 17).

If DQA not available, please briefly describe plans to establish mechanisms for data quality assessment.

As part of the GAVI HSS support, the programme will conduct Service Availability and Readiness Assessment (SARA) in 2015. A major component of SARA is the assessment of the quality of immunization data and its consistency across levels. The programme has also instituted monthly data reconciliation at all levels. At the national level, the programme meets regularly with the Disease Surveillance Department, the laboratories, WHO and UNICEF to reconcile data before it is reported. Similar arrangements have been replicated at the regional and district levels. There are plan to institute annual data quality self-assessment to regularly assess the quality of immunization data.

Please indicate what routine mechanisms to independently assess the quality of administrative data are in place, and if so what these mechanisms are and how they enable the country to track changes in data quality over time.

Data quality audit helps the programme to assess the quality of data. The last time an external data quality audit was conducted in the country was 2009. This audit was commissioned by UNICEF for three interventional areas (EPI, Growth monitoring, skilled delivery). Since then, the EPI Programme has carried out data audits and validations. However, there has not been an independent assessment of the quality of data in the past 7 years. The programme will consult the World Health Organization on how the quality of data could be independently assessed.

Please detail what household surveys have been conducted in recent years to independently assess immunisation coverage and equity, and describe any survey plans for the coming five year period.

Three key household surveys are independently conducted in Ghana. These are the Demographic and Health Survey (DHS), the Multiple Indicator Cluster Survey (MICS) and the EPI Cluster Survey. The DHS started in 1984. This survey is conducted every four (4) years. The DHS cover maternal and child health, nutrition and mortality topics. Each survey may include additional modules or country-specific questions that can cover a wide array of topics including wealth, occupation, housing conditions, exposure to mass media, attitudes toward contraception and reproductive health-related issues, AIDS, and malaria.
MICS) are surveys run under the program developed by UNICEF to provide internationally comparable, statistically rigorous data on the situation of children and women. The survey started in 1995. It is conducted every five (5) years.
EPI Cluster Survey on the other hand is a survey commissioned by the Ghana Health Service. Independent assessors are contracted to undertake this survey, usually annually, to validate the administrative performance.

5.2. Baseline and Annual Targets (NVS Routine Support)

Please refer to cMYP pages to assist in filling-in this section.

Number	Base Year	Baseline and Targets			
	2014	2016	2017	2018	2019
Total births	906,541	947,906	971,604	995,894	1,020,791
Total infants' deaths	45,327	47,395	48,580	49,795	51,039
Total surviving infants	861,214	900,511	923,024	946,099	969,752
Total pregnant women	906,541	947,906	971,604	995,894	1,020,791
Target population vaccinated with OPV3*[1]*					
OPV3 coverage*[2]*	92 %	95 %	95 %	95 %	96 %
Target population vaccinated with DTP1*[1]*	814,669	864,491	886,103	908,255	930,962
Target population vaccinated with DTP3*[1]*	793,104	855,485	876,873	898,794	930,962
DTP3 coverage*[2]*	92 %	95 %	95 %	95 %	96 %
Wastage*[3]* rate in base-year and planned thereafter (%) for DTP	10	10	10	10	10
Wastage*[3]* factor in base-year and planned thereafter for DTP	1.11	1.11	1.11	1.11	1.11
Target population vaccinated with Meningococcal*[1]*	.0	765434.0	803031.0	851489.0	921264.0
Meningococcal A coverage*[2]*	0 %	85 %	87 %	90 %	95 %
First Presentation: Meningococcal A, 10 dose(s) per vial, LYOPHILISED					
Wastage*[3]* rate in base-year and planned thereafter (%)	0	10	10	10	10
Wastage*[3]* factor in base-year and planned thereafter (%)	1.00	1.11	1.11	1.11	1.11
Maximum wastage rate value for Meningococcal A, 10 dose(s) per vial, LYOPHILISED	50 %	50 %	50 %	50 %	50 %
Target population vaccinated with 1st dose of Measles	575,270	765,434	803,031	851,489	921,264
Measles coverage*[2]*	67 %	85 %	87 %	90 %	95 %
Annual DTP Drop out rate [(DTP1 – DTP3) / DTP1] x 100	3 %	1 %	1 %	1 %	0 %

[1] Indicate total number of children vaccinated with either DTP alone or combined

[2] Number of infants vaccinated out of total surviving infants

[3] The formula to calculate a vaccine wastage rate (in percentage): [(A - B) / A] x 100. Whereby: A = the number of doses distributed for use according to the supply records with correction for stock balance at the end of the supply period; B = the number of vaccinations with the same vaccine in the same period.

[1] Indicate total number of children vaccinated with either DTP alone or combined

[2] Number of infants vaccinated out of total surviving infants

[3] The formula to calculate a vaccine wastage rate (in percentage): [(A - B) / A] x 100. Whereby: A = the number of doses distributed for use according to the supply records with correction for stock balance at the end of the supply period; B = the number of vaccinations with the same vaccine in the same period.

5.3. Targets for Preventive Campaign(s)

No NVS Prevention Campaign Support this year

6. New and Under-Used Vaccines (NVS Routine)

6.1. Assessment of burden of relevant diseases (if available)

If already included in detail in the Introduction Plan or Plan of Action, please cite the section only.

Disease	Title of the assessment	Date	Results
Epidemic Meningococcal Disease (EMD) due to Neisseria meningitides type A (NmA)	None	NA	Rationale for introduction is explained in the introduction plan

6.2. Requested vaccine (Meningococcal A, 10 dose(s) per vial, LYOPHILISED)

As reported in the cMYP, the country plans to introduce Meningococcal A, using Meningococcal A, 10 dose(s) per vial, LYOPHILISED.

When is the country planning to introduce this vaccine? **September 2016**

Please note that, due to a variety of factors, the launch date may vary compared to the date stipulated in the application. Gavi will work closely with countries and their partners to address these issues.

6.2.1. Co-financing information

If you would like to co-finance an amount higher than the minimum, please provide information in Your co-financing row.

