Ghana Health Service

Immunization Programme Comprehensive Multi-year Plan (2007-2011)

In line with
Global Immunization Vision and Strategies

Table of Contents

Preface/Forward

The Expanded Program on Immunization (EPI) was launched in Ghana in 1978 has since 1985 been operational in all 10 regions. EPI has made giant strides as shown by increasing high coverages in particular and the immense contribution towards achieving MDG 4 and 5 in general, all in the overall context of child survival and poverty reduction.

All these achievements have come as a result of effective planning. However, there is no gainsaying the fact that planning at different levels needs to be standardized with an implementation based on similar strategic approach with well-defined mission, goals and strategic objectives.

The concept of the comprehensive Multi-Year Plan (cMYP) for Immunization, based on the Global Immunization Mission & Strategy (GIVS) - ratified by WHO and UNICEF in May 2005 is to enable countries achieve this goal.

After various levels of consultations the cMYP2007-2011 for Ghana was developed in line with the overall health sector plan and with collaboration of development partners and other stakeholders.

This document lays out the achievements so far made and how we can, not only sustain the gains so far made but also how to achieve the goals through the identified strategic objectives

To ensure sustainability, there is a cost component with financing scenarios. This aspect will let us know the probable and definite sources of funding and the need for ingenious ways of meeting the funding gaps at various levels.

It is hoped that this document will be used at all levels to ensure that we are having the same vision and objectives in ensuring that our children do survive and we can continue to jointly fight vaccine-preventable diseases.

EXECUTIVE SUMMARY

Ghana will be presenting its third medium term plan for the immunization. Given that previous plans, though far from perfect, have however guided our paths at all levels to reach the enviable level of immunization where we are now- in line with the mission of the program.

Mission
This mission is to promote and provide immunization services in a comprehensive manner with a view to

- Reducing the magnitude of the problem due to vaccine-preventable diseases (VPDs) with the help of current and new technologies
- Contributing to the overall poverty reduction and
- Strengthening health services.

This current plan is guided by this mission which is clearly in line with the five goals of the global immunization vision and the achievement of the millennium development goals (MDGs). The strategic objectives of this plan are based on these goals.
The trend in routine immunization coverage, using penta 3 as an indicator, has been upward even though we are quick to admit that there are challenges at the sub-national levels where coverage may still be less than adequate.
It is believed that the current way of planning in line with the global vision for immunization will go a long way in assisting to address the gaps at all levels in a cost-effective manner.
We acknowledge that in all components of the immunization there are impeding and enabling factors. For example when considering access to immunization and other health care services major impeding factors are inadequate appropriate modes of transportation to some difficult terrain and chronic shortage of manpower. However the enabling factors include commitment by government and health workers and availability of funds from partners like GAVI to support and provide immunization services.
All these and other factors were taken into consideration while developing this plan.

In the face of dwindling resources however, we cannot over-emphasize the need to reduce verticalization and foster integration in earnest. It should be noted that activities can only be properly integrated if the integration starts at the planning stages. It is heartening to note that this plan has taken this into consideration.

A lot of work has definitely gone into developing this plan- from the stage of situation analysis to the costing and of course teasing out the annual plan. The progress of plan implementation will be measured through time-tested mechanism like departmental meetings and regular reviews at all levels. The role of the ICC in ensuring that the plan is on track cannot be over-emphasized.
It is expected that this national plan, which has definitely had inputs from the Regions, will serve a guide and template for the plans to be developed by Regions and sub-regional levels.

Acknowledgements

This document has been made possible through the hard work and support of the National EPI team. Our sincere appreciation goes to our development partners especially WHO and UNICEF who supported the developmental process with financial and technical assistance. We will like to mention the efforts of all stakeholders in the health sector, especially our development partners who put together the five year financing framework of support to the National Immunization Programme. It is also important to mention here individual support from the Director, PPMED GHS in the person of Dr Frank Nyonator, the Director, PHD, Dr George K. Amofah and the Coordinator for the development of the cMYP, Mr. Dan Osei. We need to make special mention of the effort of the EPI manager, his deputy and other EPI team.

The cMYP team was chaired by the Director PPMED and the Programme Manager for the NIP. The technical data for completing this document were provided by the EPI Data Manager and the financial and economic data by Messrs Dan Osei of PPMED, GHS and Selassie D'Almeida of the WHO. We are grateful to them for their efforts.

The team also acknowledges the efforts of many other people who contributed to production of the document, whose names cannot be mentioned here. To them we say thank you for the time and effort and the dedication to the job of ensuring that this document got completed. God bless you all.

Acronyms & Abbreviations

AD	Auto-Disable
AEFI	Adverse Events Following Immunization
AFP	Acute Flaccid Paralysis
BCG	Bacille Calmette-Guerin vaccine
CHPS	Community Health Planning and Services
CHPW	Child Health Promotion Week
cMYP	Comprehensive Multi Year Plan
DHS	Demographic Health Survey
DQS	Data Quality Survey
DPT	Diphtheria, Pertussis and Tetanus toxoid vaccine
EPI	Expanded Programme on Immunization
GAVI	Global Alliance of Vaccine and Immunization
GHS	Ghana Health Service
GIVS	Global Immunization Mission & Strategies
GoG	Government of Ghana
HCW	Healthcare workers
ICC	Inter-agency Coordination Committee
IDSR	Integrated Disease Surveillance Response
IEC	Information, Education and Communication
IMR	Information Mortality Rate
ISS	Institutional Strength Support
MDG	Millennium Development Goal
MNTE	Maternal and Neonatal Tetanus Elimination
MoH	Ministry of Health
MTEF	Medium-term Expenditure Framework
NGOs	Non-Governmental Organizations
NIDs	National Immunization Days
NT	Neonatal Tetanus
OPV	Oral Polio Vaccine
PHC	Primary Health Care
PPME	Policy, Planning, Monitoring and Evaluation
RED	Reaching Every District
SNIDs	Sub-national Immunization Days
SOCMOB	Social Mobilization
TT	Tetanus Toxoid vaccine

1. Background

General Context and Demography

Ghana is a tropical country situated in the west coast of Africa and located between latitudes 4 and 11 degrees north of the equator.

At the time of attainment of independence in 1957, Ghana's population stood barely at 6 million, which increased to 6,726,815 in 1960 when the first post independence census was conducted and rose further to 18,412,247 in 2000 with a growth rate of 2.7%, when the last census was held. Ghana's population is projected to reach 27 million by the year 2010 and 33.6 million by the year 2020. Ghana's phenomenal population growth rate is as a result of the interplay of four main factors. These are the youthful age structure of the population which means that a large proportion of the population is concentrated in the reproductive or child-bearing ages; the persistently high fertility rates; the rapidly falling mortality rates and the volume, persistence and direction of migration flows in and out of the country.

The regional distribution of the population is between the range of 17.3 percent in the Ashanti Region and 3.1 percent in the Upper West Region. There are about 240,000 households with over 45,000 communities, of which 80 percent are below 1000.

The level of fertility obtained in Ghana has remained very high. The reported Total Fertility Rate (TFR) ranged from 6 and 7 between 1960 and 1988. The 1998 GDHS report shows that there has been a slight decline of the TFR from 5.5 through 4.6 to 4.2[i], which is considered very high when compared with 2.0 for most developed countries. Infant mortality and under 5 mortality have worsened to 64 and 111[ii] deaths respectively per 1,000 live births compared to 57 deaths and 108 deaths in 1998 respectively. Ghana has a pyramidal age structure due to its large numbers of children below 15 years of age. Forty-four percent of the population is below age 15 while only 5 percent is above age 65.

There is a growing trend in rural urban migration. There are slightly more women (53%) than men (47%) in the overall population, with a slightly higher concentration of women in the rural than urban areas (55% versus 51%). Life expectancy at birth for Ghanaian is estimated at 57.7 years, with 55 years for males and 59.2 years for females

The population density is varied. Nationally, it is estimated to be 77 per square kilometre (km2) but the distribution reflects a range of 897 in the Greater Accra Region to 31 in the Upper West Region. In effect, the population density in the northern half of the country, which also is the poorest economically, is very sparse. The density and population data has considerable implications for the kind of health professionals and providers required in the different regions and their distribution patterns nationally. Where the population is high and the density is high,

the rule of synergy would require that staff and facilities are appropriately mixed to deliver more and better services. This is however not the case.

Administrative/Politics

Ghana is a multi-party democratic country with a presidency, a cabinet, a parliament, and an independent judiciary system. These constitute national level structures with day-to-day functions administered through an established bureaucracy—ministries, departments and agencies (MDAs). The national institutions are responsible for policy and strategy development. For administrative and political purposes, Ghana is divided into ten regions: Ashanti, Brong Ahafo, Central, Eastern, Greater Accra, Northern, Upper East, Upper West, Volta and Western Regions. Each region is headed by an appointed Regional Minister and a deputy who represent the Head of State (the President of the country). The regional minister is assisted by a Regional Co-ordinating Council (RCC), which among other things, co-ordinates and formulates integrated district plans and programmes within the framework of approved national development policies and priorities.

The country is further divided into one hundred and thirty eight (138) administrative districts, each headed by a District Chief Executive (DCE), who is nominated by the President and approved by the District Assembly. The DCE chairs the Executive Committee of the District Assembly whilst an elected Presiding Member presides over the of the District Assembly meetings. The District Assembly is the highest political and administrative authority in the district. The districts are also divided into unit areas and are headed by elected executives who are responsible for their area of jurisdiction. The government since 1980s has been vigorously pursing the policy of decentralisation to allow decision on development to be taken at the grassroots rather than the previous phenomenon where decisions were taken from the central point (top) and allowed to flow down. The division of the country into regions, districts, unit committees and others has implication for health management and administration in the country. The Health Sector has further demarcated districts into Sub-districts and further down into Community Health Planning and Services (CHPS) zones.

Traditional administrative areas co-exist with the modern governmental structure. The traditional areas consist of Kingdoms, Chiefdoms and Traditional Councils that have important roles to play in all human endeavours especially in rural areas.

Situation Analysis

Ghana is geographically located in the west coast of Africa sharing boundaries with Burkina Faso in the north, Togo in the east, Cote d'Ivoire in the north and the Atlantic Ocean is to the south. Inland, there are river bodies which pose challenges to access to island communities on these bodies of water.

As a tropical country, it situated in the west coast of Africa and located between latitudes 4 and 11 degrees north of the equator. The national population of Ghana, according to the 2000 census1 is 18,412,247 million. Out of this number, 50.2 percent are male and 49.8 percent are female. Life expectancy currently stands at 57 years. Forty-four percent of the population is below the age of fifteen. There is a growing trend in rural urban migration. The regional distribution is between the range of 17.3 percent in the Ashanti Region and 3.1 percent in the Upper West Region. There are about 240,000 households with over 45,000 communities, of which 80 percent are below 1000.
The population density is varied. Nationally, it is put at 77 per square kilometre (km2) but the distribution reflects a range of 897 in the Greater Accra Region to 31 in the Upper West Region. In effect, the population density in the northern half of the country, which also is the poorest economically, is very sparse. The density and population data has considerable implications for the kind of health professionals and providers required in the different regions and their distribution patterns nationally. Where the population is high and the density is high, the rule of synergy would require that staff and facilities are appropriately mixed to deliver more and better services.

There is a wide diversity in ethnicity and socio-cultural practices. However, each of these in themselves represents fundamental social capital. The principal religions are traditional Christian, and Islamic. Poverty levels have been in the region of 29.4 percent, with vast geographic disparities especially for the Northern, Upper West, Upper East, and Central regions. The national per capita income is about $400.