Country group	Intermediate

	Year 1	Year 2	Year 3	Year 4
	2016	2017	2018	2019
Minimum co-financing	0.20	0.28	0.36	0.44
Your co-financing (please change if higher)	0.20	0.28	0.36	0.44

6.2.2. Specifications of vaccinations with new vaccine

	Data from		Year 1	Year 2	Year 3	Year 4
			2016	2017	2018	2019
Number of children to be vaccinated with the first dose	Table 5.2	#	765,434	803,031	851,489	921,264
Immunisation coverage with the first dose	Table 5.2	#	85 %	87 %	90 %	95 %
Country co-financing per dose	Table 6.2.1	$	0.2	0.28	0.36	0.44

6.2.3. Portion of supply to be procured by the country (and cost estimate, US$)

		2016	2017	2018	2019
Number of vaccine doses	#	187,500	226,500	319,000	419,200
Number of AD syringes	#	191,600	226,700	319,400	420,100
Number of re-constitution syringes	#	20,900	25,200	35,500	46,600
Number of safety boxes	#	0	0	0	0
Total value to be co-financed by the Country ***[1]***	**$**	212,500	253,000	345,500	458,500

[1] The co-financing amount for intermediate and graduating countries indicates costs for the vaccines, related injection safety devices and any freight charges. The total co-financing amount does not contain the costs and fees of the relevant Procurement Agency, such as contingency buffer and handling fees. Information on these extra costs and fees will be provided by the relevant Procurement Agency as part of the cost estimate to be requested by the Country.

6.2.4. Portion of supply to be procured by the Gavi (and cost estimate, US$)

		2016	2017	2018	2019
Number of vaccine doses	#	875,100	675,600	640,100	622,900
Number of AD syringes	#	893,900	676,400	640,800	624,100
Number of re-constitution syringes	#	97,200	75,000	71,100	69,200
Number of safety boxes	#	0	0	0	0
Total value to be co-financed by Gavi	**$**	992,000	754,000	693,000	681,500

6.2.5. New and Under-Used Vaccine Introduction Grant

Calculation of Vaccine Introduction Grant for the Meningococcal A, 10 dose(s) per vial, LYOPHILISED

Year of New Vaccine Introduction	Births (from Table 5.2)	Share per Birth in US$	Total in US$
2016	947,906	0.80	758,325

The Grant will be based on a maximum award of $0.80 per infant in the birth cohort with a minimum starting grant award of $100,000

Please describe how the Gavi Vaccine Introduction Grant will be used to facilitate the timely and effective implementation of critical activities in advance of and during the introduction of the new vaccine (refer to the cMYP and the Vaccine Introduction Plan).

The vaccine introduction grant will be used to prepare the grounds before vaccine introduction, facilitate vaccine introduction and conduct some post introduction activities. The grant will be used to set up the Planning Committee and Sub-committee to plan the introduction. All recording and reporting tools used by the programme will be revised to include Men A. The grant will be used to print some of the revised version of the following; the tally books, immunization schedule and monthly reporting forms. The grant will also be used to conduct training of health staff especially those providing immunization services. Part of the grant will also be used to facilitate the movement of cold chain maintenance teams across the country. Regions and districts will be provided with funds to conduct advocacy meetings with opinion and religious leaders, organized groups and caregivers. They will also be provided with funds to conduct other social mobilization activities. Also, the grant will be used to organized a grand launch of the vaccine introduction. When introduced, funds will be released to districts to enable them conduct outreach sessions. Monitoring and supervision will also be intensified at all levels. Between six months and one (1) year after the vaccine introduction, a post introduction review will be conducted.

Please complete the 'Detailed budget for VIG / Operational costs' template provided by Gavi and attach as a mandatory document in the Attachment section.

Detailed budget attached as Document No. 28.

Where Gavi support is not enough to cover the full needs, please describe other sources of funding and the expected amounts to be contributed, if available, to cover your full needs.

The estimated cost of introducing meningococcal A conjugate vaccine into routine immunization in the seven (7) southern regions of Ghana is $ 922,384. The VIG to be provided by GAVI ($ 758,325) will cover 82.2% of the estimated cost. The remaining $ 164,060 will be provided by the Government of Ghana and partners.

6.2.6.Technical assistance

Please describe any particular area(s) the Ministry would require technical assistance to support the introduction of Meningococcal A.

The Ministry of Health will require technical assistance in the area of Adverse Events Following Immunization (AEFI) surveillance and Logistics Management.

7. NVS Preventive Campaigns

No NVS Prevention Campaign Support this year

7.1.1 Epidemiology and disease burden for Meningococcal A

Please select at least one of the following information sources to justify Meningococcal A disease burden results:

Epidemiological information on burden of disease:

☐ 1 - Risk assessments

☐ 2 - Other

8. Procurement and Management

8.1 Procurement and Management of New and Under-Used Vaccines Routine

Note: The PCV vaccine must be procured through UNICEF to be able to access the price awarded by the Advance Market Commitment (AMC).

a) Please show how the support will operate and be managed including procurement of vaccines (Gavi expects that most countries will procure vaccine and injection supplies through UNICEF or PAHO's Revolving Fund):

All vaccines and other injection supplies are procured for the Government of Ghana through the UNICEF Supply Division. Just as all other vaccines in the country's immunization programme, MenAfriVac vaccines will be procured using the existing system. Ghana operates the bundling system.

b) If an alternative mechanism for procurement and delivery of vaccine supply (financed by the country or the Gavi) is requested, please document

- A description of the mechanism and the vaccines or commodities to be procured by the country
- Assurance that vaccines will be procured from the WHO list of pre-qualified vaccines, indicating the specific vaccine from the list of pre-qualification. For the procurement of locally-produced vaccines directly from a manufacturer which may not have been prequalified by WHO, assurance should also be provided that the vaccines purchased comply with WHO's definition of quality vaccines, for which there are no unresolved quality problems reported to WHO, and for which compliance is assured by a fully functional National Regulatory Authority (NRA), as assessed by WHO in the countries where they are manufactured and where they are purchased.

Not applicable

c) If receiving direct financial support from Gavi (such as operational support for campaigns or VIG activities), please indicate how the funds should be transferred by Gavi.