Ghana is a multi-party democratic country with a presidency, a cabinet, a parliament, and an independent judiciary system. These constitute national level structures with day-to-day functions administered through an established bureaucracy—ministries, departments and agencies. The national institutions are responsible for policy and strategy development. The country is divided at the intermediary level into 10 regions and with 138 decentralized districts constituting the lower level of political administration. Decentralization to the district is a statutory requirement enshrined in the constitution of Ghana. In effect, the districts or District Assemblies are autonomous agencies responsible for the implementation of public service functions and governance at the local level. The District Assemblies operate through a general assembly system supported by subcommittees that have the responsibility for collating, harmonizing, and coordinating plans, budgets, and implementation of all activities at the district and sub-district level. There is an executive committee headed by a District Chief

Executive who is responsible for managing district level public officials and the administration and management of their functions.

The administrative system in Ghana has profound implications for the organization and management of the health sector, especially within the pluralistic paradigm of health and health-related service delivery. It presents considerable opportunities for intersectoral collaboration and action at all levels as well as the monitoring and supervision of programs targeted for the benefit of the poor and vulnerable in society. This opportunity has not been adequately explored and utilized in the past. The focus at the district level will require a major re-orientation and capacity building within the health sector and among stakeholders.
The economy has seen some improvement over the last decade especially from the onset of multi-party democracy. The economy has gone through a number of hard economic reforms over the last 20 years. With sustained prudent economic management, the difficult decisions like "Highly Indebted and Poor Country" (HIPC) on economic and financial reforms, the economy is set on an accelerated development to meet the Millennium Development Goals.

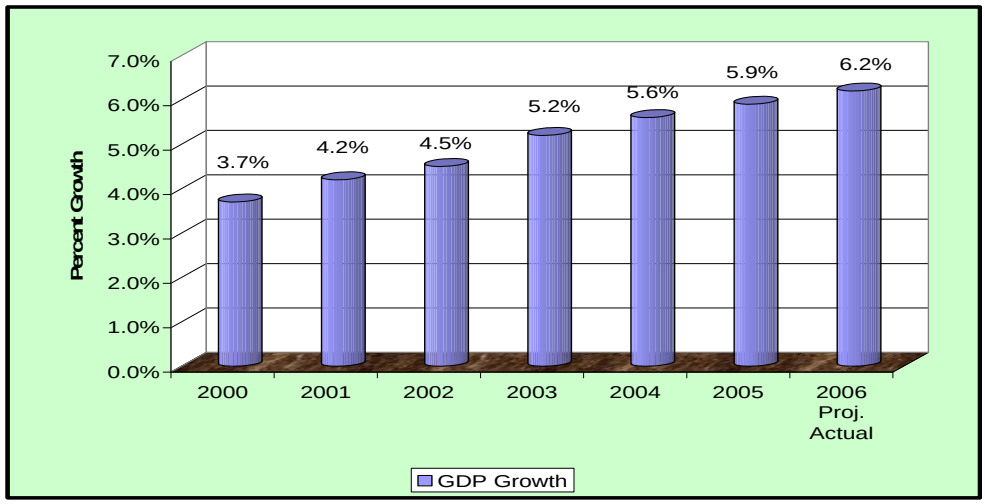
Over the last five years inflation has declined from a peak of 41.5 percent in March 2001 to 14.9 per cent in September 2006, and is projected to reach a single digit by end of 2007. The exchange rate of the cedi has remained stable over the last few years and has recently been appreciating in nominal terms against the major international currencies. Ghana GDP growth has been encouraging. GDP growth rate for 2006 was 6.2% against a target of 6.0%. Over the last six years, GDP growth rate has moved from 3.7% in 2000 to 5.7% in 2005.

Macroeconomic Environment

Ghana continues to make strides in its developmental efforts. The country's HDI has seen an improvement from the previous ranking of 0.556 to 0.567, and placing at 129 out of 174 countries compared to 119th out of 162 countries in 2001. It increased marginally to 0.568 in 2003. Though Ghana is currently placed among Medium Human Development countries, it still ranks very low where the average HDI is 0.750. There are indications that Ghana's HDI will continue to improve in the coming years.

The Ghana Living Standard Survey (GLSS4) estimates that about 40 percent of Ghanaians are below the national poverty line, and 29.4 percent are below the hard-core poverty line, with the majority located in the rural areas. It should be stated that poverty incidence appears to have declined between 1991/92 and 1998/99 from 52% to 40%. Extreme poverty also declined from 37% to 29.4% over the same period. However, there are significant differences in the spatial distribution of poverty incidence. Five out of the ten regions in Ghana had more than 40% of their population living in poverty in 1999, with the three North Savannah Regions (the Upper East, Upper West and Northern Regions) experiencing poverty incidence rations ranging between 69% and 88%. Of the ten regions the Upper East, Northern and Central Regions experienced increases in poverty levels and extreme poverty in the 1990's (GPRS 2003). The high poverty a rate in Ghana is also compounded by the fact that large majority of Ghanaians are estimated to be in employment are mostly rural peasant farmers and small scale traders in the informal sector with irregular income. Thus such poor people are more likely to get sick and stay sick and consequently have low productivity and income.

The Ghanaian economy has been performing well since the 2000 with real Gross Domestic Product (GDP) growth rate higher than of 5%. Other positive achievements of the Ghanaian economy since 2000 period include the relative stability of the cedi throughout the year, only depreciating by 4.7 percent against the US dollar. Also the overall budget deficit was contained at 3.4 percent of GDP. There was Foreign exchange reserves at the Bank of Ghana (BoG) equivalent to 3.9 months of import or US$1.012 billion. This achievement represents the highest since the liberalisation of the foreign exchange market in 1990. There was a general downward trend in annual inflation or Consumer Price Index (CPI) which is also translated into lowering of interest rates. The resilience of the economy has enabled the macroeconomic indicators to stand firm despite international inflation in areas like increase in international petroleum/fuel prices. The positive performance of the economy has a serious ramification for the health sector which relies on external markets for some of its inputs



Health Status

Improving the health status of the poor is crucial for poverty reduction in any country, given that ill health is a consequence and cause of poverty. However, in most developing countries like Ghana geographical and financial access is a major barrier to health care. A significant proportion of the people in Ghana still do not have access to health services and where the services are available, the cost of these services deters them from using them. Access in this context, is defined as living within one hour travel time (by any available means) from the health facility. By this definition the government estimates that only 45% of the rural population have access to health services. Nationally about 40% of the population do not have access to health facilities (UNICEF 1998). In order to overcome this, community-based care delivered at health centres, at smaller facilities or through a penumbra of outreach services radiating out from static facilities is being advocated in Ghana as an effective way to extend and expand services to poor people in remote areas.

This new Ghanaian strategy for empowering communities to improve health status is a bottom-up close-to-client structure, which is anchored at community level and has a nodal district hospital with an intermediary sub-district level. This close to client strategy, for bridging equity gaps in access to quality health services and removing non-financial constraints to health care delivery, entails the definition of the concept of 'whole district health systems'. At the heart of this system will be the expansion of the community-based health planning and services (CHPS) initiative. This strategy is in line with the Government's policy of locating 'nurses in every hamlet' in Ghana. The three tiers of the new 'whole district system', are linked on the service delivery side through bottom-top referrals and top-down supervision on the management side, with monitoring and evaluation and accountability running both ways.

Indicator	2002	2003	2004	2005	2006
infant mortality rate per 1000 live births		64	64	64	64
under five mortality rate per 1000 live births		111	111	111	111
maternal mortality ratio per 100,000 live births					
HIV sero prevalence (%)	3.4	3.6	3.1		
Under five malaria fatality rate (%)	3.7	3.6	2.7	2.4	
Improved service Outputs and Health service Performance					
Outpatients per capita	0.49	0.5	0.52	0.52	
Hospital admission rates per 1000 population	35.3	36	35.3	36.5	
Bed Occupancy rate (%)	65.5	64.1	62.7	58.4	
Under five who are malnourished	NA	33	33		
Tuberculosis cure rates (%)	48.9	53.8	63.9		
% Family planning acceptors	21	22.6	24.3	21.6	
% ANC coverage	93.7	91.2	89.2	88.7	
% PNC coverage	53.6	55.0	53.3	55	
% Supervised Deliveries (skilled)	32	55.0	53.4	54.1	
EPI coverage – Penta (DPTHepBHib3)	77.9	76.0	76	85	84
EPI coverage – Measles	83.7	79.0	78	83	85
EPI Coverage - BCG	96%	92%	92%	100	100
EPI coverage - OPV3 Coverage	79	76.0	76	85	84
EPI Coverage - Yellow Fever Coverage	71%	73%	76%	82%	84%
EPI Coverage - TT2+ Coverage	68	66	62	71	68
AFP non polio rate (%)	1.9	1.3	1.5	1.6	
Number of Guinea worms cases	5545	8,290	7,275	3,944	
No. of specialized outreach services carried out	158	175	145	85	
Improved quality of care					
% Tracer drug availability	85.0	85.0	80.0	85.7	
% Maternal deaths audited	84.0	85.0	55.9	89.6	
Improved level and distribution health resources					
Doctor to population ratios by regions	1:18,274	1:16,759	1:17,733	01:17.9	
Nurse to Population ratios by regions	1:1,675	1:1,649	1:1,510	1:1,508	
% GOG budget spent on health	9.3	9.1	8.2	15.0	
% GOG recurrent budget spent on health	11.5	11.2	11.9	14.5	
Proportion of non-wage recurrent budget spent at district level	40.9	35.4	37.9	48.0	
% of Donor Funds Earmarked	32.8	39.5	26.3	40.0	

The CHPS approach will be oriented to deliver a specific basic package of services or essential interventions that are effective in reaching poor populations. This will be coupled with effective government stewardship that guides the contribution of public, private and voluntary services. The CHPS as a close-to-client system is designed to comprise of a set of CHPS zones within a sub-district, Sub-District health facilities (Health Centres) providing technical backstopping for these zones and at least a district Hospital which provides referral services for the Sub-district structures.

The CHPS requires a strong community involvement, without which any scaling up of investment in health or effective expanded coverage of the poor is unlikely to be achieved. But a sincere community- based drive would necessitate a different strategic approach, additional human resources and finances, and new support and supervision of strategies. In support of the CHPS initiative as a way of reducing geographical and service delivery barriers the Technical Team on Health Service Provision of the GMHI recommended the following areas of action:

- Increasing the physical access to care in Communities by scaling up the establishment of Community Health Planning and Services (CHPS).
- It is recommended to complement CHPS with strategies for scaling up the establishment of community-based prepayment (insurance) schemes or Mutual Health Organizations as a process of removing financial barriers of communities' access to health care.
- Developing sound human resource production and management to reduce the rate of loss of health manpower. This should also lead to improving the quality and volume of services provided by government and private facilities especially at the District and Sub-district level to support and complement CHPS.

The health sector in Ghana has produced its third 5yr Programme of work (2007-11) in 2007. This strategic plan focuses on the creation of wealth through health and forms a comprehensive strategy for contributing to the creation of wealth. At the same time it is designed to address the key concerns of the MDGs. This strategy's emphasis is on preventing, promoting and regenerative health with special emphasis on nutrition, healthy lifestyle and environmental hygiene.

National Vision

The new Ghana Health Policy has a vision to attain middle income status of a 1000 USD per capita by the year 2015 by creating wealth through health.

National Vision for Health

Create wealth through health and contribute to the national vision of attaining middle income status by 2015.