The VIG should be transferred directly to Ghana via the accounts details provided.

d) Please indicate how the co-financing amounts will be paid (and who is responsible for this)

The co-financing amounts will be paid through UNICEF's Procurement and Supply Division by the Ministry of Health. The Director, Policy, Planning, Monitoring and Evaluation (PPME) and the Financial Controller of the Ministry of Health are responsible.

e) Please describe the financial management procedures that will be applied for the management of the NVS direct financial support, including procurement.

There is a laid down financial management procedure for managing funds in the health sector including vaccine introduction and campaign grants. The financial management system is decentralized. Budget Management Centers manage funds for their activities. Funds for the introduction of Men A in the seven regions will be sent to the decentralized levels using existing structures (i.e. through region to districts). Transfers are made through the banks (bank to bank transfer). At the national level, the EPI Manager initiates the process for the release of funds by preparing a financial memo. The memo is then approved by the Division Head (the Director for Public Health). The memo is then sent to the Accounts Division for processing. As part of the processing, all documents are sent to the Audit Division for clearance after which a cheque is then written and endorsed by the Financial Controller (or Deputy) and the Director for Public Health. Similar arrangements are used at the regional and district levels. The Public Procurement Act (PPA) requires that each government entity submit its procurement plan to the Public Procurement Board. Each year, the procurement plan is prepared to cover all commodities to be procured from the sector programmes of work (including donor supported programmes and projects).

f) Please outline how coverage of the introduced vaccine will be monitored, reported and evaluated (refer to cMYP and Introduction Plan)

The existing reporting system for routine immunization will be used. Data will be generated at the service delivery level. Data will then be transferred to the District level where the data will be entered the District Health Information Management System (DHIMS) as well as the District Vaccination Data Management tool (DVD-MT). EPI Managers at higher levels will monitor the performance on the DHIMS which is a web-based platform. The DVDMT on the other hand is transmitted across level till it gets to the national level. Evaluation of performance will be done as part of the annual coverage surveys conducted by the country as well as other surveys as the DHS and MICS.

g) If applying for measles second dose, does the country wish to have the support in cash or in-kind? **N/A**

8.2 Procurement and Management for NVS Preventive Campaign(s)

No NVS Prevention Campaign Support this year

8.3 Product Licensure

For each of the vaccine(s) requested, please state whether manufacturer registration and/or national vaccine licensure will be needed in addition to WHO prequalification and, if so, describe the procedure and its duration. In addition, state whether the country accepts the Expedited Procedure for national registration of WHO-prequalified vaccines.

Note that the necessary time for licensure should be factored into the introduction timeline and reflected in the Vaccine Introduction Plan or Plan of Action.

Ghana requires that all vaccines used in the immunization programme including WHO pre-qualified vaccines are registered by the Food and Drugs Authority if they are not already registered in the country. There is expedited procedure for registration of WHO pre-qualified vaccines.

For each of the vaccine(s) requested, please provide the actual licensure status of the preferred presentation and of any alternative presentations, if required.

MenAfriVac is registered in Ghana.

Please describe local customs regulations, requirements for pre-delivery inspection, special documentation requirements that may potentially cause delays in receiving the vaccine. If such delays are anticipated, explain what steps are planned to handle these.

All EPI vaccine shipments are consigned directly to the Procurement and Stores Division (PSD) of the Ministry of Health, which is responsible to clear the shipments using their appointed clearing agent. The shipping documents are sentby the UNICEF Global Freight Forwarders to the UNICEF country office as notified party. UNICEF then forwards the shipping documents to The Ministry of Health with a copy to the EPI Office. The Ministry of Health then submits the documents to the Customs Authority and the authorized clearing agent on behalf of the Government for clearance of the shipment at least 5 working days before the arrival of shipment.

The shipping documents are directly addressed to customs to expedite the processing time as the vaccines must be cleared within a few hours of arrival. The Local Customs Authority assesses the duties and taxes (CD/VAT) based on the value ofthe vaccine shipment. The consignee arranges payment on a provisional basis of duties and taxes to the Customs Authority. If there are any delays, UNICEF immediately takes action and asks all concerned authorities and concerned parties to take immediate action to ensure the safe storage of vaccines. There is cold storage capacity at the port of arrival to store vaccines should there be any unexpected delays.

Since vaccines are procured from WHO pre-qualified suppliers, a special requirement for pre-delivery inspection is not required.

Please provide information on NRA in the country, including status (e.g. whether it is WHO-certified). Please include points of contact with phone numbers and e-mail addresses. UNICEF will support the process by communicating licensing requirements to the vaccine manufacturers where relevant.

The Food and Drugs Authority (FDA) is the national regulatory authority mandated by the Public Health Act, 2012(Act 851) of the Republic of Ghana to regulate drugs and medical devices including vaccines. The FDA is an Agency under the Ministry of Health and a WHO-certified center.

Contact details;
Name: Mrs Delese Mimi Darko
Title: Ag. Deputy Chief Executive and Head of Clinical Trials & Pharmacovigilance
Contact No.: 0244337250
Email: mimidarko66@yahoo.co.uk

8.4 Vaccine Management (EVSM/EVM/VMA)

It is mandatory for countries to conduct an Effective Vaccine Management (EVM) assessment prior to an application for introduction of new vaccine. This EVM should have been conducted within the preceding 36 months.

When was the EVM conducted? **October 2014**

Please attach the most recent EVM assessment report (DOCUMENT NUMBER : 25,26,27), the corresponding EVM improvement plan (DOCUMENT NUMBER : 26) and progress on the EVM improvement plan (DOCUMENT NUMBER : 27). The improvement plan should include a timeline, budget of committed resources for these activities and funding gaps, if any, as well as M&E indicators to monitor progress of implementation.

If any of the above mandatory documents (EVM Assessment Report, EVM Improvement Plan, Progress on the EVM Improvement Plan) are not available, please provide justification and reference to additional documents such as PIE and External EPI Reviews.

When is the next Effective Vaccine Management (EVM) Assessment planned? **October 2017**

The above documents are available and attached.

8.5 Waste management

Countries must have a detailed waste management and monitoring plan as appropriate for their immunisation activities. This should include details on sufficient availability of waste management supplies (including safety boxes), the safe handling, storage, transportation and disposal of immunisation waste, as part of a healthcare waste management strategy. Please describe the country's waste management plan for immunisation activities (including campaigns).