Mission Statement

"The mission is to contribute to socio-economic development and wealth creation by promoting health and vitality, ensuring access to quality health, population and nutrition services for all people living in Ghana and promoting the development of a local health industry."

Health Sector Goal

The ultimate goal of the Ministry is to ensure a healthy and productive population that reproduces itself safely.

Health Sector Objectives

The goal of the health sector will be achieved through pursuing three inter-related and mutually reinforcing objectives. These are:

- To ensure that people live long, healthy and productive lives and reproduce without risk of injuries or death
- Reduce the excess risk and burden of morbidity, mortality and disability especially in the poor and marginalized groups
- Reduce inequalities in access to health, populations and nutrition services and health outcomes

The new health strategy is structured around four main thematic areas and these are:

- Healthy Lifestyles and Environment
- Health, Reproduction and Nutrition Services
- General Health System Strengthening
- Governance and Financing

In 2007 the health sector will begin the implementation of the new health strategy focusing on achieving three inter-related and mutually reinforcing objectives of:

- Ensuring that children survive and grow to become healthy and productive adults that reproduce without risk of injuries or death
- Reducing the excess risk and burden of morbidity, disability, and mortality especially in the poor and marginalized groups
- Reducing inequalities in access to health, population and nutrition services, and health outcomes

These strategies are fundamental to the Global Immunizations Vision and Strategy (GIVS) and re-enforces the basic tenets of using immunization as a cost effective intervention for protecting children to survive and grow to be productive and contribute to the development of the economy.

The National Immunization Programme in Ghana

The Expanded Programme on Immunization (EPI) programme in Ghana was launched in 1978. It was not until 1985 however, when EPI became operational in all 10 regions and 110 districts in Ghana. EPI is one of the priority health interventions in all the MoH 5 yr Programme of Work. EPI administrative coverage has become a key health performance indicator for the entire health sector and is monitored at all levels.

The National Immunization Programme is one of the most successful and cost effective programmes implemented in Ghana. The uniqueness of the NIP has been the innovativeness and adaptation it has gone through with the support of national and international partners. As a vertical programme the NIP has successfully transformed itself and integrated within the country's decentralized health system.

The Expanded Programme on immunization (EPI) in Ghana aims at protecting every child in Ghana from nine common childhood diseases; namely, tuberculosis, poliomyelitis, diphtheria, neonatal tetanus, whooping cough, hepatitis B, haemophilus influenza type b, measles and yellow fever.

The development of immunization in Ghana was very slow in the early 1990s. In the early 2000s, the delivery was accelerated with the global initative and support from GAVI. Subsequently with the introduction of new and under utilized vaccines and sustained NIDs, more children have been immunized. Greater attention has also been drawn to the importance of the national immunization programme and its integration with the health systems, gaining overall policy support.

Indicator	2002	2003	2004	2005	2006
EPI coverage - Penta (DPTHepBHib3)	77.9	76.0	76	85	84
EPI coverage – Measles	83.7	79.0	78	83	85
EPI Coverage - BCG	96%	92%	92%	100%	100%
EPI coverage - OPV3 Coverage	79	76.0	76	85	84
EPI Coverage - Yellow Fever Coverage	71%	73%	76%	82%	84%
EPI Coverage - TT2+ Coverage	68	66.0	62	71	68
AFP non polio rate	1.9	1.3	1.5	1.6	

Immunization continues to be one of the most cost-effective of all child survival health interventions. Traditionally, immunization has had children and women as the main foci of attention but recently this is being broadened to include the wider population in line with the current global immunization vision and strategy (GIVS).

The mission of immunization in Ghana is to contribute to the overall poverty reduction goal of government through the decrease in the magnitude of vaccine-preventable diseases by using cost effective, efficacious and safe vaccines, new and under used technologies to protect more people whilst contributing to overall health systems strengthening in an integrated manner. Ghana has been at the forefront of showcasing immunization as the platform for health systems strengthening.

Goal 1 : Reach out and protect more people than being done currently

Reach every child by strengthening the RED strategy

The Ghana Immunisation Programme has as a primary strategy to ensure that every child in every district is reached and immunized. This will be achieved through a combination of routine immunisation and NIDs. The routine immunisation programme will be strengthened and supported especially in "hard to reach" areas and regional capitals. Through advocacy, the CHPS expansion programme will make these hard to reach areas as a priority in establishment of functional zones.

Strengthen safe injection practices and waste disposal

The goal is to ensure that no harm is done to the child, health worker and the community. To achieve this goal, the use of auto-destruct needles was introduced in 1996. Every district has also been supported and will continue to be supported to use safety boxes and incinerators.

As of now, over 115 districts have been provided with incinerators and there are plans to extend this to the remaining 23 districts and selected large health facilities.

Maintain vaccine independence through continuous advocacy and mobilization

As of now, the Government of Ghana (GOG) increases its contribution by 15% annually until 2011 when it is expected that GOG will be entirely independent in the area of vaccine procurement.

Advocacy will definitely be continued for effective resource mobilization to ensure the sustainability of this initiative.

Ensure effective cold chain and vaccine management

To ensure potency of vaccines from purchase to utilization, adequate cold chain and effective management are promoted. Preventive maintenance will also be promoted.

Vaccine storage will continue to be decentralized with Regions being supported to have cold rooms and human capacity will be improved to manage the system.

Ensure quality of service

Capacity will be enhanced through frequent training on new technologies and refresher training on old ones. These training will be structured like MLM and on-job trainings.

Supportive supervision and monitoring will be strengthened at all levels with feedback provided.

Motivation of staff will be a component to be properly addressed

GOAL 3 : Rapidly increase the herd immunity to selected VPDs

Conduct immunization campaigns:

The essence of campaigns is to reach large proportions of the target population over a very short period. Immunization campaigns will be carried out as required.