Auto Disable syringes and safety boxes are used for all vaccinations in Ghana. There are adequate quantities of these safe injection equipment at all vaccination sites. At facilities/district with an incinerator, injection waste are incinerated as per the national policy. Where there is no incinerator, filled safety boxes are transported to near-by districts for incineration. However, some health facilities burn injection waste in pits. During the yellow fever campaign, injection waste will be assembled and incinerated at the end of each day at designated incineration points under the supervision of trained waste management officers.
Training of vaccinators (health workers) and support staff (assistants of vaccinator) will include the use and safe disposal of injection materials.

9. Additional Comments and Recommendations from the National Coordinating Body (ICC/HSCC)

Comments and Recommendations from the National Coordinating Body (ICC/HSCC)

The ICC commended the Meningococcal A routine introduction Application team for putting together Ghana's application documents. The ICC hoped that Ghana's application will received favourable results by the IRC.

10. List of documents attached to this proposal

10.1. List of documents attached to this proposal

Document Number	Document	Section	Mandatory	File
1	MoH Signature (or delegated authority) of Proposal	4.1.1	☑	Signature - MoH.pdf **File desc:** Signature of the Chief Director of the Ministry of Health **Date/time :** 08/09/2015 01:16:18 **Size:** 1 MB
2	MoF Signature (or delegated authority) of Proposal	4.1.1	☑	Signature - MoF.pdf **File desc:** Signature of the Chief Director of the Ministry of Finance **Date/time :** 29/09/2015 01:36:34 **Size:** 1 MB
3	MoE signature (or delegated authority) of HPV Proposal	4.1.1	☒	Signature of Minister of Education.docx **File desc:** Signature of Minister of Education not required for this application **Date/time :** 23/01/2015 05:11:02 **Size:** 11 KB
4	Terms of Reference for the ICC	4.1.2	☑	Terms of Reference for ICC.docx **File desc:** Terms of reference of the Inter-agency coordinating committee of the immunization programme **Date/time :** 23/01/2015 05:15:27 **Size:** 15 KB
5	Minutes of ICC/HSCC meeting endorsing Proposal	4.1.3	☑	Emergency_ICC_02_09_2015-2 2.pdf **File desc:** Minutes of the ICC meeting which endorsed the application **Date/time :** 08/09/2015 01:40:02 **Size:** 187 KB
6	Signatures of ICC or HSCC or equivalent in Proposal	4.1.3	☑	Signature packet ICC members.pdf **File desc:** Signature of members of ICC endorsing the application **Date/time :** 18/02/2015 11:54:01 **Size:** 252 KB
7	Minutes of last three ICC/HSCC meetings	4.1.3	☑	ICC minutes.zip **File desc:** Minutes of last three ICC meetings held in October 2014, January and April 2015 **Date/time :** 08/09/2015 01:55:36 **Size:** 162 KB

8	A description of partner participation in preparing the application	4.1.3	☒	No file loaded
9	Minutes of NITAG meeting with specific recommendations on the NVS introduction or campaign	4.2	☒	No file loaded
10	Role and functioning of the advisory group, description of plans to establish a NITAG	4.2.1	☑	Concept Paper for NITAG Establishment.docx **File desc:** Concept Paper for the Establishment of National Immunization Technical Advisory Group (NITAG) in Ghana **Date/time :** 23/01/2015 05:35:20 **Size:** 206 KB
11	comprehensive Multi Year Plan - cMYP	5.1	☑	Ghana cMYP 2015-2019_08092015.doc **File desc:** The latest version of the cMYP 2015-2019 **Date/time :** 08/09/2015 09:50:18 **Size:** 1 MB
12	cMYP Costing tool for financial analysis	5.1	☑	cMYP_Costing_Tool_3 6_EPIedit_08092015.xlsx **File desc:** The cMYP costing tool used for costing analysis **Date/time :** 08/09/2015 09:51:55 **Size:** 2 MB
13	Monitoring and evaluation and surveillance (M&E) plan for the support requested, within the context of the country's existing monitoring plan for the EPI programme	5.1.5	☑	Already in cMYP.docx **File desc:** This is captured as part of the monitoring and evaluation plan in the cMYP/introduction plan **Date/time :** 25/01/2015 06:27:34 **Size:** 11 KB
14	Vaccine introduction plan	5.1	☑	Vaccine introduction plan - 1 - EN_Karan.docx **File desc:** Introduction plan for Men A introduction into routine immunization in 7 regions **Date/time :** 29/09/2015 01:34:49 **Size:** 1 MB
15	Introduction Plan for the introduction of RCV / JE / Men A into the national programme	7.x.4	☒	Not Applicable.docx **File desc:** NA **Date/time :** 25/01/2015 10:16:48 **Size:** 11 KB

16	Data quality assessment (DQA) report	5.1.5	☒	DQA Report-2nd Draft.doc **File desc:** Report of Data Quality Self Assessment conducted in 2009 **Date/time :** 23/01/2015 09:23:57 **Size:** 1 MB
17	DQA improvement plan	5.1.5	☒	Not Applicable.docx **File desc:** NA **Date/time :** 25/01/2015 06:28:18 **Size:** 11 KB
19	HPV roadmap or strategy	6.1.1	☒	Not Applicable.docx **File desc:** NA **Date/time :** 25/01/2015 06:30:04 **Size:** 11 KB
20	Introduction Plan for the introduction of RCV into the national programme	7.x.4	☒	Not Applicable.docx **File desc:** NA **Date/time :** 25/01/2015 06:30:34 **Size:** 11 KB
21	HPV summary of the evaluation methodology	5.1.6	☒	Not Applicable.docx **File desc:** NA **Date/time :** 25/01/2015 06:31:04 **Size:** 11 KB
22	Evidence of commitment to fund purchase of RCV for use in the routine system in place of the first dose of MCV	7.x.3	☒	RCV for measles first dose.docx **File desc:** RCV is already given at 9 months in Ghana **Date/time :** 25/01/2015 06:11:55 **Size:** 13 KB
23	Campaign target population documentation	7.x.1	☑	Not required.odt **File desc:** NA **Date/time :** 08/09/2015 09:56:58 **Size:** 4 KB
24	Roadmap or strategy for strengthening a comprehensive approach to pneumonia and/or diarrhoea prevention and treatment	6.x.6	☒	Not Applicable.docx **File desc:** NA **Date/time :** 25/01/2015 06:31:46 **Size:** 11 KB
25	EVM report	8.3	☑	Ghana EVM Report_Updated_261114.doc **File desc:** Report of 2014 EVMA **Date/time :** 25/01/2015 06:36:44 **Size:** 9 MB

26	Improvement plan based on EVM	8.3	☑	Ghana_EVM_improvement_plan_081214.xls **File desc:** Improvement plan for 2014 EVMA **Date/time :** 25/01/2015 07:06:11 **Size:** 224 KB
27	EVM improvement plan progress report	8.3	☑	Ghana_EVM_improvement_plan_081214.xls **File desc:** The status of the improvement plan is incorporated in the improvement **Date/time :** 25/01/2015 10:13:13 **Size:** 224 KB
28	Detailed budget template for VIG / Operational Costs	6.x,7.x.2	☑	7Budget for Men A_VIG_NVS_230915.xlsx **File desc:** Budget for Men A introduction into routine immunization in the 7 southern and middle regions **Date/time :** 29/09/2015 01:32:10 **Size:** 24 KB
29	Risk assessment and consensus meeting report for Meningitis / Yellow Fever: (for yellow fever please include information required in the NVS guidelines on YF Risk Assessment process)	7.1	☑	Not required.odt **File desc:** NA **Date/time :** 08/09/2015 09:59:47 **Size:** 4 KB
30	Plan of Action for campaigns	7.1, 7.x.4	☑	Not required.odt **File desc:** NA **Date/time :** 08/09/2015 10:00:39 **Size:** 4 KB
	Other		☒	Bank Details.pdf **File desc:** Endorsed banking form **Date/time :** 18/02/2015 11:55:48 **Size:** 983 KB

11. Annexes

Annex 1 - NVS Routine Support

Annex 1.1 - NVS Routine Support (Meningococcal A, 10 dose(s) per vial, LYOPHILISED)

Table Annex 1.1 A: Rounded up portion of supply that is procured by the country and estimate of relative costs in US$

		2016	2017	2018	2019
Number of vaccine doses	#	187,500	226,500	319,000	419,200
Number of AD syringes	#	191,600	226,700	319,400	420,100
Number of re-constitution syringes	#	20,900	25,200	35,500	46,600
Number of safety boxes	#	0	0	0	0
Total value to be co-financed by the Country ***[1]***	**$**	212,500	253,000	345,500	458,500

Table Annex 1.1 B: Rounded up portion of supply that is procured by Gavi and estimate of relative costs in US$

		2016	2017	2018	2019
Number of vaccine doses	#	875,100	675,600	640,100	622,900
Number of AD syringes	#	893,900	676,400	640,800	624,100
Number of re-constitution syringes	#	97,200	75,000	71,100	69,200
Number of safety boxes	#	0	0	0	0
Total value to be co-financed by Gavi	**$**	992,000	754,000	693,000	681,500

Table Annex 1.1 C: Summary table for vaccine Meningococcal A, 10 dose(s) per vial, LYOPHILISED

ID		Data from		2016	2017	2018	2019
	Number of surviving infants	Table 5.2	#	900,511	923,024	946,099	969,752
	Immunization coverage	Table 5.2	%	85 %	87 %	90 %	95 %
	Number of children to be vaccinated with the first dose	Table 5.2	#	765,434	803,031	851,489	921,264
	Number of doses per child	Parameter	#	1	1	1	1
	Estimated vaccine wastage factor	Table 5.2	#	1.11	1.11	1.11	1.11
	Number of doses per vial	Parameter	#	10	10	10	10
	AD syringes required	Parameter	#	Yes	Yes	Yes	Yes
	Reconstitution syringes required	Parameter	#	Yes	Yes	Yes	Yes
	Safety boxes required	Parameter	#	No	No	No	No
cc	**Country co-financing per dose**	Table 6.4.1	$	0.2	0.28	0.36	0.44
ca	**AD syringe price per unit**	Table Annexes 4A	$	0.448	0.448	0.448	0.448
cr	**Reconstitution syringe price per unit**	Table Annexes 4A	$	0.035	0.035	0.035	0.035
cs	**Safety box price per unit**	Table Annexes 4A	$	0.0054	0.0054	0.0054	0.0054
fv	**Freight cost as % of vaccines value**	Table Annexes 4B	%	5.00 %	6.00 %	6.00 %	6.00 %
fd	**Freight cost as % of devices value**	Parameter	%	0	0	0	0

Table Annex 1.1 D: Estimated numbers for Meningococcal A, 10 dose(s) per vial, LYOPHILISED, associated injection safety material and related co-financing budget (page 1)

		Formula	2016		
			Total	Government	Gavi
A	Country co-finance	*V*	17.65 %		
B	Number of children to be vaccinated with the first dose	*Table 5.2*	765,434	135,064	630,370
C	Number of doses per child	*Vaccine parameter (schedule)*	1		
D	Number of doses needed	*B x C*	765,434	135,064	630,370
E	Estimated vaccine wastage factor	*Table 5.2*	1.11		
F	Number of doses needed including wastage	*D x E*	849,632	149,922	699,710
G	Vaccines buffer stock	*Buffer on doses needed = (D - D of previous year) x 25% Buffer on wastages = ((F - D) - (F of previous year - D of previous year)) x 25%, = 0 if negative result G = [buffer on doses needed] + [buffer on wastages]*	212,408	37,481	174,927
I	Total vaccine doses needed	*Round up((F + G) / Vaccine package size) * Vaccine package size*	1,062,500	187,483	875,017
J	Number of doses per vial	*Vaccine parameter*	10		
K	Number of AD syringes (+ 10% wastage) needed	*(D + G) x 1.11*	1,085,405	191,525	893,880
L	Reconstitution syringes (+ 10% wastage) needed	*(I / J) x 1.11*	117,938	20,811	97,127
M	Total of safety boxes (+ 10% of extra need) needed	*(K + L) / 100 x 1.11*	0	0	0
N	Cost of vaccines needed	*I x vaccine price per dose (g)*	676,701	119,407	557,294
O	Cost of AD syringes needed	*K x AD syringe price per unit (ca)*	486,262	85,803	400,459
P	Cost of reconstitution syringes needed	*L x reconstitution price per unit (cr)*	4,128	729	3,399
Q	Cost of safety boxes needed	*M x safety box price per unit (cs)*	0	0	0
R	Freight cost for vaccines needed	*N x freight cost as of % of vaccines value (fv)*	37,188	6,562	30,626
S	Freight cost for devices needed	*(O+P+Q) x freight cost as % of devices value (fd)*	0	0	0
T	Total fund needed	*(N+O+P+Q+R+S)*	1,204,279	212,500	991,779
U	Total country co-financing	*I x country co-financing per dose (cc)*	212,500		
V	Country co-financing % of Gavi supported proportion	*U / T*	17.65 %		