Continue Child Health Promotion Week activities:

The Child Health Promotion Week (CHPW) has now been institutionalized in Ghana and this week which is celebrated the 2nd week of May every year, will continue to be used to advocate and sensitize the community to demand child survival services like immunization, Vitamin A supplementation, deworming, insecticide-treated nets (ITNs)

Conduct CSM vaccination campaigns:

Ghana is within the "meningitis belt". It is important that vaccination services will be provided as part of the emergency preparedness and response

Conduct Yellow Fever vaccination campaigns:

Ghana is at risk of yellow fever epidemics. The country has been zoned into 3 zones of high, medium and low risk and would be tacled over a period of 3 years with immunizations.

GOAL 4 : Strengthen surveillance

Continue to strengthen surveillance system for AFP, measles and MNT in the context of integrated disease surveillance:

As part of IDSR, surveillance for VPDs will be strengthened especially at the community level using all available structures and possible innovations

Institutionalize AEFI surveillance

Improve data management:

Considering the relevance of data in decision making and programme direction, the structure and human capacity required for effective data management will be supported

GOAL 5 : Support strengthening of overall health system through integration

Engage other programs in the process of planning, implementation and evaluation:
For cost-effectiveness, integration with other programmes will be actively pursued without losing focus of each child survival intervention and immunization.

Strengthen planning capacity the district levels:
Since the operational level is the district level, the plan will address the issue of capacity development in its entirety at this level.

Evolve and Implement a viable human resources plan:
To ensure that the right quality and quantity of staff are attracted and retained, a robust and sustainable human resources plan will be implemented.

Provide continuous support supervision:
This will be continuously promoted and supported.
Table 1 below shows the premise on which the 2007-2011 plans will be based to achieve the goals indicated and keeping in view the accompanying strategic objectives.

2. Indicators, Milestones and Key Activities

GOAL	STRATEGIC OBJECTIVE	KEY INDICATOR	MILESTONES	KEY **ACTIVITIES**
GOAL 1: Protect People & Save Lives by widespread use of Safe vaccines	1.1. Implement RED strategy in all Districts	% of districts with more than 80% coverage in Penta 3	80% - 2007 82% - 2008 84% - 2009	➢ Planning & Mgt EPI Resources ➢ Supportive Supervision – focused and results oriented ➢ Involvement of Communities Leaders in EPI ➢ Monitoring EPI coverage performance for action ➢ Establishing more outreach points
	1.2 Ensure high quality and high coverage immunization service	Drop-out less than 10% by 2008 DPT1 – DPT3	8 % by 2007 8 % by 2008	➢ Strengthen services in community clinics to quality of outreach service ➢ Ensure high quality service delivery through a focus on quality assurance ➢ Involve private practitioners ➢ Monitor Community satisfaction with immunization service
	1.3 Ensure Safe Injection practices and waste disposal	Development of waste plan management % injection using AD syringes	2007: All districts have implemented waste management	➢ Sustain use of AD syringe ➢ Ensure safe disposal of EPI wastes ➢ Construct incinerators for 23 remaining districts
	1.4 Ensure effective vaccine and cold chain management	% Vaccine wastage rate % Districts with no **stock outs**	<5% for Penta 100% by 2007	➢ Conduct timely forecasts of vaccine requirement for routine, SIA and Mop-up activities ➢ Order and procure required vaccine timely ➢ Ensure timely procurement of

	1.5 Strengthen EPI Advocacy, Communication and IEC	% satisfaction with EPI services among users % DPT1-DPT3 Drop out rate	>90% annually < 10% annually	required cold chain equipment • Ensure timely supply and distribution of vaccines and supplies to all levels • Supply of adequate quantity of all types of EPI record keeping and reporting forms timely • Monitor district stock in national database monthly • Train staff in logistics Mgt • Strengthen EPI Programme Communication & Advocacy • Strengthen Linkages and collaboration with NGOs and LG • Sustain community perception of the high value of immunization
GOAL 1I: Accelerate Reduction of morbidity and mortality from VPDs	2.1 Provide 2nd dose measles vaccine by SIAs and routine vaccination	Measles mortality	Measles incidence reduction by 5 % in 2006 Incidence reduction by 90 %	• ?? Introduce 2nd dose of measles in routine • Identify & address all Measles Out-breaks as per National Policy
	2.2 Implement MNT Elimination Activities	NT case/100live births	2006: 1.5 2007: <1 per 1000 live births 2010: <1 per 1000 live birth	• Strengthen MNT surveillance • Re-assess MNT risk status of all districts • Conduct Validation of NT Elimination status in 2010
	2.3 Conduct Polio vaccine SIAs and other PEI Activities	% OPV coverage during campaigns	> 90% in every district Polio certification by 2008	• Conduct 1 round of OPV <5 yr children (NID) in 2007 • Strengthen Polio Certification Committees • Present Country report for certification- 2007/8
GOAL III: Introduce New & Under-utilized Vaccines	3.1 Introduce new vaccines like Pneumococcal,	% coverage of Pneumococcal vaccine	Introduction of pneumococcal vaccine by 2010	• Establish sentinel sites for Pneumococcal surveillance • Conduct Pneumococcal

	rotavirus 3.2 Ensure sufficient and sustainable immunization programme financing 3.3 Ensure efficiency in use and accountability for immunization programme funds		80% - 2010 85% - 2011	burden study - Integration of cMYP into national budgeting processes - Mobilize funds from GAVI funds and other partners - Ensure Timely Financial support to lower levels - Ensure financial probity in funding activities - Prepare in cMYP 2011-2015 - Prepare Annual Work plan for each year
GOAL IV: Strengthen EPI Surveillance in the Health System context	4.1 Strengthen AFP, Measles and NNT Surveillance	Measles: % of measles cases positive % for measles IGM samples with results within 7 day AFP: AFP Rate % stool adequacy NT: No of NT cases/1000 live births	< 10% >80% >2 / 100,000 pop < 15yrs <1 /1000 live births per district per year	- Strengthen and sustain timeliness and completeness of active and passive surveillance reporting - Identify silent areas and take appropriate measure - Regular review and update of surveillance sites - Strengthening community surveillance for VPDs - Regular orientation on AFP surveillance for service provider at different level (specialists, general physicians, village doctors etc.)
	4.2 Strengthen AEFI surveillance	% of serious AEFIs detected, reported and adequately investigated	40 % - 2006 50 % - 2008 55 % - 2010	- Include AEFI along with AFP and other VPD orientation - Refresher training on AEFI surveillance at all levels - Include AEFI in national database for district monitoring - Strengthen facility and community based AEFI surveillance system - Monitoring and monthly

				feedback of AEFI - Investigate all serious AEFI - Timeliness and completeness of AEFI surveillance report - Regular meeting of AEFI Expert Review Committee - Review and update of AEFI surveillance guideline and forms
V. Integrate EPI with other Interventions in the context of Health System Development	Integration of EPI Surveillance with surveillance of other priority diseases	% Plans, supervision that are integrated	>25%	- Combine measles/polio lab support, training, supplies
	5.1 Ensure effective EPI Human resource management & Strengthen the performance-based reward system	Percent trained staff in EPI and other interventions	90% - 2006 100% - 2007	- Prepare & Submit Proposal for recruitment of field level staff - Review and Finalize TOR of EPI staff at all levels - Training & Capacity Building
	5.2 Strengthen Linkages between EPI and other childhood interventions	Children receiving Vitamin A with Measles at the EPI session % women receiving Vitamin A during Post-partum period	70% in 2007 85% in 2011	- Conduct coordination meetings with other programmes, as required
	5.3 Strengthen District & Sub-district capacity in planning, use of EPI information and sharing of best practices	% districts with updated EPI microplans	90% in 2007	- Training of district on microplanning and use of EPI information and tools

3. Costing, Financing and Financing Gaps

Total immunization expenditure for 2005 was $15.6m. These were necessitated by the support from GAVI in the form the five year support for vaccines and immunization service support. The government responded positively to increasing its expenditure on health with Target to reach 15% as agreed in Abuja. The health strategy to spread GAVI funds beyond the five years with co-financing and increasing portion has also been support by all development partners through the SWAp system. The health sector committed itself to the national immunization programme by securing the funds for vaccines each year. Total immunization expenditure in 2000 was $8,308,365 compared to $15.6m in 2005. Unlike in 2000, routine immunization expenditure represents about 98% as compared to 48% in 2000 (FSP).

Total expenditure on immunization over the year has been increasing. Greater awareness was raised when Ghana opted to introduce two more vaccine (Heb B and HIB) into routine immunization in 2002. This introduction account for the rapid increase in the cost of immunizing a child. However, as a cost effective intervention, the benefit is well documented as far exceeding the cost.

Future Resource Requirements	**2007**	**2008**	**2009**	**2010**	**2011**	**Total 2007 - 2011**
MYP Components	**US$**	**US$**	**US$**	**US$**	**US$**	**US$**
Vaccine Supply and Logistics	20,960,710	20,171,852	21,083,463	22,961,012	22,453,119	107,630,154
Service Delivery	14,345,050	14,703,864	14,981,424	21,101,145	15,452,526	80,584,009
Advocacy and Communication	25,500	26,010	31,836	32,473	33,122	148,942
Monitoring and Disease Surveillance	25,500	57,222	37,142	70,358	44,163	234,386
Programme Management	15,300	46,818	15,918	16,236	71,765	166,038
Grand Total	35,372,059	35,005,766	36,149,783	44,181,224	38,054,695	188,763,528

Expenditure on NIP will grow over the next five years by an average of 3% per annum. Over the next five years, the NIP proposes to spend $189m to maintain existing performance and meet performance targets set for the next five years. Total resources required for vaccines and injection safety (logistics) represents about half of total immunization expenditure throughout the five years.

Resource Requirements, Financing and Gaps	**2007**	**2008**	**2009**	**2010**	**2011**	**2007 - 2011**
Annual growth rate	91%	-1%	3%	18%	-16%	
per capita	$1.6	$1.5	$1.5	$1.5	$1.5	$1.5
per DTP targeted child	$48.4	$43.3	$42.1	$41.8	$42.0	$43.4
% Vaccines and supplies	59%	57%	58%	59%	59%	58%

Macroeconomic Indicators	2005	2007	2008	2009	2010	2011
Per Capita GDP ($)	$491	$649	$730	$826	$919	$1,050
Total Health Expenditures per capita ($)	$19	$27	$43	$51	$54	$59
Population	21,444,426	22,618,058	23,228,746	23,855,922	24,500,032	25,161,533
GDP ($)	$10,522,493,418	**$14,671,235,634**	$16,955,374,270	$19,695,137,873	$22,521,656,799	$26,419,609,369
Total Health Expenditures ($)	$407,444,099	**$610,687,573**	$998,836,071	$1,216,652,021	$1,323,001,721	$1,484,530,431
Goverment Health Expenditures ($)	$48,893,292	**$85,496,260**	$189,778,854	$243,330,404	$291,060,379	$371,132,608
Total Resource Requirements	$15,334,722	**$35,372,059**	$35,005,766	$36,149,783	$44,181,224	$38,054,695
Total Resource Requirements (Routine only)	$15,143,801	**$35,372,059**	$35,005,766	$36,149,783	$36,901,158	$38,054,695
Total Financing (Secured)	$0	**$0**	$0	$0	$0	$0
Funding Gap	$15,334,722	**$35,372,059**	$35,005,766	$36,149,783	$44,181,224	$38,054,695
Total Financing (Not Secured - Probable)	$0	**$0**	$0	$0	$0	$0
Funding Gap	$15,334,722	**$35,372,059**	$35,005,766	$36,149,783	$44,181,224	$38,054,695

The MoFEP projects the country's GDP to grow from $649 per capita in 2007 to about $1,050 per capita in 2011. Similrly total health expenditure is expected to grow from $27 per capita to $59 per capita by 2011. Total resource requirement for immunization will however stabilize at 3% in the last three years of this cMYP. The country will not be conducting campaigns as in the past and therefore NIP expenditure as a % of THE is likely to remain at 3% beyond 2011. The average per capita expenditure is around $1.51 with the exception of 2010 where in increases to 1.81 due to measles campaign to be conducted.

Total cost analysis of expenditure over the period shows a steady growth in spending beyond 2005. Over the next five years the focus of spending will be in strengthening routine immunization activities especially outreach services using the CHPS strategy.

On average, shared cost made up of personnel cost make up about 32% of total projected expenditure. Over the next five years, one of the priorities of the NIP is to replace cold chain equipment and support structures at the district and sub-district levels to deliver close to client services as a means to strengthening the routine outreach programme.

Cost Category	2005	2007	2008	2009	2010	2011
	US$	US$	US$	US$	US$	US$
Routine Recurrent Cost	17.40%	64.85%	63.71%	64.15%	53.81%	64.59%
Routine Capital Cost	2.32%	0.20%	0.27%	0.27%	0.02%	0.25%
Campaigns	1.25%	0.00%	0.00%	0.00%	16.48%	0.00%
Other Costs (Personnel)	79.03%	34.95%	36.02%	35.58%	29.69%	35.16%
GRAND TOTAL	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Routine (Fixed Delivery)	81.30%	35.13%	36.26%	35.81%	29.70%	35.38%
Routine (Outreach Activities)	17.45%	64.87%	63.74%	64.19%	53.82%	64.62%
Campaigns	1.25%	0.00%	0.00%	0.00%	16.48%	0.00%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

5. Financing and Financial Sustainability Strategies

Traditionally the health sector has been financed from four major sources namely;

Government of Ghana/SWAp funds

Internally generated funds

Pooled donor funds

Earmarked donor funds

During the first two Health Sector Programmes of Work (1997-2006) not much was seen in the financing strategies. The main instrument for resource allocation was the use of pro poor strategies, first focused on decentralization of funding to the district level, allocation of more funds to the four deprived regions (and later deprived districts) and securing of strategic funds for specific health commodities.

The cost of financing public health services has been a significant factor and worry to health policy makers in Ghana. With the support from Development Partners and Global Health Initiatives, the burden has been reduced in the short to medium term. However the long term sustainability of financing health services continues to persist and requires long term strategies.

The health sector in Ghana has responding to the complex dynamics of the health systems and the trend in international health. The Government of Ghana has introduced the National Health Insurance Scheme as a financing mechanism to address primarily issues of access to healthcare services by the poor. The NHIS is being funded from a 2.5% levy of goods and services and contributions from registered clients. It is anticipated that funding to the health sector will increase to improve healthcare delivery by health facilities.

The government of Ghana through the MoFEP is also consolidating the gains of the economic growth, with strategies in sectoral resource allocation and control. The MoFEP and its Development Partners has moved to implement the Multi Donor Budget Support (MDBS) Programme. Subsequently some DPs will be moving funds to central government budget from sectoral allocation over the next five years. Though the details of the transition are not very clear now, there are strong commitments on the part of Government to consolidate all funding sources into sectoral allocation. This strategy will recogise all sources in line with the sector programme and activities and be able to allocate based on priority.

The focus of the third health sector policy and Programme of Work (2007-11) is on the individual to improving lifestyle, the environment, reproduction and nutrition services. In addition there are strong efforts to improve on how the health sector is financed. At the background of the implementation of the NHIS, the health sector in Ghana intends to

mobilize more funding from the NHIS to support the healthcare therefore freeing more funds to support public health programmes such as immunization.

The MoH recognises the apparent implication of MDBS and future funding streams due to this policy shift from government and is working with all stakeholders including the MoFEP to address concerns especially in securing funding for interventions which were previously covered by some SWAp funds.

During the period of the cMYP, the MoH will make specific efforts in addressing the overall needs of the NIP through resource allocation strategies, dialoguing with the MoFEP for increased funds to the sector, mobilizing and redirecting new and existing funds to support priority health interventions. These strategies are expected to increase spending levels on priority programmes (e.g. NIP). Additional resources are expected to be mobilized through global health initiatives such as the GAVI and other child survival projects.

6. Monitoring & Evaluation

The NIP has seen tremendous progress in its indicators and in absolute terms, many children are being immunized. There are a number of monitoring mechanism that exist within the health system. The NIP has an information system network that is both horizontal and vertical and ensures the sharing of intelligence information on the NIP. The Surveillance system also compliments the network of information sharing within the public Health Division.

The GHS working with the MoH is investing in a comprehensive monitoring and evaluation system through many initiatives like the HMN and the surveillance system. The EPI programme is evaluated each year through the annual sector review programme. This is an independent review team that assesses the performance of the health sector against the programme of work drawn for the year. This system will be used as one of the main evaluation tools over the period of the cMYP.

The NIP will also be assessed by the NIP through monthly and quarterly reports from the district levels. An annual NIP review will be instituted as a forum for bringing together all relevant stakeholders within the private and public sector including civil society organizations and NGOs. This review meeting is intended to allow for greater participation of district level non state sector organizations in information sharing and consensus building.

A mid and end term evaluation will be organized specifically for the NIP to contribute to the performance analysis of the sector and more specifically provide direction on future investments in the NIP.

Over the period of the cMYP, the NIP will support the expansion of the use of PDAs in collecting immunization data at the household level. This initiative is being supported by the health system and will be expanded through the CHPS. The National Identification System will also support the development of comprehensive database on immunization services within the country.

During the next five years, the NIP will invest in improving data management though a comprehensive programme of capacity building within the programme office.