Table Annex 1.1 D: Estimated numbers for Meningococcal A, 10 dose(s) per vial, LYOPHILISED, associated injection safety material and related co-financing budget (page 2)

		Formula	2017		
			Total	Government	Gavi
A	Country co-finance	*V*	25.10 %		
B	Number of children to be vaccinated with the first dose	*Table 5.2*	803,031	201,565	601,466
C	Number of doses per child	*Vaccine parameter (schedule)*	1		
D	Number of doses needed	*B x C*	803,031	201,565	601,466
E	Estimated vaccine wastage factor	*Table 5.2*	1.11		
F	Number of doses needed including wastage	*D x E*	891,365	223,737	667,628
G	Vaccines buffer stock	*Buffer on doses needed = (D - D of previous year) x 25% Buffer on wastages = ((F - D) - (F of previous year - D of previous year)) x 25%, = 0 if negative result G = [buffer on doses needed] + [buffer on wastages]*	10,434	2,619	7,815
I	Total vaccine doses needed	*Round up((F + G) / Vaccine package size) * Vaccine package size*	902,000	226,406	675,594
J	Number of doses per vial	*Vaccine parameter*	10		
K	Number of AD syringes (+ 10% wastage) needed	*(D + G) x 1.11*	902,947	226,644	676,303
L	Reconstitution syringes (+ 10% wastage) needed	*(I / J) x 1.11*	100,123	25,132	74,991
M	Total of safety boxes (+ 10% of extra need) needed	*(K + L) / 100 x 1.11*	0	0	0
N	Cost of vaccines needed	*I x vaccine price per dose (g)*	566,605	142,221	424,384
O	Cost of AD syringes needed	*K x AD syringe price per unit (ca)*	404,521	101,537	302,984
P	Cost of reconstitution syringes needed	*L x reconstitution price per unit (cr)*	3,505	880	2,625
Q	Cost of safety boxes needed	*M x safety box price per unit (cs)*	0	0	0
R	Freight cost for vaccines needed	*N x freight cost as of % of vaccines value (fv)*	31,571	7,925	23,646
S	Freight cost for devices needed	*(O+P+Q) x freight cost as % of devices value (fd)*	0	0	0
T	Total fund needed	*(N+O+P+Q+R+S)*	1,006,202	252,562	753,640
U	Total country co-financing	*I x country co-financing per dose (cc)*	252,561		
V	Country co-financing % of Gavi supported proportion	*U / T*	25.10 %		

Table Annex 1.1 D: Estimated numbers for Meningococcal A, 10 dose(s) per vial, LYOPHILISED, associated injection safety material and related co-financing budget (page 3)

		Formula	2018		
			Total	Government	Gavi
A	Country co-finance	*V*	33.26 %		
B	Number of children to be vaccinated with the first dose	*Table 5.2*	851,489	283,209	568,280
C	Number of doses per child	*Vaccine parameter (schedule)*	1		
D	Number of doses needed	*B x C*	851,489	283,209	568,280
E	Estimated vaccine wastage factor	*Table 5.2*	1.11		
F	Number of doses needed including wastage	*D x E*	945,153	314,363	630,790
G	Vaccines buffer stock	*Buffer on doses needed = (D - D of previous year) x 25% Buffer on wastages = ((F - D) - (F of previous year - D of previous year)) x 25%, = 0 if negative result G = [buffer on doses needed] + [buffer on wastages]*	13,447	4,473	8,974
I	Total vaccine doses needed	*Round up((F + G) / Vaccine package size) * Vaccine package size*	959,000	318,968	640,032
J	Number of doses per vial	*Vaccine parameter*	10		
K	Number of AD syringes (+ 10% wastage) needed	*(D + G) x 1.11*	960,079	319,327	640,752
L	Reconstitution syringes (+ 10% wastage) needed	*(I / J) x 1.11*	106,450	35,406	71,044
M	Total of safety boxes (+ 10% of extra need) needed	*(K + L) / 100 x 1.11*	0	0	0
N	Cost of vaccines needed	*I x vaccine price per dose (g)*	570,582	189,779	380,803
O	Cost of AD syringes needed	*K x AD syringe price per unit (ca)*	430,116	143,059	287,057
P	Cost of reconstitution syringes needed	*L x reconstitution price per unit (cr)*	3,726	1,240	2,486
Q	Cost of safety boxes needed	*M x safety box price per unit (cs)*	0	0	0
R	Freight cost for vaccines needed	*N x freight cost as of % of vaccines value (fv)*	33,566	11,165	22,401
S	Freight cost for devices needed	*(O+P+Q) x freight cost as % of devices value (fd)*	0	0	0
T	Total fund needed	*(N+O+P+Q+R+S)*	1,037,990	345,240	692,750
U	Total country co-financing	*I x country co-financing per dose (cc)*	345,240		
V	Country co-financing % of Gavi supported proportion	*U / T*	33.26 %		

Table Annex 1.1 D: Estimated numbers for Meningococcal A, 10 dose(s) per vial, LYOPHILISED, associated injection safety material and related co-financing budget (page 4)

		Formula	2019		
			Total	Government	Gavi
A	Country co-finance	*V*	40.23 %		
B	Number of children to be vaccinated with the first dose	*Table 5.2*	921,264	370,609	550,655
C	Number of doses per child	*Vaccine parameter (schedule)*	1		
D	Number of doses needed	*B x C*	921,264	370,609	550,655
E	Estimated vaccine wastage factor	*Table 5.2*	1.11		
F	Number of doses needed including wastage	*D x E*	1,022,604	411,376	611,228
G	Vaccines buffer stock	*Buffer on doses needed = (D - D of previous year) x 25% Buffer on wastages = ((F - D) - (F of previous year - D of previous year)) x 25%, = 0 if negative result G = [buffer on doses needed] + [buffer on wastages]*	19,363	7,790	11,573
I	Total vaccine doses needed	*Round up((F + G) / Vaccine package size) * Vaccine package size*	1,042,000	419,179	622,821
J	Number of doses per vial	*Vaccine parameter*	10		
K	Number of AD syringes (+ 10% wastage) needed	*(D + G) x 1.11*	1,044,096	420,022	624,074
L	Reconstitution syringes (+ 10% wastage) needed	*(I / J) x 1.11*	115,663	46,530	69,133
M	Total of safety boxes (+ 10% of extra need) needed	*(K + L) / 100 x 1.11*	0	0	0
N	Cost of vaccines needed	*I x vaccine price per dose (g)*	631,421	254,010	377,411
O	Cost of AD syringes needed	*K x AD syringe price per unit (ca)*	467,756	188,170	279,586
P	Cost of reconstitution syringes needed	*L x reconstitution price per unit (cr)*	4,049	1,629	2,420
Q	Cost of safety boxes needed	*M x safety box price per unit (cs)*	0	0	0
R	Freight cost for vaccines needed	*N x freight cost as of % of vaccines value (fv)*	36,471	14,672	21,799
S	Freight cost for devices needed	*(O+P+Q) x freight cost as % of devices value (fd)*	0	0	0
T	Total fund needed	*(N+O+P+Q+R+S)*	1,139,697	458,480	681,217
U	Total country co-financing	*I x country co-financing per dose (cc)*	458,480		
V	Country co-financing % of Gavi supported proportion	*U / T*	40.23 %		

Annex 2 - NVS Routine – Preferred Second Presentation

No NVS Routine – Preferred Second Presentation requested this year

Annex 3 - NVS Preventive campaign(s)

No NVS Prevention Campaign Support this year

Annex 4

Table Annex 4A: Commodities Cost

Estimated prices of supply are not disclosed

Table Annex 4B: Freight cost as percentage of value

Vaccine Antigen	Vaccine Type	2016	2017	2018	2019
Meningococcal A, 10 dose(s) per vial, LYOPHILISED	MENINACONJUGATE	5.50 %	5.57 %	5.88 %	5.78 %

Table Annex 4C: Intermediate - Minimum country's co-payment per dose of co-financed vaccine.

Vaccine	2016	2017	2018	2019
Meningococcal A, 10 dose(s) per vial, LYOPHILISED	0.2	0.28	0.36	0.44

Table Annex 4D: Wastage rates and factors

The following table shows the wastage rates for routine and campaign vaccines, set for 2016.

Vaccine	dose(s) per vial	Maximum Vaccine wastage rate*		Benchmark Wastage Rate**
		Routine	Campaign	
HPV bivalent, 2 dose(s) per vial, LIQUID	2	10 %	10 %	
HPV quadrivalent, 1 dose(s) per vial, LIQUID	1	5 %	5 %	
JE, 5 dose(s) per vial, LYOPHILISED	5	10 %	10 %	
Measles second dose, 10 dose(s) per vial, LYOPHILISED	10	40 %	40 %	
Meningococcal A, 10 dose(s) per vial, LYOPHILISED	10	50 %	10 %	
MR, 10 dose(s) per vial, LYOPHILISED	10	15 %	15 %	
Pneumococcal (PCV10), 2 dose(s) per vial, LIQUID	2	10 %	10 %	
Pneumococcal (PCV13), 1 dose(s) per vial, LIQUID	1	5 %	5 %	
Rotavirus, 2-dose schedule	1	5 %	5 %	
Rotavirus, 3-dose schedule	1	5 %	5 %	
Yellow Fever, 10 dose(s) per vial, LYOPHILISED	10	40 %	40 %	
Yellow Fever, 5 dose(s) per vial, LYOPHILISED	5	10 %	10 %	

Comments:

* Source - WHO indicative wastage rates

** Source - Country APRs and studies, approved by WHO, UNICEF, and the Gavi Secretariat

Note: HPV demonstration project wastage rates are the same as for the national introduction of the vaccine

Table Annex 4E: Vaccine maximum packed volumes

Kindly note that this table is for reference purposes only and includes Gavi- and non Gavi-supported vaccines.

Vaccine product	Designation	Vaccine formulation	Admin route	No. Of doses in the schedule	Presentation (doses/vial, prefilled)	Packed volume vaccine (cm3/dose)	Packed volume diluents (cm3/dose)
BCG	BCG	lyophilized	ID	1	20	1.2	0.7
Diphtheria-Tetanus	DT	liquid	IM	3	10	3	
Diphtheria-Tetanus-Pertussis	DTP	liquid	IM	3	20	2.5	
Diphtheria-Tetanus-Pertussis	DTP	liquid	IM	3	10	3	
DTP liquid + Hib freeze-dried	DTP+Hib	liquid+lyop.	IM	3	1	45	
DTP-HepB combined	DTP-HepB	liquid	IM	3	1	9.7	
DTP-HepB combined	DTP-HepB	liquid	IM	3	2	6	
DTP-HepB combined	DTP-HepB	liquid	IM	3	10	3	
DTP-HepB liquid + Hib freeze-dried	DTP-Hib	liquid	IM	3	10	2.5	
DTP-HepB liquid + Hib freeze-dried	DTP-HepB+Hib	liquid+lyop.	IM	3	1	22	

DTP-HepB-Hib liquid	DTP-HepB+Hib	liquid+lyop.	IM	3	2	11	
DTP-HepB-Hib liquid	DTP-HepB-Hib	liquid	IM	3	10	4.4	
DTP-HepB-Hib liquid	DTP-HepB-Hib	liquid	IM	3	2	13.1	
DTP-HepB-Hib liquid	DTP-HepB-Hib	liquid	IM	3	1	19.2	
DTP-Hib combined liquid	DTP+Hib	liquid+lyop.	IM	3	10	12	
DTP-Hib combined liquid	DTP-Hib	liquid	IM	3	1	32.3	
Hepatitis B	HepB	liquid	IM	3	1	18	
Hepatitis B	HepB	liquid	IM	3	2	13	
Hepatitis B	HepB	liquid	IM	3	6	4.5	
Hepatitis B	HepB	liquid	IM	3	10	4	
Hepatitis B UniJect	HepB	liquid	IM	3	Uniject	12	
Hib freeze-dried	Hib_lyo	lyophilized	IM	3	1	13	35
Hib freeze-dried	Hib_lyo	lyophilized	IM	3	2	6	
Hib freeze-dried	Hib_lyo	lyophilized	IM	3	10	2.5	3
Hib liquid	Hib_liq	liquid	IM	3	1	15	
Hib liquid	Hib_liq	liquid	IM	3	10	2.5	
Human Papilomavirus vaccine	HPV	liquid	IM	3	1	15	
Human Papilomavirus vaccine	HPV	liquid	IM	3	2	5.7	
Japanese Encephalitis	JE_lyo	lyophilized	SC	1	5	2.5	2.9
Measles	Measles	lyophilized	SC	1	1	26.1	20
Measles	Measles	lyophilized	SC	1	2	13.1	13.1
Measles	Measles	lyophilized	SC	1	5	5.2	7
Measles	Measles	lyophilized	SC	1	10	3.5	4
Measles-Mumps-Rubella freeze dried	MMR	lyophilized	SC	1	1	26.1	26.1
Measles-Mumps-Rubella freeze dried	MMR	lyophilized	SC	1	2	13.1	13.1
Measles-Mumps-Rubella freeze dried	MMR	lyophilized	SC	1	5	5.2	7
Measles-Mumps-Rubella freeze dried	MMR	lyophilized	SC	1	10	3	4
Measles-Rubella freeze dried	MR	lyophilized	SC	1	1	26.1	26.1
Measles-Rubella freeze dried	MR	lyophilized	SC	1	2	13.1	13.1
Measles-Rubella freeze dried	MR	lyophilized	SC	1	5	5.2	7
Measles-Rubella freeze dried	MR	lyophilized	SC	1	10	2.5	4
Meningitis A conjugate	Men_A	lyophilized	IM	1	10	2.6	4
Meningitis A/C	MV_A/C	lyophilized	SC	1	10	2.5	4
Meningitis A/C	MV_A/C	lyophilized	SC	1	50	1.5	3
Meningitis W135	MV_W135	lyophilized	SC	1	10	2.5	4
Meningococcal A/C/W/	MV_A/C/W	lyophilized	SC	1	50	1.5	3

Meningococcal A/C/W/Y	MV_A/C/W/Y	lyophilized	SC	1	10	2.5	4
Monovalent OPV-1	mOPV1	liquid	Oral		20	1.5	
Monovalent OPV-3	mOPV3	liquid	Oral		20	1.5	
Pneumo. conjugate vaccine 10-valent	PCV-10	liquid	IM	3	1	11.5	
Pneumo. conjugate vaccine 10-valent	PCV-10	liquid	IM	3	2	4.8	
Pneumo. conjugate vaccine 13-valent	PCV-13	liquid	IM	3	1	12	
Polio	OPV	liquid	Oral	4	10	2	
Polio	OPV	liquid	Oral	4	20	1	
Polio inactivated	IPV	liquid	IM	3	PFS	107.4	
Polio inactivated	IPV	liquid	IM	3	10	2.5	
Polio inactivated	IPV	liquid	IM	3	1	15.7	
Rota vaccine	Rota_liq	liquid	Oral	2	1	17.1	
Rota vaccine	Rota_liq	liquid	Oral	3	1	45.9	
Tetanus Toxoid	TT	liquid	IM	2	10	3	
Tetanus Toxoid	TT	liquid	IM	2	20	2.5	
Tetanus Toxoid UniJect	TT	liquid	IM	2	Unijject	12	
Tetanus-Diphtheria	Td	liquid	IM	2	10	3	
Yellow fever	YF	lyophilized	SC	1	5	6.5	7
Yellow fever	YF	lyophilized	SC	1	10	2.5	3
Yellow fever	YF	lyophilized	SC	1	20	1.5	2
Yellow fever	YF	lyophilized	SC	1	50	0.7	1

12. Banking Form

In accordance with the decision on financial support made by the Gavi, the Government of Ghana hereby requests that a payment be made via electronic bank transfer as detailed below:

Name of Institution (Account Holder):	GHANA HEALTH SERVICE		
Address:	P. O. BOX KB 493, KORLE-BU, ACCRA		
City Country:	GHANA		
Telephone no.:	+233272602300	**Fax no.:**	+233302687701
		Currency of the bank account:	US DOLLAR
For credit to:			
Bank account's title:	PUBLIC HEALTH PROGRAMME ACCOUNT		
Bank account no.:	0330207615714		
Bank's name:	UNIBANK GHANA LIMITED		

Is the bank account exclusively to be used by this program? False

By who is the account audited? GHANA AUDIT SERVICE AND ERNST & YOUNG

Signature of Government's authorizing official

Name:		**Seal**
Title:		
Signature:		
Date:		

FINANCIAL INSTITUTION		**CORRESPONDENT BANK (In the United States)**	
Bank Name:			
Branch Name:			
Address:			
City Country:			
Swift Code:			
Sort Code:			
ABA No.:			
Telephone No.:			
FAX No.:			

I certify that the account No is held by at this banking institution

The account is to be signed jointly by at least (number of signatories) of the following authorized signatories:

1		
	Name:	
	Title:	
2		
	Name:	
	Title:	
3		
	Name:	
	Title:	

Name of bank's authorizing official
Signature:
Date:
Seal: