COMPREHENSIVE MULTI-YEAR PLAN FOR IMMUNIZATION

July 2015- June 2019

UNIT OF VACCINES AND IMMUNIZATION SERVICES

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3 COUNTRY PROFILE

Kenya has a population of approximately 42 million out of which 1.5 million are surviving infants targeted for routine immunization services that is delivered through a network of more than 5703 health facilities and clinics spread across 47 counties in the country. Despite the immunization system in Kenya being fairly well developed, an estimated 450,000 children are not fully vaccinated at a.

Five counties have consistently achieved less than 50% of children under 1 year. According to the KDHS 2013, there was a 10 percentage point decline in the fully immunized children between 2008 and 2014 and disparities in coverage t across and within counties and wealth quantiles. While over 80% of children in Kenya received 3 doses of DPT, 27% of sub-counties (districts) vaccinate less than 80% of their target population with utilization of immunization services being low amongst the poor, less educated and those living in urban informal settlements (KDHS). Only 130 Sub-counties out of 286 are report DPT 3 coverage of above 80%.

Kenya has introduced several new vaccines into the routine immunization schedule over the last 13 years namely: Pentavalent in 2002, PCV 10 in 2011, Measles Second Dose (MSD) in 2013 and Rotavirus in 2014 and IPV in2015. There is a plan to introduce MR and HPV in 2017 as part of efforts aimed at preventing morbidity and mortality from VPDs.

In Kenya, most immunizations primarily take place in fixed posts and there is need to institutionalize the REC strategy to sustain the gains made and to reach more children with lifesaving vaccines. In addition periodic SIAs will be implemented boost population immunity against diseases of global and regional public health importance including polio, measles/Rubella and neonatal tetanus.

3.1 Current situation of the Health sector

Kenya health services are run through two levels of Governments , national and 47 county governments, each with defined roles and tasks, where the National Government provide

leadership in policy development, management of national referral facilities and capacity development while the County Governments are be responsible for service delivery

The Kenya health policy defines health services and interventions (essential package) to be provided for each, level of care and cohort (where applicable). There are four tiers of service delivery namely;

1. **Community level**: The foundation of the service delivery system, with both demand creation (health promotion services), and specified supply services that are most effectively delivered at the community. In the essential package, all non-facility based health and related services are classified as community services – not only the interventions provided through the Community Health Strategy as defined in NHSSP II.
2. **Primary care level**: The first physical level of the health system, comprising all dispensaries, health centres, maternity / nursing homes in the country. This is the 1st level care level, where most clients health needs should be addressed
3. **County level**: The first level hospitals, whose services complement the primary care level to allow for a more comprehensive package of close to client services
4. **National level**: The tertiary level hospitals, whose services are highly specialized and complete the set of care available to persons in Kenya.

3.2 National Health Policy and Planning

Kenya Health policy 2014-2030

The Kenya Health Policy, 2014–2030 gives directions to ensure improvement in overall status of health in Kenya in line with the country's long-term development agenda, Vision 2030 and global commitments. It is designed to be comprehensive and focuses on the two key obligations of health: realization of fundamental human rights including the right to health and contribution to economic development.

The overall goal of the Kenya Health Policy is "attaining the highest possible standard of health in a manner responsive to the needs of the population". To realize this goal, the policy aims to deliver "equitable, affordable and quality health and related services at the highest attainable standards to all Kenyans". The policy, it envisions policy principles based on an equitable health delivery system; efficient application of health technologies; a multi-sectoral approach to realizing health goals by applying a 'Health in All Sectors' approach by focusing on health-related sectors including Agriculture, Education, Roads, Housing, and Environmental factors in realizing the objectives of the policy; social accountability; and a people-centred and participatory approach to healthcare services delivery.

The target of the policy is to attain a level and distribution of health at a level commensurate with that of a middle income country. It focuses on attaining two critical obligations of the Health Sector: A rights based approach, and ensuring health contribution to the Country's development.

There are six strategic objectives in the health policy are:

1. Eliminate communicable diseases
2. Halt and reverse the rising burden of non-communicable conditions
3. Reduce the burden of violence and injuries
4. Provide essential health care
5. Minimize exposure to health risk factors
6. Strengthen collaboration with health related sectors

The immunization program is covered in Objective 1 which is eliminating communicable diseases.

Kenya Health Sector Strategic Plan 3

The Kenya Health sector Strategic plan (KHSSP-III) provides medium term direction for health services and investment in Kenya. This is for the period 2012 – 2017, and outlines the intent of the Country towards attaining the overall Health goals for the people in Kenya. The strategy is informed by the Kenya Health policy 2014-2030, Vision 2030, Constitution 2010 and other global health commitments of the country

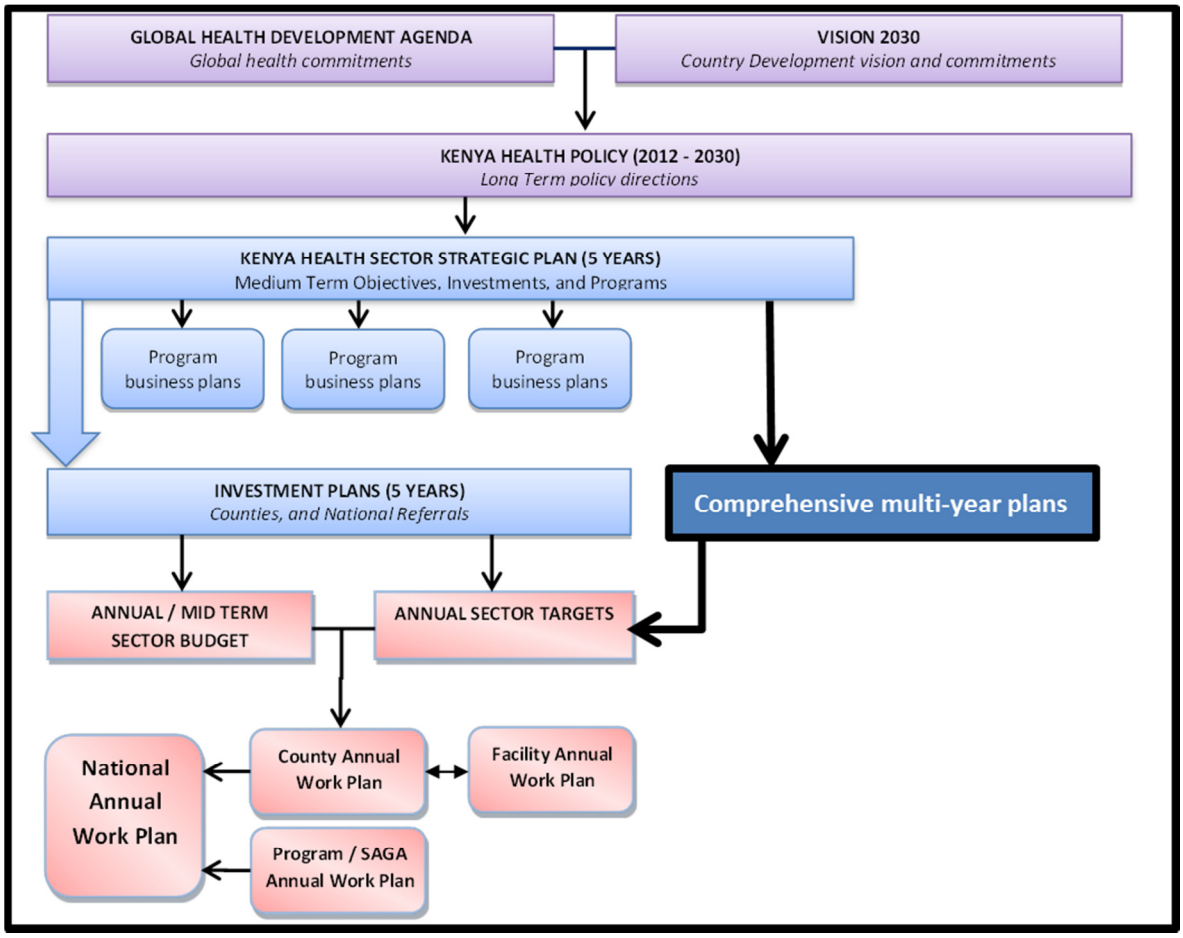


Figure 1: Kenya health policy development process

3.3 ORGANIZATION OF HEALTH SERVICES IN A DEVOLVED GOVERNMENT

The overall stewardship of the health in Kenya is carried out by the Ministry of health. The Ministry of health is tasked with acting on the global and international commitments done by the Ministry of Health, coordinating and managing disease outbreak in Kenya and overall coordination of health in Kenya. .Health services are managed and provided by two levels of government. At each level, there exist coordination mechanisms as shown below.

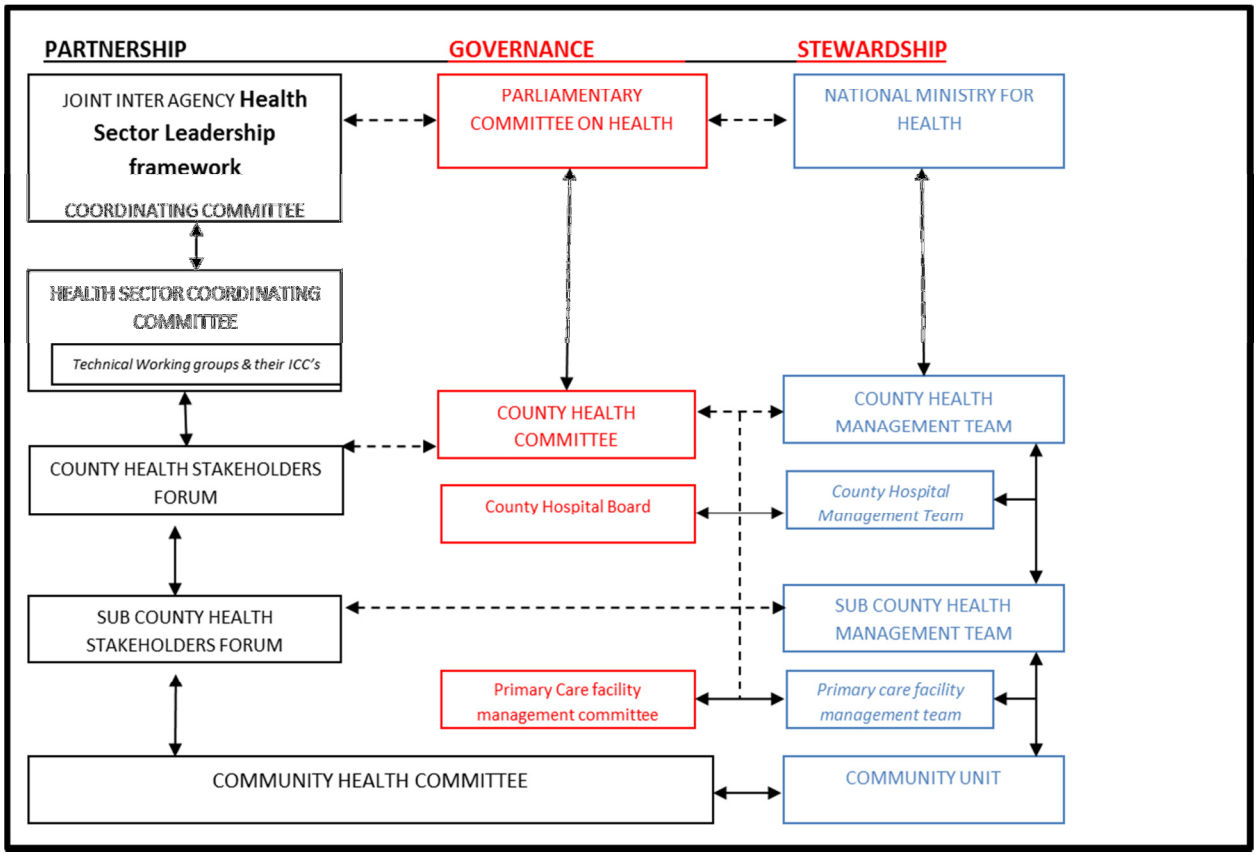


Figure 2: Coordination mechanism

The coordination mechanism structure addresses three areas namely partnership in the health systems, Political governance of health systems and Stewardship and management of the health systems. The political partnership is managed at the national level by the Joint Interagency Health sector Leadership framework and this grouping has a coordinating committee and is chaired by the Cabinet secretary of Health.

The Joint Inter Agency Health Sector Leadership Framework oversees the Health sector coordinating committee (HSCC) and their working technical working group. The HSCC is chaired by the Principal Secretary in the Ministry of Health. The HSCC supervises the various Inter agency coordinating committees (ICCs) which are chaired by the Director of Health services and they respond to HSCC.

The counties have their own forums namely the County Health Stakeholder forums, Sub county Health stakeholder's forums and community health committees. The county partnership forums are in various stages of implementation with some counties with well-developed partnership forums and other with no structures in place.

The national level has been facing challenges in the management of its health forums as well due to competing priorities.

The political governance of the Health system at the National level is managed by the parliamentary committee on Health. The parliamentary committee on health is ultimately responsible for ensuring that laws are developed that cover health services and they also oversee the budgetary allocation in the national budget.

The County Health committees are responsible for the political governance and management of health care delivery services in the county. The county health committee is chaired by the county executive committee member of health and answers to the Governor of the county and the County parliament. This structure have however not been fully developed and very few are functional.

The County Health management teams are responsible for the management of the health services in Counties and service delivery within the counties. The county health management teams supervise the Sub-county Health management teams, health facility management teams and the community units. The sub county health committees and below are not all functional. These teams are not fully developed and the management of these teams is usually lacking.

National Systems Planning and Budgeting

Planning and Budgeting in Kenya takes place within the framework of the Medium Term Expenditure Framework (MTEF) and the Economic Recovery Strategy. The planning and budgeting process in the MTEF starts with input from the districts. All health programmes are captured in the annual work plan and submitted to the Ministry of Health where they are aggregated before being submitted to the Ministry of Finance for consolidation into the National Budget. Disease programmes are prepared by the respective National Programmes in the Ministry of Health and submitted to Ministry of Finance.

Procurement and Supply Management

Government procurement systems follow the Public Procurement and Disposal Act 2005 and the Procurement Regulations of 2006 and this governs the procurement of all products financed by the Government. The regulations require that health products be procured through competitive tendering process. Procurement and supply of health products is managed by Kenya Medical Supplies Agency (KEMSA). KEMSA is responsible and accountable for the procurement and distribution of syringes, safety boxes, and vaccine cold storage devices that are financed by Government.

All EPI vaccines are procured of through UNICEF for GAVI. The Government of Kenya and UNICEF work under a memorandum of understanding and UNICEF is contracted to procure Gavi funded vaccines as well as Kenya's copayment of Gavi supported vaccines and traditional vaccines. The Government of Kenya also has a funding mechanism with UNICEF called the vaccine independent initiative that (VII) which provides a mechanism to maintain an annual group procurement of vaccines while encouraging governments to finance and assume increasing responsibility for procurement of vaccines on the international market.

Auditing

All government entities in Kenya is done by the office of the Auditor General which is responsible for auditing all public programmes as well as externally funded program that are funded through the Government of Kenya such as Gavi HSS programs and Global funded programs. The office of the Auditor General was previously called Kenya National Audit office is now an independent national office.

Financing

The current constitution requires counties to be funded with at least 15% of the total national funding to fund county responsibilities. The financial year 2014/2015 the counties received 30% of the total budget of the last audited budget. The counties however receive as a block budget for the funds according to the county priorities as approved by the county assembly

The counties have also faced challenges including health worker strikes in several counties due to delays in payment of salaries.

The national government funding for health is mainly for the procurement of critical health commodities such as vaccines. This has been a challenge in the financial years 2013/2014 with delays in procurement of co-financed Gavi supported vaccines.

The figure below from the Kenya Health Sector Strengthening Program provides estimated investments required by the Government of Kenya and partners in the different key health areas including immunization.

Total costs of the KHSSP by disease programmes and health system investment areas (KSh Millions)

Disease Program Areas *(all costs of service delivery except human resources)*	Baseline	2014-15	2015-16	2016-17	2017-18	Total
Maternal/newborn& reproductive health	12,571	14,005	15,531	17,015	18,428	**77,550**
Child health	6,746	7,237	7,720	8,238	8,651	**38,592**
Immunization	5,723	5,045	5,913	5,016	6,281	**27,978**
Malaria	33,561	34,355	37,047	40,374	44,524	**189,861**
TB	17,170	17,233	17,106	17,043	17,035	**85,588**
HIV/AIDS	54,049	57,616	62,651	68,028	73,817	**316,160**
Nutrition	4,217	4,386	4,607	4,849	5,070	**23,129**
WASH	13,002	13,100	13,158	13,521	13,548	**66,329**
Non-communicable diseases	6,770	9,750	12,843	16,048	19,363	**64,773**
Basic services, emergency, trauma care	7,761	10,650	15,962	21,190	26,885	**82,447**
Sub-Total, Disease Program Areas	***161,569***	***173,376***	***192,538***	***211,321***	***233,603***	***972,407***
Health Systems Investment Areas						
Human Resources	25,828	30,608	35,794	41,413	47,112	**180,756**
Infrastructure and Equipment	47,421	50,485	49,543	38,125	38,320	**223,894**
Health products and technologies	2,998	26,162	8,840	9,523	10,103	**57,627**
Health financing	1,890	335	335	335	335	**3,228**
Health information systems (including research)	2,231	2,382	1,971	1,971	1,971	**10,525**
Leadership & Governance	2,613	2,695	2,835	2,925	3,046	**14,114**
Sub-Total, Health Systems Areas	***80,368***	***109,973***	***96,482***	***91,366***	***97,840***	***476,029***
Total	**244,550**	**286,044**	**291,855**	**305,612**	**334,489**	**1,462,550**

Source: One Health model

Figure 3: Estimated financial requirements for KHSSP

3.4 HEALTH SECTOR CHALLENGES

There are several challenges faced in the health Sector especially in the setting on devolution of health services.

Challenges faced in Leadership and Governance

- Lack of clarity of roles played by the national and county government in health care delivery
- Lack of civic education on the roles and responsibilities of the two levels of government
- Lack of civic actors and partners including the members of the public within counties to provide advocacy for immunization services both politically and within communities.
- Inadequate skills at county level for managing and coordinating immunization services due to new staff members with limited exposure to the management of the health systems in general

Challenges in Health care Financing

- Inadequate financing of operations for immunization services
- Delays in release of funds by both levels of government.
- Inadequate funding for the health due to competing priorities at the county level

Challenges faced in the Health workforce

- Inadequate staffing both in absolute number and skills mix.

Challenges in Information

- Lack of prerequisite skills in data management at county and sub-county levels including data analysis and use of data for decision making.
- Poor collection and management of vaccine utilization data.
- Poor data quality and recurrent stock-out of tools leading to delayed and incomplete data reporting.

Challenges in Service Delivery

- Lack of funding for alternative means of service delivery (e.g. outreaches and mobile clinics) especially in hard to reach populations.
- Poor vaccine management practices at all levels
- Recurrent vaccine stock-out
- Poorly development of supply chain management leading to stock out and vaccine wastage

Challenges in Infrastructure

- Poor funding for maintenance of equipment and procurement of gas.
- Procurement of non-EPI fridges by the counties with potential to compromise vaccine potency.
- New vaccines introduced into the routine program exert pressure on existing structure

4 OVERVIEW OF IMMUNIZATION PROGRAM IN KENYA

The Ministry of Health established The Kenya Expanded Programme on Immunization (KEPI) in 1980 with the aim of providing immunization against the then six killer diseases of childhood, namely tuberculosis, polio, diphtheria, whooping cough, tetanus and measles to all children in the country before their first birthday, and tetanus toxoid vaccination to all pregnant women. KEPI was part of the global Expanded Programmes on Immunization (EPIs), whose main goal was to control killer vaccine- preventable diseases of childhood.

Prior to 1980 vaccination services had been provided on an ad-hoc basis mainly through primary schools and the larger health institutions and facilities. During the late 1970s the National Public Health Laboratories of the Ministry of Health used to manufacture smallpox and cholera vaccines and investigated all outbreaks of public health importance in Kenya. Because of its role in the surveillance for and response to diseases of public health importance the N.P.H.Ls became the repository of all emergency vaccines such as Cholera, Hepatitis B, Typhoid, Rabies and Anti-snake venom. However with the global eradication of smallpox, the N.P.H.Ls ceased manufacturing the small pox vaccine but continued to coordinate the use of the other emergency vaccines except for cholera which was phased out in the 1980s due to poor efficacy. From the early 1970s when international travel regulations mandated that travelers moving across countries must be appropriately vaccinated to prevent global transmission of regional endemic diseases, the Nairobi City Council coordinated the vaccination of prospective overseas travelers with cholera and yellow fever vaccines.

Subsequently this role was taken up by the Department of Environmental Health within the Ministry of Health and was administered through the Port Health Services in collaboration with the Department of Immigration. The KEPI programme concentrated initially on establishing and strengthening the health service delivery. However, in the 1990s, having achieved the Universal Child Immunization goals of immunizing at least 80% of the target population, KEPI's focus changed to disease control, elimination and eradication.

4.1 ORGANIZATION AND MANAGEMENT OF THE EPI

The immunization program is managed by the Unit of Vaccine and Immunization services (UVIS) within the Ministry of Health. The unit's mandate is to coordinate vaccination services for all preventable disease through the provision of guidelines and selected priority vaccines and related biological such as immunoglobulins. Apart from the routine infant vaccines, the unit also provides vaccines for high risk groups (Tetanus for special occupational risk groups, Hepatitis B vaccines for health workers typhoid vaccine for food handlers and yellow fever vaccination for foreign travelers) and emergency vaccines anti-rabies vaccine, snake venoms and any other emergence vaccines as may be prescribed during outbreaks)

The role of the Unit of Vaccines and Immunization Services are

1. Policy regulation and oversight
2. Commodity security and quality assurance
3. Monitoring and evaluation
4. Advocacy and resource mobilization
5. Capacity strengthening
6. Conducting appropriate operational research

The 47 county Governments are responsible for health service delivery at the county level. The counties are responsible for hiring health care providers, training of health service providers and management of cold chain equipment at the county, sub-county and facility, vaccine distribution, response to AEFIs within the counties in collaboration with the national Government and offering immunization services within the counties.

4.2 VACCINE PROCUREMENT AND VACCINE SUPPLY

The Unit of Vaccines and Immunization is responsible for the forecasting of vaccines, procurement of vaccines, storage of vaccines at the national and regional store, and distribution of vaccines from the airport to the regional store. The county governments are responsible for storage of vaccines at county store, sub county stores and at facility level and distribution of vaccine between these levels.

The Government of Kenya currently procures all traditional vaccines (Measles, BCG, Tetanus Toxoid and Polio vaccines), non EPI vaccines such as Hepatitis B, Typhoid vaccine and biological sera such as anti-snake venom and anti-rabies antibodies. The Government of Kenya also co pays for Gavi supported vaccines such as PCV, Rotavirus vaccines, Pentavalent and Yellow Fever. The procurement of vaccines is done through UNICEF for traditional vaccines and for Gavi supported vaccines while the non EPI vaccines are procured through public procurement procedures through KEMSA. The county Governments are also responsible for procurement of non EPI vaccines and biological through KEMSA.

The vaccine distribution and storage responsibilities are shares between the national and county level. The national level is responsible for the storage and distribution from the Airport through the national vaccine stores up to the regional vaccine stores. The county Governments are

responsible for collecting vaccines from the regional vaccine stores and are responsible for distributing and storage of vaccines and maintenance of cold chain equipment in the county, sub county and facility levels.

The vaccine cold chain is made up of the following equipment

Table 1: Cold Chain Capacity

Type of facility	Numbers	Responsible Authority
Sub county stores	300	County Government
Immunizing facilities with cold chain	4566	County Government
Facilities with no cold chain		County Government
Regional stores	9	National Government
National stores	1	National Government
Total		

The vaccine cold chain and repair system is a challenge and UVIS together with strategic partners is working to ensure that the Replacement, Expansion and Maintenance (REM) plan are implemented. The cold chain management system is also facing a challenge with the introduction of new technologies such solar direct drive and continuous temperature monitoring systems, and the current gap in technicians' skills abilities is glaring. When skills and abilities are available there are challenges in with resources to support installation, repair and maintenance of this equipment either as spare parts of funds to support the mobilization of theses staff.

The Vaccine procurement has also faced several challenges with securing and ring fencing of funds for vaccine procurements. This is due to the devolution of funds that were secured in the previous system. The Ministry of Health is working to ensure that funding for vaccines and for co-financed vaccines is being ring fenced. The challenge has been reflected by defaulting on Gavi co-financed vaccines in the financial year 2013/2014.

The Ministry of Health has made several improvements in improving vaccine procurement, vaccine supply and the cold chain and logistics system. The Ministry has outsourced the distribution of vaccines distribution between the national and regional vaccine stores to several private sector companies that manage and distribute vaccines with refrigerated trucks. The out sourcing has successfully been managed by Unit of Vaccine from 2013. The outsourcing has improved the speed and efficiency of vaccine delivery, quantity of vaccines delivered and improved the temperature maintained during transportation. The Unit of Vaccines has also developed online reporting system for vaccines from the national level, regional vaccine level and is implementing the system at the sub county store. The unit of vaccines is developing the system with support from CHAI, UNICEF, MCHIP and WHO. The system will also integrate with the national reporting system. The Unit has also made changes to the temperature monitoring system to ensure that the vaccine cold chain is maintained at a high quality level such through the deployment of continuous temperature monitoring device, Fridge-Tag2, in all health facilities replacing the thermometer at all level. The unit is also working to introduce remote

temperature monitoring devices in larger vaccine stores and cold rooms through the introduction of Remonsys temperature monitoring devices.

4.3 SERVICE DELIVERY AND IMMUNIZATION COVERAGE

Vaccine service delivery is a function of the county Governments. The County Governments are responsible for service delivery at facility level. The county is responsible for hiring of health care workers, training of health care workers, and supervision of health care workers and management of the health facilities.

Following devolution of health services, the current roles for national government are: policy direction, standards and quality assurance, capacity building, immunization services monitoring, procurement of vaccines and limited logistics, resource mobilization and responding to outbreaks. County governments are mandated by the constitution to manage health service delivery, mobilize resources, monitor delivery of services and mobilize communities to demand and utilize services.

The two levels of government have distinct and interdependent roles. This has led to lack of clarity on the expectations and mandate of each level as concerns immunization services. The programme endeavours to sustain and improve on the gains made over the years by providing quality immunization services.

The Unit of Vaccine and immunization supports the County Governments by mobilizing funds at the national level through partners to support equipment procurement where possible but this is complementary to what the County Governments should be doing and not supplementary of what the county is procuring. The County Governments mainly procurements should follow the national procurement act in procurement of commodities.

The planning and management of service delivery is also a county function where the county is responsible for ensuring that Immunizations services are provided and meeting the national quality guidelines as provide for in the Immunization policy and the Kenya National Health sector strategic plan. Planning for service delivery is done at the facility level and this are aggregated at the sub county level together with the sub county plans and this are aggregated at the county level and tracked and reported in a similar manner. However, planning does not work as well in all the counties all the time. Counties face technical challenges in development and monitoring of the county plans because of a lack of technical expertise in some counties. These tasks and responsibilities were previously carried out by the National Government and some counties require their technical capacity to manage these services to be developed and improved.

Budgeting and financing of service delivery is a county function where counties are responsible for mobilizing for funds by developing plans and budgets to be funded through the county

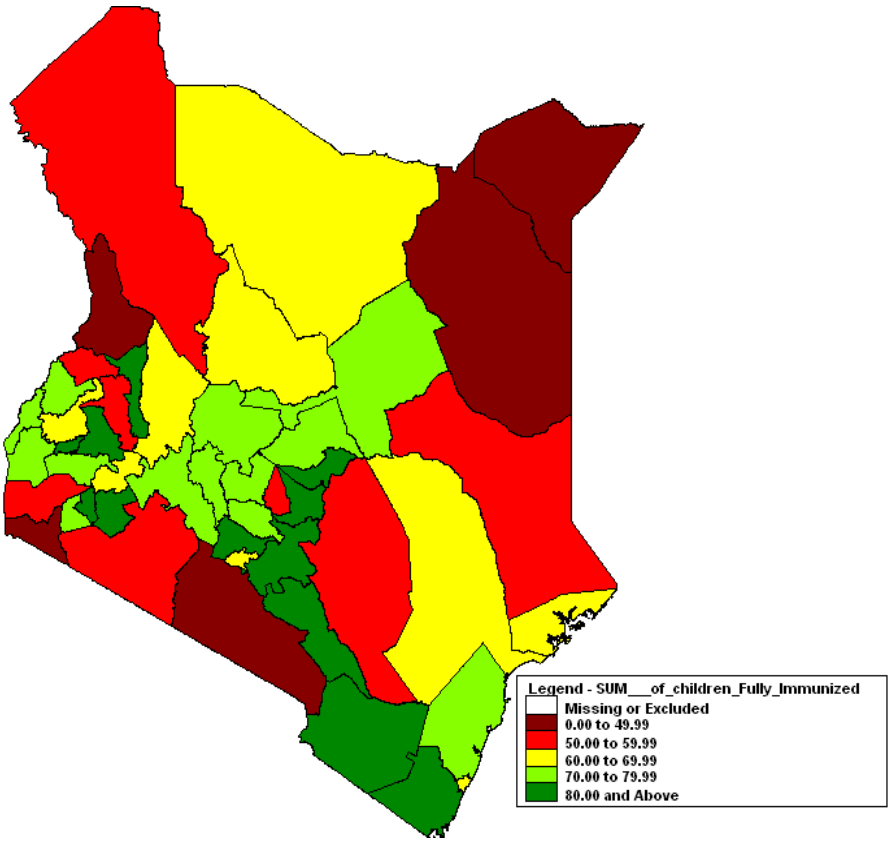
budgeting process. The counties Governments are also responsible for hiring health care workers who provide services within the county. The county is also responsible for opening new fixed facilities where immunization services are offered, supporting outreaches and using innovative methods for outreach and community health strategies were services can be offered through mobile sites. The counties are also responsible for managing and implementing the community health strategy where community health volunteers carry out defaulter tracking and tracing in the communities and support the advocacy and social mobilization.

The national Government responsibilities in service delivery are mainly in developing standards for service delivery and developing training guidelines and training standards that the counties are supposed to implement. The National Government offers technical assistance and training to the counties in the areas of immunization by training the county health management teams, providing technical assistance to the counties and ensuring that quality standards in service delivery are well known by the counties and are adhered to.

The county Government and the National Government have a joint responsibility in the area of immunization data management and tracking of immunization coverage and other immunization quality indicators. The County Governments are responsible for generating information on immunization services offered and in reporting the information through the DHIS- 2. The county is responsible for developing and analyzing county level immunization coverage and other related data such as the h wastages, dropout and identify areas where unimmunized children can be reached. The counties face several challenges in their ability to critically analyze the immunization data reported and developed at the county and using the information in development of plans based on this information. The challenge in technical skills at the county level is also worsened by loss of health care workers due to movement from some counties that have difficulties and transferring of trained and knowledgeable health workers within and between different counties.

As Kenya implements devolution, improving and sustaining national immunization outcomes by strengthening decentralized health system is key.

Distribution of FIC by County KDHS 2014



Distribution of FIC show that counties in the North of Kenya have had immunization coverage of below 60% in 2014, thus approximately 250, 000 children in these areas alone are not fully immunized. The graph below shows the distribution between counties for DPT, OPV and Measles, while the target coverage for all counties is 80%, approximately half of the counties have not met the target, with 6 counties below the 60% coverage.

The national Government is responsible for management of the national online reporting system which is the district health information system 2 (DHIS-2). The National Government is responsible for analyzing the data within the DHIS-2 and developing analytical reports for the counties to implement changes and also for reporting to the international bodies such WHO and UNICEF on coverage and reporting on vaccine preventable disease.

The country faces several challenges with the devolvement of the health services to county Government. There at times seem to be a lack of clarity from on the role and responsibilities between the different levels of Government. There have also been several improvements with health care workers increasing in several counties due to increased hiring and retention of health workers. The community health strategy has been implemented in several counties and this has improved defaulter tracing of children and referral of defaulter to the Health facilities.

4.4 ADVOCACY AND SOCIAL MOBILIZATION

Advocacy, social mobilization and demand generation are primary responsibilities of the county Governments according to the Constitution of Kenya. The National Governments role is to provide standards, advice and technical assistance for county Governments to implement the promotion of primary care services.
Demand generation at county level is carried out through 2 main approaches the community health strategy and through the health promotion strategy. The strategies are intertwined and work hand in hand to increase community participation in health service delivery and enable the population to increase control over the determinants of health and thereby improve their health.

The community health strategy involves the development and deployment of community units which are supported by community volunteers who link up with community health extension workers in link facilities. The community unit is made up of a referral health facility and community health volunteers who work in the community. The Health Promotion Strategy supports the National Health Sector Strategic Plan III by providing a framework to guide decisions on health promotion at national, county and sub-county levels. The strategy addresses gap in health promotion with an aim is to promote a comprehensive and participatory approach to the improvement of health and well-being among all the people in Kenya. The strategy focuses on consolidating, streamlining and expanding existing structures, mechanisms and actions in order to tackle modifiable determinants of health.

There have been several successes in rolling out the 2 strategies at the county level and the national level has provided frameworks and several documents to support the implementation of this strategies. There are however still several challenges in the implementation of strategies due to lack of funding and a perception that the approaches are not critical in improving coverage.

4.5 DISEASE SURVEILLANCE AND DISEASE CONTROL

Surveillance is a key component in immunization services which can be sub divided into two,

i. Surveillance activities which helps the system to be sensitive in detection and reporting of priority diseases
ii. Surveillance of accelerated disease control which includes surveillance of main vaccine preventable diseases which include measles surveillance, Polio surveillance, Neonatal Tetanus surveillance, maternal neonatal Tetanus, Rotavirus surveillance and Meningitis surveillance.

Disease surveillance activities are implemented in 47 Counties that comprise 292 sub-counties. Networking strategies between the national and county governments are in place to ensure that the gains are not lost but sustained and enhanced in a manner in which the global polio eradication goals are achieved. Although the country did not have wild poliovirus outbreak in

2014, Kenya, together with other Horn of African countries remained at risk of imported wild poliovirus from neighbouring Somalia as in the 2013 outbreak that continued until July 2014.

In 2014, all the 47 counties reported AFP cases with 45 (97%) having a non-polio AFP detection rate greater than 2.0/100,000. All but four counties (Kericho, Marsabit, Busia and Muranga) had stool adequacy greater than 80%. In order to improve AFP surveillance, the Ministry of Health and key partners has rolled out community disease surveillance in Garissa, Wajir, and Nairobi.

After the polio outbreak in May 2013 the country initiated environmental surveillance for polio viruses in an effort to supplement Acute Flaccid Paralysis (AFP) surveillance, which is the gold standard for surveillance of wild polio virus.

Rotavirus surveillance was introduced in KNH in the year 2006. It documented the burden of rotavirus disease, and thus formed the baseline information for Rotavirus vaccine introduction in Kenya. Further sentinel surveillance continues at the sites so as to inform the effect of the vaccine after introduction in the country in July 2014

The Disease Surveillance and outbreak Response Unit (DSRU) has also continued to facilitate undertaking of the activities towards the containment of the laboratory wild polio virus and has developed activities towards this end, following the establishment of an effective surveillance system for wild poliovirus eradication.

Further, the Disease Surveillance and Response Unit (DSRU) gets reports on weekly basis from all the sub counties through eIDSR web based system. However, the National health information system has another system, the District Health Information System (DHIS) which is more comprehensive.

Surveillance activities done in the past include capacity building of health workers on VPD, IDSR and laboratory surveillance, which help achieve the objective of strengthening and sustaining reporting of priority diseases and active case search for vaccine preventable diseases (VPDs) . However, high staff turnover due to devolution amongst other reasons has left many Counties with staff who are not trained in disease surveillance, and more specifically of VPDs.

5 SITUATIONAL ANALYSIS OF THE IMMUNIZATION PROGRAMME IN KENYA

5.1 ORGANIZATION AND MANAGEMENT OF THE EPI

The national regulatory authority (NRA) lacks the capacity to carryout vaccine testing/pharmacovigilance. There is lack of clarity on role of NRA on medical devices regulation and control. Therefore there is need to strengthen the capacity of PPB to assure the quality of vaccines, injection devices and other technologies. This will be achieved through advocacy with the Ministry of Health and PPB to set up structures and process to enable vaccine testing and devices licensing**.** This will help to address the current challenges of vaccine resistance.

There is no/irregular support supervision from national level to counties and sub-counties which would correct poor practices and improve performance. There is low government funding for immunization operations. Therefore the National level should take the lead in coordinating biannual technical assistant to counties.

There is need to update national immunization policy, immunization guidelines and develop job aids. This will be achieved through resource mobilization and technical assistance to update, develop, print and disseminate.

HUMAN RESOURCE

There is limited knowledge on immunization by health care workers due to attrition, rotation between departments, transfers, new recruits and Shortage of staffs at lower level .We therefore need to determine training needs gap at all levels and develop strategies to fill in the gaps and develop database of health workers trained on immunization service provision at all levels. This will be achieved through advocacy, resource mobilization and technical assistance with all stakeholders. National government should therefore support counties to carry out capacity building and develop new strategies of training staff such as online modules.
There is need to meet staffing norms as described by Norms and standards in service delivery advocacy and resource mobilization with county and other stakeholders. GAVI HSS applications to support short term gap filling for HR before Government (national or county) take over.

FINANCE

There is Low government funding for immunization operations. Therefore there is need to increase funds allocated for operations at national from 3.3million to 100 million by 2018 and to determine allocations at county level and increase county level allocations.

The Ministry has been having a challenge in the timely disbursement of fund to Gavi before the 15th of December every year. This has been due to challenges with mobilizing funds from the Ministry of Finance in a timely manner.

Strengths

- Policy document in place
- Annual work plans in place

Weakness

- Annual work plans not fully funded
- Policy documents not comprehensive enough and does not capture certain aspects of new vaccines
- NRA not able to carry out all its function
- Market authorization and Licensing
- Good manufacturing practice inspections

- Post market surveillance including AEFI
- Vaccine lot release-consistency
- Laboratory access-testing vaccine samples
- Over sight of clinical trials
- No joint planning between national and county level
- Micro plans not regularly done annually

Opportunities

- Devolution of health service

Threats

- Implementation is done at county level

Human resource

Strengths

- specialized staffs at national level that can provide training to staffs at lower level
- Counties are recruiting more health care staffs

Weakness

- HR is county function
- Frequent staffs turnover
- No induction training for newly recruited staffs
- No supervisory visits from national to lower levels
- Lack of adequate knowledge by policy makers at all levels on EPI program

Opportunities

- Advocating to increase HR for immunization to the counties

Threats

- Frequent health workers strike
- Uncertainty health workers job security
- Lack of understanding of the immunization programme among the devolved leadership
- Insecurity in some parts of the country leading closure of facilities and disruption of services

5.2 SERVICE DELIVERY

Devolution of health services including immunization has provided opportunities to increase access. More health facilities are being built and made functional in regions that suffered many years of marginalization and under development. The devolved structures also provide opportunities to further disaggregate data for action.

Challenges during the last two years of implementation of devolution have however contributed to underfunding, low prioritization for immunization service delivery, weak coordination of program and delayed procurement of vaccines and related logistics leading to stock outs.

New healthcare providers have been employed and managers appointed to provide immunization services. This has created a pool of vaccinators and EPI managers who do not possess the prerequisite knowledge, skills and competencies to improve service delivery. The northern counties in Kenya continue to suffer insecurity that has affected delivery of quality services. Due to insecurity, healthcare provides have been displaced and majority of health facilities are currently without staff. High population movement in the HOA continues to pose risk of outbreak of VPDs in these regions.

This multiyear plan identifies the following key strategies: Advocacy with key decision makers and stakeholders at national and county to prioritize investing in immunization services, improving linkages with communities and other health programs (RMNCH, HIV/TB/Malaria, education, Civil Registration (CRD) and the county administration system will play key role in mobilizing additional resources to deliver results in immunization. Use of quality disaggregated data to address inequities in access and utilization of immunization services by the poor and less educated remains key to reaching the 20% of children that have been consistently missed for the last 3 years. Use of new technologies for knowledge management and Exchange and linkage with professional accreditation systems are the innovative approaches identified to address knowledge and skills gap amongst healthcare providers. PIRI has specifically been identified as key strategy to ensure delivery of services to populations living in regions suffering insecurity.

Strength

- Increased demand for immunization services
- Successful introduction of new vaccines into the routine system
- Improved reporting of immunization services through the DHIS 2 system
-

Weakness

- Immunization equity between counties
- No immunization specific M&E framework in place to guide county Governments
- Poor coverage of Measles second dose

Opportunity

- Immunization bulletins introduced at the national level and to be introduced at county levels
- County Government funding if leveraged effectively can improve immunization coverage
- Leveraging on Polio end game to improve the general immunization coverage of other antigens

Threats

- Focus on campaigns and supplementary activities is a threat on reducing focus on the routine immunization

5.3 SURVEILLANCE AND RESPONSE

There are several challenged that require immediate remedy in managing disease surveillance system in Kenya. It has been noted that the number of Health facility visits (active case search)continue to decrease which decrease by 48% in 2014 due to insufficient funding. Although by end of 2014 there were no silent counties, only 22 (46.8%) counties had achieved ≥ 4.0 non polio AFP rate and 46% of the 292 sub-counties had achieved ≥ 4.0 non polio AFP rate whereas 54 sub-counties remained silent. A number of surveillance indicators such as OPV3 coverage are also declining rather than improving in specific sub-counties including those in counties with high risk populations.

Polio containment meetings (NPCC and NPEC) have in recent past been held irregularly and only one verification visit has been made by the NPCC and NPEC. There has also not been any support supervision by the national level to the sub national level in the recent past. Quarterly disease surveillance meetings at National have been erratic with no such meetings at the sub national level.

Further, the Disease Surveillance and Response Unit (DSRU) gets reports on weekly basis from all the sub counties through eIDSR web based system. However, the National health information

system has another system, the District Health Information System (DHIS) which is more comprehensive.

Surveillance activities done in the past include capacity building of health workers on VPD, IDSR and laboratory surveillance, which help achieve the objective of strengthening and sustaining reporting of priority diseases and active case search for vaccine preventable diseases (VPDs) . However, high staff turnover due to devolution amongst other reasons has left many Counties with staff who are not trained in disease surveillance, and more specifically of VPDs. There has also been weak collaboration between WHO and MOH; which has led to weaknesses in surveillance system not being sufficiently addressed.

STRENGTHS

- Disease surveillance reporting structures in place
- Availability of standardized reporting tools at all levels
- Devolution
- Good laboratory network for confirmation of cases

Weakness

- Un efficient reporting system of routine immunization
- Lack of functional AEFI surveillance system
  -no committee to investigate in the event of a reported case
  -out dated reporting tools
  -No data base for AEFI
  - No AEFI Policy in place
- In adequate logistics, financial and human resource (staff shortage)
- Lack of surveillance plan at the county level
- Inadequate skilled personnel
- Lack of budget line for disease surveillance at the county and national level
- In efficiency data transmission
- Weak cross border disease surveillance
- No quarterly surveillance review meeting

OPPORTUNITY

- Partner support for disease surveillance activities
- Government goodwill
- Effective surveillance system

THREATS

- Devolution of health services as reduced Disease surveillance prioritization
- Competing priorities for surveillance activities
- Staff turn over
- Insecurity in areas with high risk of Polio importation

5.4 VACCINE SUPPLY COLD CHAIN AND LOGISTICS

An EVM assessment conducted in 2013 revealed major gaps in the various criteria of assessment in all levels of the supply chain. The results were generally less than satisfactory. The programme aims to support all levels of the supply chains through human resource capacity strengthening, by updating and disseminating vaccine management guidelines, carrying out support supervision using supervision tools that include EVM indicators, leveraging on planned activities to emphasize on good practices. Other strategies include development of implementable plans and mobilizing resources to improve system infrastructure.

Among the recommendations raised was the need to urgently introduce continuous temperature monitoring devices to assure vaccine quality, and especially monitor closely to mitigate any likelihood of freezing freeze-sensitive vaccines. There was also need to expand cold storage capacity through procurement of appropriate equipment and rehabilitation of over 300 non-functioning CCE to accommodate new vaccines planned for introduction into the immunization schedule. On transport, vaccine distribution between national and regional stores was well organized and reliably carried out by a contracted logistics company. However, at lower levels timely availability of transport was not assured with most HCWs using foam boxes instead of appropriate carriers at the risk of compromising the quality and shelf life of the vaccines. The table below is a summary of the results

Table 2: Consolidated Scores of EVM assessment

#	Indicator	Consolidated Scores			
		CVS	8 RVS	18 DVS	18 HF
1	Vaccine Arrival Process	56%	NA	NA	NA
2	Vaccine Storage Temperature	55%	56%	**82%**	70%
3	Storage Capacity	**88%**	**88%**	66%	69%
4	Building, CC Equip. & Transport	69%	68%	69%	71%
5	Maintenance	58%	76%	46%	53%
6	Stock Management	65%	**83%**	66%	66%
7	Distribution	58%	32%	34%	25%
8	VM policy and procedure implementation	**96%**	71%	79%	74%
9	MIS & Supportive Functions	72%	45%	52%	55%

*Consolidated Scores (**0-70% in red and >80% in green**)

Following the EVM assessment, an improvement plan was prepared with the view of systematically improving the overall status of vaccine management in the EPI programme. The programme, through JICA support in 2011 improved its cold storage capacity at national level from 44,000 litres to about 126,000 litres. And this is envisaged to serve adequately up to the year 2021. Capacity at regional stores was expanded as well. A rapid cold chain inventory update in 2014 showed only55% of the 290 sub-county stores had adequate cold storage, making it difficult for district stores to hold sufficient stocks of vaccine in line with country's vaccine management policy. The national policy requires a stock level of 3 months plus 25% safety stock at sub county stores. However, the collection frequency of vaccines from regional stores was instead very high in a set-up where even reliable transport is not guaranteed. This compromised access to immunization and potentially resulted in missed opportunities. The assessment brought to the front the need to expand cold chain to fill existing gaps. At service delivery points, approximately 59% health facilities had functioning cold chain equipment majority of which are absorption refrigerators. Accurate quantification of required cold chain was required. An analysis of the CCE inventory revealed an apparent need to increase capacity at sub-county stores as well as health facilities to reflect policy, especially with new vaccine introduction. The Immunization programme introduced Rota vaccine in 2014, and plans to introduce 1 dose of IPV into its routine immunization schedule in July 2015 as well as roll out HPV vaccine in 2017. Through resource mobilization and sustained good relations with development partners, GOK received a grant of about USD 2.7Million from KFW in support of Cold chain in 2014. The equipment procured through this grant significantly improved capacity at sub-county stores (>90%). Over 900 refrigerators appropriate for some Health facilities with access to electricity were also procured as well as spare parts to repair non-functioning equipment.

EPI services are provided at county level and hence implementation is dependent on the commitment and prioritization by the county leadership. This includes supervision, vaccine distribution and other field activities like outreaches. While other counties get support for supervision and access to vehicles, others do not. This creates inequity across the country. However, UVIS views devolution as an opportunity for county leadership to significantly improve and sustain health programmes in their areas, including operationalization of health facilities to offer immunization services. County governments have already shown goodwill and commitment to invest in immunization infrastructure including cold chain. UVIS plans to continue advocating for adequate and timely funding of immunization activities and commodities from all stakeholders, particularly national and county governments.

UVIS is working on a plan to further improve the cold chain by replacing all, absorption and gas powered refrigerators with Solar Direct Drive equipment where there is no electricity, and other new technology equipment for better efficiency and ensure vaccine quality. About 50% of the country does not have access to reliable electricity. A Replacement, expansion and maintenance Plan is being drafted and will be finalized by end of 2015. This document will be disseminated for adoption at county level. The program also plans to train over 70 in-service biomedical engineering technicians on repair and maintenance of modern CCE. This will expedite

rehabilitation of equipment as well as minimize equipment down time in future. UVIS is also in the process of introducing the fridge tag 2 which will improve on monitoring of storage temperature as well as equipment performance. Guidelines on equipment handling have been developed and disseminated. Supervision and a quick evaluation will be carried out to gauge extent implementation and ensure expected standards.

On vaccine supply and related logistics, UVIS plans to actively advocate for better allocation and timely disbursement of funds for vaccines at national level. Injection devices and data capture tools are procured at county level. Joint planning and sharing of the same with county senior health leaders and advocacy for prioritization of immunization will be done. Regular sharing of commodity stock level with senior management and rollout of electronic stock management tools to lowest levels will accord the program better visibility of consumption patterns and hence abate stock out situations within the pipeline. Regular monitoring and analysis of utilization data at all levels is envisaged to provide realistic and evidence based wastage rates and inform future procurement and distribution patterns.

Management of immunization waste and disposal of packaging materials and obsolete equipment has been a challenge majorly because of inadequate availability of appropriate structures, finances and tools. While policies and protocols on management and disposal of medical waste and obsolete equipment exist, there is a clear gap on their dissemination and uncertainty on whether the same apply to immunization waste, particularly spoiled vaccines. The programme plans to develop simple guidelines on this and general plans on disposal of unusable materials. These will be disseminated to all levels. The need for appropriate disposal tools is also apparent. Only about 15% of counties have access to high temperature incinerators, while there is none at national stores. Advocacy and resource mobilization activities will be done to improve on infrastructure and implementation of waste management plans.

Strengths

- Active logistics management team at national program level
- Ample cold storage capacity at national and regional stores
- A clear logistical pipeline/structure exists at all levels.
- Reliable vaccine inventory management tool available
- EPI focal points in every county.
- Cold chain technicians available both at national and subnational levels
- A waste management policy exists at national level, and implemented in partner supported areas.
- DHIS providing data on vaccine consumption

Weaknesses

1. Lack of a county replacement plan for CCE.
2. Inadequate oversight/supervision on repair and maintenance.

3. Inadequate transport at subnational level and lack of a tracking system of available transport at county level
4. Insufficient knowledge on planning for immunization at county level; inability to budget, forecast, monitor wastage, management deficiencies
5. Inadequate cold chain equipment at health facility level and newly constituted sub-county facilities
6. Insufficient and delayed funding for vaccines and logistics activities at all levels.

Opportunity

- Counties have the capability/funds to
  - procure CC equipment,
  - train/ capacity build staff, managers,
  - carry out distribution
- Political goodwill and commitment from the GoK and immunization partners.
- Strong communication channels with county counterparts

Threats

- Unreliability of partner support.
- High staff turnover resulting in a drain of abilities to other sectors away from EPI

5.5 ADVOCACY COMMUNICATION AND SOCIAL MOBILIZATION (DEMAND GENERATION AND COMMUNICATION)

The EPI ACSM programme faces multiple challenges including low prioritization and understanding of its importance and role, lack of national and sub-national strategic plans, low coverage and high dropout rates, declining awareness and knowledge among caregivers, providers and key decision makers. There is a high number of missed and unvaccinated children due to population movement, refusals by resistant groups, insecurity and presence of geographically hard to reach areas. (Administration and KDHS 2014 data).

Although improvements have been made in raising community and key stakeholders awareness and knowledge on immunization in the past two years, these have been due largely to activities in support of repeated SIAs during 2013-14 polio outbreak response and introduction of new vaccines. There are still significant number of caregivers who do not understand the EPI schedule and the fact that some vaccines require multiple does to be effective. There is room for further improvement.

Thus, ACSM efforts to improve routine immunization require a strong community based interventions and partner involvement without which any scaling up of investment in this critical area for strengthening routine immunization is unlikely to be achieved. This entails development of national and sub-national strategic and action plans, prioritization of ACSM in both national and sub-national levels with the provision of additional human resources and finances, training

and capacity building of key staff in IPC skills, development, implementation and evaluation techniques of targeted interventions.

The following are the recommended areas of action:

- Finalization and implementation of an integrated national and sub-national strategic plans
- Development and implementation of ACSM activities to support introduction of new vaccines and planned supplementary immunization activities
- Creating support for immunization services through development and implementation of evidence-driven advocacy and partner engagement action plan
- Creation and implementation of tailored and evidence based programs to reach the non-traditional groups such as HH in lowest wealth quantile, caregivers with low educational levels and mobile populations among others
- Roll out of IPC skills development program targeted to community level health providers
- Roll out of social mobilisers training program to support both SIAs and routine immunization service delivery
- Development of communication programs designed to raise public awareness through print, electronic, social media and community channels of communication
- Development and implementation of an advocacy and private sector engagement strategic plan

Among the gaps in ACSM component of the program are inadequate and/or lack of prioritization at high decision-making levels in government, planning, county and sub-county levels, and also among stakeholders. Under the new dispensation of devolution, the role of communication between central and county governments seems to have been minimized or gone un-attended. Funding for ACSM in immunization is often limited or not provided by central and county governments. This impacts on effective management of health workers in facilities who need inter-personal communication skills sustained in order to keep the demand for immunization consistent.

Findings from a recently conducted post evaluation introduction (PIE) on Rota and MCV2 revealed low key interpersonal skills and training among health workers impacting on how they relate with caregivers and in the long run demand for immunization. The PIE also shows that lack of inadequate ACSM preparation for introduction of new vaccines has a direct impact on acceptance and appreciation of the antigen as happened in the case of MCV2 which was introduced without much promotion and only through community groups and health workers. The launch of Rota at national level and distribution of IEC materials to care-givers and HWs left a more memorable, understanding and appreciation of the antigen among care-givers and health workers.

The polio campaigns done between July 2013 and December 2014 in Kenya have had a reasonably high impact in polio awareness among communities and the general public. This

was particularly enhanced by the house-to-house strategy leading to an awareness of polio by 93 per cent in 2014. Social mapping of mobile communities revealed various lessons learned and development of targeted strategies to better and more effectively reach these communities.

The ACSM mandate for RI is to address the identified gaps and using advocacy and communication skills and strategy to engage stakeholders and the publics through various channels of social mobilization. It aims at building capacity of health care providers and volunteers in IPC with the support of MOH and partners. It also addresses how best to empower health-care givers with information and skill so they can demand for immunization. Overall it recommends involvement and engagement of high level policy makers and stakeholders, prioritization of ACSM at all levels and through budgets as well as continuous interaction among all players with an expected result of demand generation for routine immunization.

Strengths

- Community acceptance of immunization is high
- Community knowledgeable on the importance of immunization
- Health care workers knowledgeable on the importance of immunization
-

Weakness

- Lack of an ACSM strategy
- Lack of county specific ACSM strategies
- Wide disparities between knowledge and attitude between counties
- Health care workers with poor interpersonal and communication skills

Opportunities

- Introduction of new vaccines provide opportunities to improve advocacy, communication and social mobilization
- County Governments have political will to increase demand for health service in the counties
- Opportunity to increase partnerships in advocacy and social mobilization at the national and county level

Threats

- A lack of funding is a big risk in achieving objectives
- Low prioritization of advocacy communication and social mobilization even with the immunization system components

6 IMMUNIZATION IMPLEMENTATION PLAN

This section describes the objectives, strategies and activities under each immunization system component.

6.1 PROGRAM MANAGEMENT

The EPI program has been getting negative publicity from sections of the population on quality of the vaccines used in the country. This has seen drop in coverage and resistance to mass immunization campaigns. The Pharmacy and Poisons Board is the body mandated by law to regulate Medicines and Vaccines. The program has been introducing new vaccines hence the need to review the immunization policy and other tools. There is increased demand for training from the Counties and technical support due to newly recruited staff and high turnover at the sub county levels nationwide. The EPI program has also lost visibility due to devolution and competing priorities in the Counties hence great need for advocacy to highest level in county governments

Table 3: Objectives and Strategies – Programme Management

Objectives	Strategies	Main Activities
To strengthen the capacity of PPB to assure the quality of vaccines, injection devices and other technologies	Advocacy with the Ministry of Health and NRA (PPB) to set up structures and process to enable vaccine testing and devices licensing.	Consultative meeting with stakeholders to agree on how testing of vaccines will be done. PPB develops system to regularly test vaccines Clear guidelines on licensing of devices such as syringes etc.
To update national immunization policy, immunization guidelines and develop job aids	Resource mobilization and technical assistance to update, develop, print and disseminate.	Develop job aids, update policy guidelines, update operational immunization guidelines.
Improve national and county planning process and implementation To ensure all sub-counties have microplans implemented and reviewed regularly	Resource mobilization and advocacy at national and county level	Microplanning process at county and sub county, joint planning meeting between national and county levels.
Implement the coordinated plans between the national and county levels.	Resource mobilization and advocacy at national and county level	Quarterly national and county coordination meeting to track performance.

Determine training needs gap at all levels and develop strategies to fill in the gap	Advocacy, resource mobilization and technical assistance with all stakeholders.	Training needs assessment. Database developed on health workers trained on immunization service provision at all level. Support to counties to carry out capacity building. Develop new strategies of training staff such as online modules.
To meet staffing norms as described by Norms and standards in service delivery	Advocacy and resource mobilization with county and other stakeholders	Meetings with all stake holders. GAVI HSS applications to support short term gap filling for HR before Government (national or county) take over.
To ensure all health care workers offering vaccination are trained on immunization	Advocacy and resource mobilization with county and other stakeholders	Training of Managers on MLM. Develop orientation package for new staffs Training of HCW on immunization.
To provide technical assistance to counties in managing immunization program	supportive supervision	Coordinated biannual technical assistant to counties.
Increase funds allocated for operations at national from 3.3million to 100 million by 2018. To determine allocations at county level and increase county level allocations	Advocacy with relevant stakeholders	High level meetings with parliament, MoF and MoH. Lobby county government to allocate operational resources for immunization. Update costing of immunization operations at national and county levels to determine cost required.
Timely disbursement of fund to Gavi: annually by 15th of December every year	Advocacy with treasury and MOH	High level meetings with finance, accounts and treasury. Budgeting for co-financing. Earlier initiation of funds release to Gavi (By July every Year).

6.2 SERVICE DELIVERY

Health service delivery is a county function as per the constitution with National government developing policy, standards and guidance through cooperation and consultations

Immunization coverage's has dropped for all antigens due to lack of support supervision and training by Counties health services leadership

The National level needs to engage this leadership at different forums to advocate for the value of immunization services. The gains and the savings the Counties will reap in the long run by immunizing their populations

The RED strategy needs to be revamped in all counties to arrest the declining coverages recover the lost gains

Table 4: Service delivery objectives and strategies

Objective s	Strategies	Main Activities
80% of sub counties report DPT 3 coverage above 80% by 2018	Promote the REC strategy	Advocacy with counties to adopt REC, Orientation and planning meeting to develop sub-county Immunization improvement plans, Microplanning meetings with HF, Support Supervision and mentorship
80% of sub counties report DPT 3 coverage above 80% by 2018	Advocacy at national and county (MOH Policy makers, Governors, CEC, CHO, MCAs, CSO) · Improve investment in EPI · Allocate financial resources for operational costs and procurement of vaccines and CCL	Advocacy meeting with Senior MOH Policy makers and Financial managers, Advocacy meeting with CHOs of Counties. To include clarifying of roles, Advocacy meeting with DPHK
80% of sub counties report DPT 3 coverage above 80% by 2018	Promote accountability using RMNCH Scorecard and similar initiatives	Advocacy and Inception Meetings with counties Technical staff, Advocacy Meetings with counties MCAs, Governors and CECS
80% of sub counties report DPT 3 coverage above 80% by 2018	Linkage with other programs, professional bodies and other sectors (education, health programs, CRD,). How?	Develop advocacy materials to share with key programs under Department of Strategic Programs, Leveraging on ongoing funding mechanisms and ensure EPI is adequately reflected-RMNCAH Investment case and GF

80% of sub counties report DPT 3 coverage above 80% by 2018	Capacity Enhancement (knowledge, skills and practice) of Healthcare providers	Develop Online Operational module for EPI operational level training, Link up with professional associations to promote training in immunization modules as prerequisites for retention
80% of sub counties report DPT 3 coverage above 80% by 2018	County Immunization Improvement Plans	Hold Planning meeting with counties prioritizing High risk and persistently poor performing sub-counties in the initial phase, Biannual Performance Review meetings with Counties and Quarterly Sub-county review meetings
80% of sub counties report DPT 3 coverage above 80% by 2018	Orientation system for newly employed staff	Capacity assessment and training of new managers on MLM, Resource mobilization for Operational level trainings and orientation of newly deployed staffs
No sub counties report have dropout rates above 10% by 2018	Promote linkages with Community structures (CHS, Administration, CBOS etc.) to increase demand	Promote REC Strategy especially mapping of unreached children, microplanning and mapping of key stakeholders in immunization, Promote investment in CHS and integration across programs
No sub counties report have dropout rates above 10% by 2018	Communication with HCW, Communities and Care Givers	Training of HCP including CHVs in IPC
No sub counties report have dropout rates above 10% by 2018	PIRI – Periodic Intensified Routine Immunization in insecurity prone areas.	Micro Planning meetings with HF and Communities IN SELECTED counties
90% of children under 1 year old are fully immunized by 2018	PIRI – Periodic Intensified Routine Immunization in insecurity prone areas.	Micro Planning meetings with HF and Communities IN SELECTED counties
90% of children under 1 year old are fully immunized by 2018	Promote the REC strategy	
90% of children under 1 year old are vaccinated with ROTA 2 by 2018	Provide leadership on clarity on guideline for Rota	Policy circular on Rotavirus vaccine administration by EPI manager
Introduce MR into Routine Immunization System by 2017	Introduce MR into Routine Immunization System by 2017	Implement introductory activities for IPV and MR
Introduce IPV into Routine Immunization System by 2015	Introduce IPV into Routine Immunization System by 2015	IPV introduction into the routine immunization schedule

All sub-counties reporting rates (Completeness and Timeliness)	Provide monthly feedback to Counties and Subcounties on reporting rates	Provide monthly feedback to Counties and Subcounties on reporting rates
Data Quality Score	Annual DQSA	Annual DQS
Data Quality Score	Coverage Survey	Coverage Survey
Updated M&E Framework for EPI	Involvement of key immunization stakeholders in developing the M&E framework	Planning Meetings to Develop M&E
Quarterly National Immunization Bulletin Exists	Quarterly meetings for the M&E Working group to analyze data and publish the Bulletin	Quarterly National M&E Working group meetings to review data and publish the Bulletin
To conduct biannual National review meetings	Periodic Performance review with Counties	Biannual National review meetings conducted
improve on AEFI reporting and investigation to 80%	Establish AEFI causality assessment committee for investigation of cases	Print AEFI reporting forms, distribution of the tools,
improve on AEFI reporting and investigation to 80%	Development of AEFI protocol	Print and distribute AEFI Protocol and guide lines
improve on AEFI reporting and investigation to 80%	Establish an AEFI database by 2016	Vetting and gazetting of AEFI causality members, AEFI stakeholders review meeting
improve on AEFI reporting and investigation to 80%	Revise, print and disseminate AEFI guidelines ,protocol and strategy by 2016	conduct quarterly UVIS/VPD liaison meeting

6.3 SURVEILLANCE AND RESPONSE

Disease Surveillance and response used to be part of the larger EPI program. A separate unit was created for ease of management and efficiency disease surveillance and response activities.

Since devolution most staff in the counties has limited knowledge in the same hence serious training gaps across the board need to be addressed

Laboratory support services need to be revamped to handle the increasing number of test samples from the field.

Adverse events following immunization (AEFI) have poorly reported and investigated due lack of trained staff and scarce resources.

The unit has partnered with the Pharmacy and Poisons (PPB) to have a robust and well-funded AEFI section

Table 5: Surveillance and accelerated disease control

Objective	Strategies	Main activities
To strengthen and improve and sustain reporting of priority diseases at all levels to 95% by 2018	capacity building of health staff at all levels in data management case detection, investigation, reporting; a well as epidemic preparedness	Train all surveillance officers and CHEWS on full IDSR training and community based surveillance
To strengthen and improve and sustain reporting of priority diseases at all levels to 95% by 2019	Strengthen community based surveillance through involvement of community health volunteers and participation	Train CHEWS and Community health volunteers on community based surveillance, Organize sensitization meetings for clinicians and cases investigators, Conduct support supervision, Conduct regular surveillance review meetings at all levels
To strengthen and improve and sustain reporting of priority diseases at all levels to 95% by 2020	Strengthen community based surveillance through involvement of community health volunteers and participation	Conduct support supervision, Conduct regular surveillance and data review meetings at all levels, Print IEC materials for priority diseases and IDSR training materials
To strengthen data management at all levels	strengthen data management through date reviews, data quality audits, and ensure supply of tools	train on data management ,conduct DQAs, printing of reporting tools, procure data capture /analysis equipment and accessories for surveillance staff
Strengthen laboratory services	strengthen lab surveillance at all levels	Procure specimen bottles, specimen carriers,
Strengthen laboratory services	motivate case investigators to conduct active case search	
Ensure safe storage/destruction of any polio viruses/ isolates in Laboratories	complete survey and inventory of laboratories storing or likely to have wild polio viruses	Laboratory survey/verification visits

Ensure safe storage/destruction of any polio viruses/ isolates in Laboratories	complete survey and inventory of laboratories storing or likely to have wild polio viruses	Quarterly NTF Meetings
Ensure safe storage/destruction of any polio viruses/ isolates in Laboratories	complete survey and inventory of laboratories storing or likely to have wild polio viruses	updating laboratory inventory
Sustain NAFP rate at not less than 4% and above	improve sample collection, transportation and provision of feedback	conduct NPEC,NPCC,MTGS at all levels,
Achieve stool adequacy rate of 80% and above	strengthen and sustain AFP reporting at all levels	Review meetings ,active case search and strengthen reporting
strengthen NNT surveillance and reporting of all facilities	strengthen and sustain NNT reporting at all levels	
Sustain meningitis testing at 99% and above	strengthen measles surveillance at all levels	Conduct MTAGs meetings regularly
Sustain NMFI at 80% and above	strengthen and sustain Meningitis reporting at all levels	

6.4 VACCINE SUPPLY COLD CHAIN AND LOGISTICS

Since devolution of Health services the UVIS only procures, stores and distributes vaccines up to the Regional National depots.

The procurement of other vaccine related logistics is a County function and they have performed dismally as they are not allocating adequate funds to address the gaps noted by the Cold chain inventory report

There is also urgent need to carry out high level advocacy to senior counties leadership to have immunization program prioritized in allocation of resources

At the national level there is Replacement, Maintenance and Expansion (REM) plan which is awaiting implementation when funds are availed

The Unit intends to have a pool of trained medical engineers in each county capable of implementing this stalled plan

Table 6: Vaccine supply and cold chain objectives and strategies

Objectives	Strategies	Main Activities
National cold chain replacement, maintenance and expansion plan in place and adopted by all counties by end of 2015	Advocacy and resource mobilization with counties and other stakeholders for uptake of the plan.	Documentation of plan; sensitization of county teams;
> 90% of cold chain equipment are fully functional at all times by 2019.	Strengthening capacities of METs, HCW; improving equipment and consumables availability through resource mobilization	Current METs receive on-the-job training on maintenance and repair of CCE by end of 2015; Develop and implement a continuous training plan for METs; bi-annual updating of cold chain inventory; Introduction of continuous temperature monitoring systems at all levels; finalization and dissemination of REM plan;
Adequate and potent vaccines are delivered to sub-county stores and service delivery points in a timely manner, in accordance with the vaccine management policy.	Advocate for and promote ownership of prioritization of immunization services at county level.	Encourage prior planning and integration of health activities at sub-county level;
Adequate allocation and timely release of funding to ensure uninterrupted supply chain.	Advocacy at national and county levels to improve allocation and disbursement of funds;	Accurate forecasting and budgeting for vaccines logistics; advocacy and dissemination of plans to key decision makers;
Increase the proportion of sub-counties with sufficient cold-storage capacity from 59% to 90% by 2019.	Advocacy and resource mobilization with counties and other stakeholders for uptake of immunization plans.	Accelerate counties' repair activities through issuing of spare parts, and training of METs; provide counties with support in cold chain equipment selection;

Implementation of immunization waste management and disposal policy for all levels of the supply chain.	Development and dissemination of an immunization waste management and disposal plan;	Advocate and resource-mobilize for set up of at least one modern incinerator at national and in each county. Create awareness and promote use of developed waste management plan/ guidelines.
0 stock outs at all levels by end of 2016	Advocate for timely planning and release of resources for vaccine logistics.	Timely preparation of procurement plans and budgets; Regular updating and sharing of stock information using available reporting tools with decision makers.
80% of facilities scoring above 80% by 2019.	Strengthening capacities of HCW on elements of vaccine management and monitoring of key indicators.	Carry out regular support supervision and assessment of performance based on EVMA criteria; leveraging on planned activities to carry out refresher trainings on HCWs.
Quarterly analysis of wastage rates of all antigens	Strengthen use of data for decision making at national and county levels.	Analysis of stock data (e.g. DHIS2, SMT);
Rollout of electronic stock management tool to all sub-counties by March 2016	Application of new technologies to strengthen data capturing systems.	Development, rollout and training of electronic SMT at all sub-counties storage points.

6.5 DEMAND GENERATION AND COMMUNICATION (ANTI-VACCINE LOBBY PRIVATE SECTOR COLLABORATION

Strategies and activities should be designed to address equity issues in immunization services delivery

Innovation is required to bring in new partners and new thinking to push the EPI to achieve new heights (its lost glory)

There has been a tendency at National level to focus on NIDs and SIAs (Campaigns) at the expense of supporting routine immunization activities

Advocacy and Social mobilization activities should be a continuous all year round not ad hoc

Table 7: Demand generation objectives and strategies

Objectives	Strategies	Main Activities

Develop and implement communication plan for EPI that will include training for interpersonal communication (IPC) for health workers	Assess the existing ACSM gaps and develop the strategies	>Conduct comprehensive situation analysis on knowledge, practices and attitudes of different stakeholders towards immunization including conducting focus groups>Contract technical assistant for development of an ACSM strategic plan>Convene ToT forum for the development of national plan and cascade into regional trainings for development of county specific plans>Disseminate the communications plans and make them available at all levels>Develop and use M&E indicators to routinely track progress.
At least 80% of caretakers of children understand the importance of routine immunization and the vaccination schedule by 2015 and beyond. At least 100% of low EPI performing counties conduct social mobilization activities to increase demand for immunization services	>Develop specific and population appropriate social mobilization strategies >Develop a roadmap for integration of child health survival programs with ACSM	>Roll out the school strategy in low performing counties >Mapping of the hard to reach communities including cross border communities >Development of the socio-cultural sensitive strategies to reach the identified hard to reach populations >Develop/update county specific micro plans >Conduct regular sensitization of community and facility health workers >Conduct mass media campaigns to reach families >Develop, field testing and dissemination of evidence based IEC materials

>To achieve at least 80% of counties/districts with health workers who are trained in IPC by 2018. >To achieve that at least all ACSM staff at national level and at least 100% of county and 80% of sub-county HPOs are trained in ACSM planning, development, implementation, monitoring and evaluation by 2018. >Strengthen networking and improve linkages between HPO's, community health strategy and ACSM sub-committees to increase their core competencies e.g. in micro-planning & action planning by 2018. >Increase at least 80% of counties and sub-counties have built IPC skills of CHWs/CHVs by 2018	>Needs assessment to determine specific needs at different levels	>Develop IPC training manuals and materials including job aids Select facilitators >Hold regional training forums to build capacity of immunizing Health workers using a structured format for training and mentorship with ACSM ingrained in all training activities >Hold regular refresher IPC training for new staff
>Strengthen advocacy for EPI by increasing to 100% the number of counties with advocacy/partnership building action plans by 2018. >Increase by 4 the number of PPP that support immunization ACSM activities -"friends of immunization" by 2016- and double the number annually by 2018	>Engagement of high level policy makers >Meetings/ review based on clusters >Develop advocacy strategy with timelines and delineate roles and responsibilities >Develop a partnership engagement document	>Meetings at national and county forums >Targeted advocacy briefs >Develop and share calendar of activities >Mapping of who the key stakeholders are, their interests, how to approach them, their roles >Meetings with private and public sector and the media >Develop a partnership engagement document targeting all levels of Public Private Partners >Hold PPP meetings at all levels

The National and 100% of county governments regularly conduct engagement activities with these key stakeholders to inform and update on key issues and priorities of EPI program by 2018	>Development of a comprehensive engagement plan with timelines and delineated roles and responsibilities	>Develop county specific priority area document and share with decision makers and policy makers >Convene regular high level advocacy/ stakeholder meetings to prioritize and determine health activities for the year with an ACSM agenda >Convene lower level advocacy meetings and social mobilization including meeting with community, religious and traditional leadership structures
Successful introduction of IPV and MR into the national RI schedule by December 2015	>Development of an ACSM introduction plan	>IEC materials development >Mass media engagement plan >Social mobilization activities plan >Training of social mobilizers and community health workers >Community mobilization through community leadership, PAS, Barazas, stakeholders engagement >Technical support
Successful implementation of SIAs and increased optimal coverage	>Development of an ACSM SIA plan	>IEC materials development>Mass media engagement plan>Social mobilization activities plan>Training of social mobilizers and community health workers>Community mobilization through community leadership, PAS, Barazas, stakeholders engagement>Technical support

6.6 INTRODUCTION OF NEW ANTIGENS / COMBINED VACCINES INTO THE NATIONAL EPI

The introduction of new vaccines is critical in ensuring that vaccine preventable diseases are tackled and controlled at a national level. However the introduction of new vaccines presents new challenges related to the age groups being targeted for disease control are usually outside the traditional cohorts for example HPV introduction to preteen girls, Vaccines with a variable protection have to be weighed against benefits of other disease control responses and challenges to the vaccine supply chain system and especially the vaccine cold chain.

The Unit of vaccine and immunization is currently working with the Kenya National Immunization Technical Advisory Group (KENITAG) to create a matrix for the new vaccine introduction. This matrix takes into account the scientific evidence on the new vaccines and takes into consideration other disease control measures available against the diseases. The matrix also takes into account the current infrastructure available in terms of cold chain capacity and the vaccine supply chain system

This section discusses in summary the new vaccines considered for introduction into system.

Introduction of HPV vaccine into the EPI

Human Papilloma virus (HPV) is a virus that is responsible for cervical cancer and genital warts. There are currently 2 licensed vaccines in Kenya against the HPV. There is a 2 valent and a 4valent vaccines. The 2 valent vaccine only targets HPV virus against cervical cancer while the 4 valent vaccine targets viruses against genital warts and cervical cancer.

HPV vaccine should be provided to preteen girls and boys before their sexual debut. This is ensure that they are protected against the virus prior to sexual debut. The Government is currently implementing pilot projects that target preteen girls using a schools strategy and will be implementing a facility based pilot once GAVI approval for support is received

Measles and rubella (MR)

Malaria Vaccine, Japanese Encephalitis and Meningitis A vaccines

6.7 VACCINE PREVENTABLE DISEASE OUTBREAKS PREPAREDNESS AND RESPONSE

Polio Outbreaks in Kenya Brief

Kenya is committed to the 1988 World Health Assembly resolution of global poliomyelitis eradication. Towards this polio eradication initiative, the country has been implementing the four recommended strategies; Acute Flaccid Paralysis (AFP) surveillance, routine immunization, National/Sub-national Immunization Days and Mop up vaccination campaigns. A lot of progress has been made in the performance of AFP and population immunity in the country since commencement of this initiative. The last indigenous wild poliovirus (WPV) in Kenya was in 1984. However, the country suffered importations of WPV from Somalia and Sudan in 2006 (2 cases in Garissa County) and 2009 (19 cases in Turkana County) respectively. One additional wild poliovirus (WPV) type 1 case was detected again in Kenya in July 2011 and the WPV case was genetically linked to the 2010 WPV outbreak in eastern Uganda (Bugiri district) and the 2009 outbreak in Kenya. On 16th May 2013 a polio outbreak linked to the outbreak in Somalia was reported in Garissa County in the Refugee camp. A total of 14 confirmed cases were reported by the time it was contained in July 2014.

Quarterly polio risk analysis is done based on the following:

- AFP surveillance performance indicators
- Routine Immunization Coverage
- Surveillance index

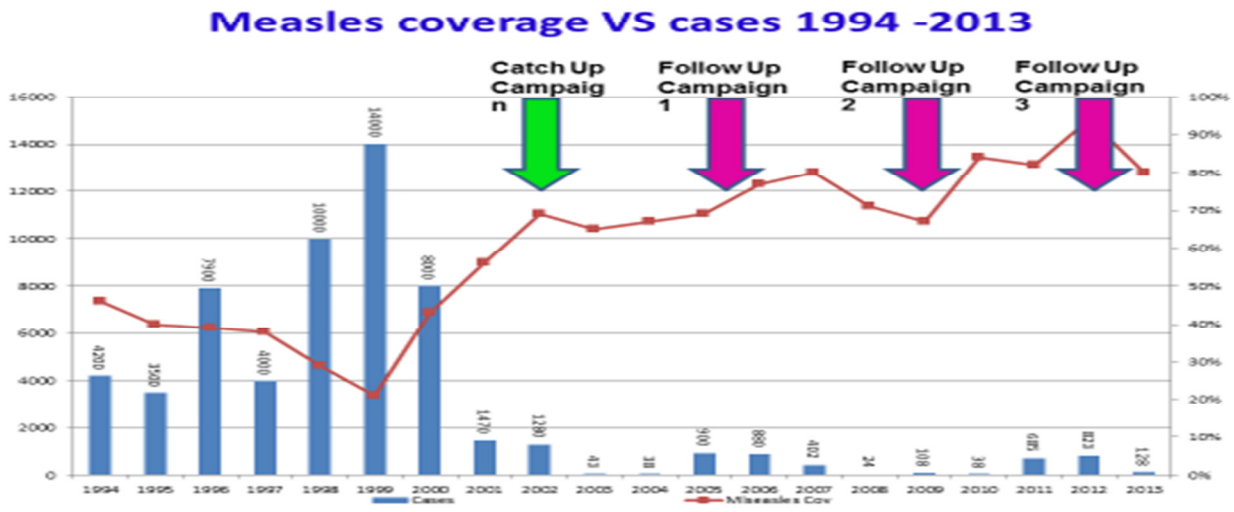
Based on these, gaps have been identified at sub-national level that require continuous support in terms of capacity building, support supervision, review meetings and conducting polio SIAs.

Addressing these gaps has faced challenges due to inadequate resources and over-reliance on partner support.

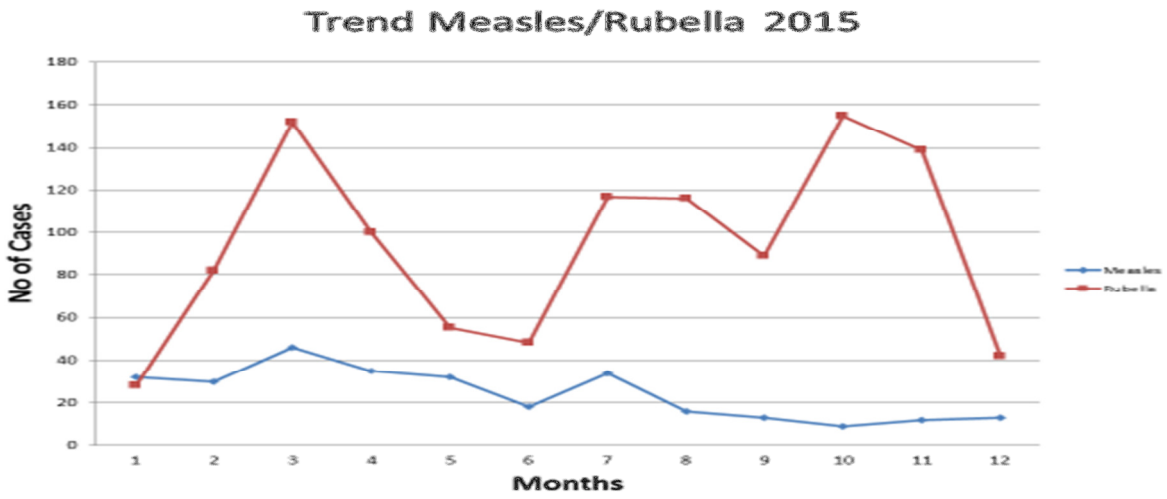
Accelerated Measles Control in Kenya

Accelerated measles control activities started in 2001 in countries in the World Health Organization (WHO) African Region, aiming to reduce measles deaths by half by 2005. The strategies implemented included improving routine vaccination coverage, providing a second opportunity for measles vaccination through supplementary immunization activities (SIAs), improving measles-case management, and establishing case-based measles surveillance.
Kenya started implementation of accelerated control activities in 2002 by conducting the first catch up campaign targeting children 9months to 14 years. This campaign significantly reduced the measles disease burden. Subsequent SIAs were held in 2006, 2009 and 2013. Following the 2002 SIA, the country established measles case-based surveillance system

The 2002 measles catch-up campaign was highly effective in reducing the number of measles cases to near zero in 2003 – mid 2005 period.



Measles and rubella trend, 2015



Through the active measles surveillance system, rubella cases are investigated and evidence shows an average of 400 cases of rubella are confirmed annually countrywide.

The current positivity rate is less than 10% for measles and 40-50% for samples tested at KEMRI EPI lab.
It is against this background that the country has decided to introduce rubella vaccine in the routine immunization program.
Despite, the success achieved so far in measles case-based surveillance, there are challenges to the surveillance system. These are basically similar to polio surveillance, but in addition, measles suffer poor investigation rate by all counties due to lack of funds for shipment of specimens, inadequate capacity of health workers to conduct investigations due to high turnover of staff

For Kenya to achieve the AFRO target for 2020 support in terms of capacity building for County teams, review meetings and MTAG activities need to be addressed through additional support.

7 MONITORING AND EVALUATION OF THE COMPREHENSIVE MULTI-YEAR PLAN

The monitoring and evaluation of the vaccine system is an intense process that requires a lot of data. The data is required in a timely fashion and should be of a high quality to enable analysis and action by managers and decision makers. In this regard this section describes the M&E strategy to monitor the immunization program and the CMYP strategy for the duration of the CMYP

7.1 ENSURING DATA QUALITY FOR IMMUNIZATION SERVICE DELIVERY AND VACCINE COMMODITIES

Information in the national data management systems should represent what happens at service delivery points as much as possible and should be of high quality. Data quality can be defined as the degree to which a data management system represents the facts on the ground.

Since every data collection and management system is prone to errors resulting from data collection, processing and transmission it is of utmost importance that starting with individual patient data at health facilities, these errors are minimized. The dimensions of data quality listed below need to be adhered to avoid erosion of trust in the data generated data from the system.

Table 8: Ensuring quality of data

Dimension	How to ensure quality
Completeness	Completeness is ensured by reviewing the requisite forms to check whether all the data elements that should have been reported, are reported during a reporting period
Timeliness	Submission of the reports by an accepted deadline at each level
Accuracy	by comparing data that has been reported or compiled against the primary source documents at the point of collection and triangulation of the reported data with other data sources, if available
Reliability	Checking whether the data generated are based on protocols and procedures that do not change according to who is using them and when or how often they are used. The data are reliable because they are measured and collected consistently
Precision	The data should have sufficient detail to enable analysis and decision making for the immunization program
Integrity	When the system used to generate data is protected from deliberate bias or manipulation for any reasons other than for medical care
Confidentiality	Clients are assured that their data will be maintained according to standards for data. Personal data should not be inappropriately disclosed or left unsecured.

7.2 DATA FLOW AND USE AT VARIOUS LEVELS OF THE HEALTHCARE SYSTEM

Decision makers and stakeholders explicitly consider information in one or more steps in the process of policymaking, program planning and management or service provision. Decision making is more pragmatic when based on evidence that leads to improvements in the health care system.

Every level of immunization service delivery needs to secure the technical and human capacity to satisfy the demand for data, as well as manage, analyze, and distribute data to users. Providers need to establish data-informed decision making processes, so that the health system as whole benefits.

Every level of health care not only needs to improve documentation and reporting to the next level, but also make data available and accessible in varied formats for routine data use in decision making and performance review.

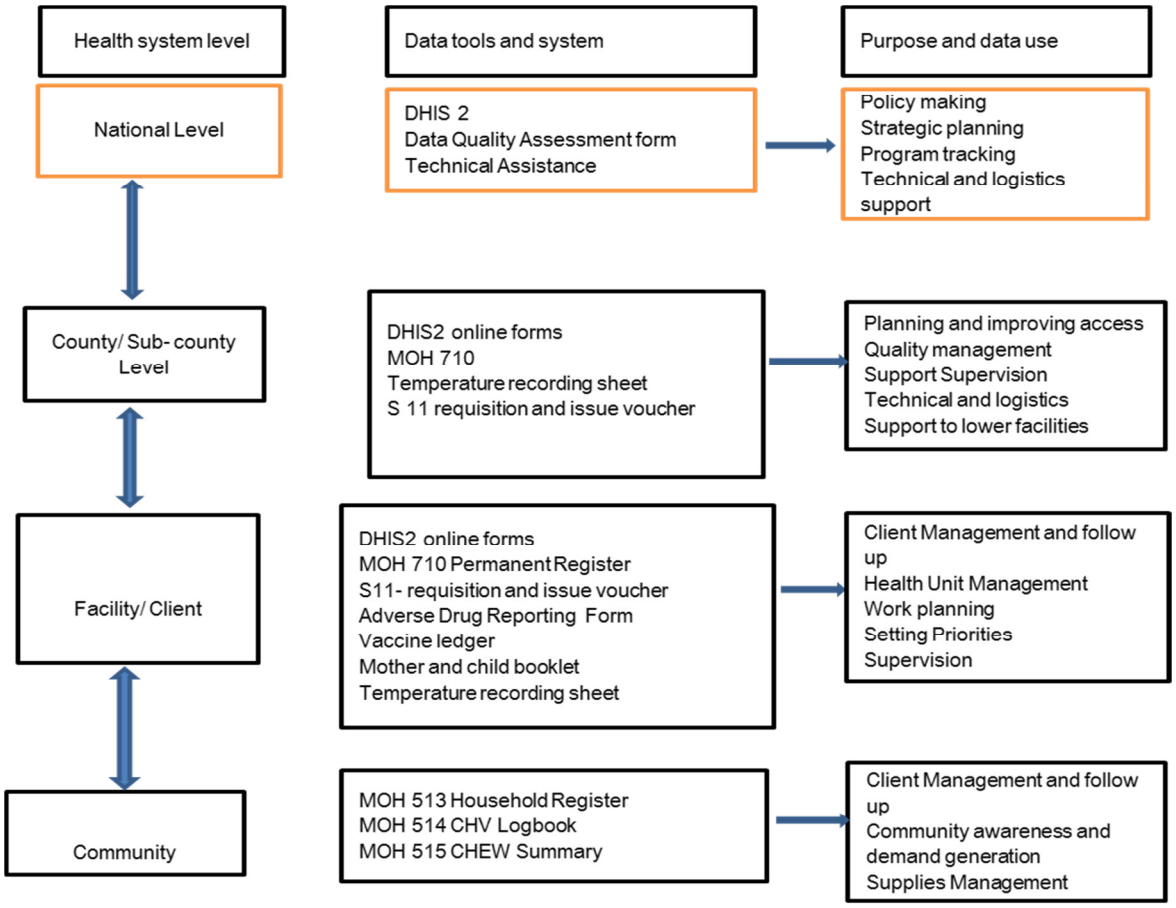


Figure 4: Flow and Use of Immunization data at various levels of the healthcare system

7.3 Roles and Reporting requirements by service delivery levels

Health care worker and vaccine store managers at all levels are required to report on services provided and commodities dispensed, using the appropriate tools and submitted at the recommended timelines.

All service providers should maintain proper records on each client served and the specific immunization services provided and the return date for follow up immunizations. Service providers from Non-governmental organizations (NGOs) and the private sector should ensure that they also follow the Ministry of Health's service provision and reporting guidelines.

Health care providers will collect the various data according to the main data points:

1. Facility details (includes county, facility name, type and reporting period)
2. Vaccines offered
3. Vitamin A offered
4. Expected/planned return date of the client

7.4 Services Reporting

Reporting on immunization services offered and vaccine supplies used is through the routine health information systems. The reporting system has undergone significant improvements in the past decade, including the migration of most health data to a web-based repository and analysis application namely the District Health Information System 2.16 (DHIS2).

Despite the significant improvements in reporting rate through the DHIS2 there remain gaps especially with ensuring timely reporting, completeness of the data and more critically analysis and use of the reported data for planning and decision making.

The Ministry of Health has specific tools for reporting and summarizing data on Immunization services, vaccines supplies and other commodities such as syringes and safety boxes for various levels of the immunization system, most culminating into the national DHIS2.

Table 9: Immunization and vaccines reporting tools by service delivery level

Data Tools	Data points	Frequency	Who Fills
Community Level			
MOH513 Household register	Penta1 Given, Penta 3 Given, Measles, Fully immunized, Vitamin A given	6 monthly	Community Health Volunteers
MOH514 Service Delivery Logbook	Defaulter identified and referred	Monthly	Community Health Volunteers
MOH515 CHEW Summary	Summary of defaulters referred	Monthly	CHEW
Client Referral Form	Immunization defaulters referred to the health facility	As need arises	CHVs
Facility Level: Hospitals, Health Centers, Dispensaries, Maternity Homes and Nursing Homes			
MOH510 Permanent register	New clients Revisit Vaccines offered Vitamin A offered	Daily	Nurse, midwife, Doctor CO
MOH 702 tally sheet			
MOH710 Monthly immunization services	Summary of number of vaccines offered by antigen, vaccine supply opening stock, closing stock and vaccines received, temperature monitoring	Daily	Nurse, Midwife Doctor CO
Mother and Child booklet	Vaccines offered, date offered, Clients revisit date	As required	Nurse, Midwife, Doctor, Co
Vaccine stock ledger	Vaccines received, vaccines issued, vaccine stock balances, vaccines expired, vaccines discarded, vaccines lost	As required	Vaccine store manager, nurse, Midwife, Doctor, CO
Temperature monitoring sheet	Temperature of vaccine fridge. Spot temperatures twice a day(AM and PM) highest and lowest temperature, and interventions carried out	As required	Vaccine store manager, nurse, Midwife, Doctor, CO
S- 11	Requisition and issuing voucher recording data on number of products and units issued	As required	Vaccine store manager, nurse, Midwife, Doctor, CO
DHIS 2	Summary on MOH 710	Done by 15th of every month	The HRIO/ sub county HRIO

7.6 VACCINE SUPPLY COMMODITIES REPORTING

Immunization programs need an efficient commodity logistics and management system in order to ensure uninterrupted supply of vaccines in a properly managed cold chain system. The Health workers and managers should maintain proper records on each client immunized, stock issued, received and in stock should be as accurate as possible.

All vaccines and related supplies such as syringes, cold chain equipment and safety boxes should be received at the facility store by an authorized person. The commodities received (e.g. from KEMSA store) should be verified against the quantities on the S-11 and delivery note.

Important information to look for is the destination of the commodities, expiry date, actual quantities and the quality of the products. A Goods Received Note (GRN) should be prepared and signed, after properly making adjustments for any products that are returned. The received commodities should then be entered into the vaccine ledger for vaccines and S5 (Bin card) for other related commodities and balances adjusted accordingly.

The S11 (Counter Requisition and Issue voucher) should be used for Intra-facility issuing and S12 (Issue and Receipt voucher) for Inter-facility issuing. Use the First Expiry First Out System in issuing vaccines to minimize expiries. Proper records on vaccine balances, vaccine physical stock count, daily temperature logs; and other storage check lists should be accurately maintained in the relevant tools.

The vaccine store should be organized, clean and well ventilated with temperature maintained in the cold chain between 2 and 8 degrees. Non cold chain supplies such as syringes, diluents and safety boxes should be kept off the floor to avoid contact with moisture. All the documents used in commodities management should be signed, verified by an authorized person, stamped and copies filed. The store should be secured safely and access limited only to authorized personnel.

At the service delivery point, all the service providers should on a daily basis correctly document in the Permanent Register the clients seen and the clients details, services offered to individual clients and the return dates of the subsequent vaccines. The service providers should tally the number of vaccines offered for the different vaccines in the tally book daily and summarize the daily count into the MOH 710.

At end of month, the Immunization service provider should prepare the MOH 710 which summarizes the services offered monthly, correctly document the commodities consumed in the month including any commodity adjustments. The MOH 710 should be forwarded to the sub county level for review by the sub county managers and for inputting into the DHIS 710 on a monthly basis.

Stock management for syringes, cold boxes, vaccine fridges, vaccine carriers, safety boxes and other equipment required and used in the immunization system should be managed using standard reporting documents that are used for general government commodities. These includes the S5 Bin card and the S11 and S12 for issues between and within facilities.

7.7 CHECKLIST FOR HEALTH DATA COLLECTION

Service delivery staff is required to

i. Use standard, MOH coded, data collection tools
ii. Refer to the guidelines provided in the data collection tools (cover page of registers and vaccine ledgers)
iii. Fill in the data collection tool/register as the clients are being seen – do not fill the tools later or after service delivery
iv. Fill all rows and columns completely and appropriately
v. All summary tools must have the supervisor's signature, facility name, date and stamp
vi. Summary tools from the facility should reach the sub county level by 5th of the following month and aggregated to DHIS 2 by 15th of the following month.
vii. When starting a new day, start a new page in the register or write total for the day then put a divider line in red color

7.8 QUALITY OF CARE IN IMMUNIZATION SERVICE PROVISION

Quality is defined as the "totality of features and characteristics of the Kenyan healthcare system that relates to its ability to satisfy a stated or implied health need" Kenya Quality Model for Health (KQMH 2011).

As in the broader sector, improving the quality of care in immunizations would in turn result in improvement of immunizations outcomes, such as reduced dropout rates, improved client experiences, and reduced resistance and myths around vaccination.

The following dimensions of quality of care are key for immunization services according to the Kenya Quality Model for Health:

i. **Time & Timeliness**: Client waiting time, completed on time
ii. **Completeness**: Clients gets all they asked for
iii. **Courtesy**: Treatment by health care workers
iv. **Consistency**: Same level of service to all clients
v. **Accessibility & Convenience**: Ease of obtaining service for clients
vi. **Accuracy**: Service provided well every time
vii. **Responsiveness**: Accurate and rapid reactions to unusual situations

8 COSTING, FINANCING AND SUSTAINABILITY

The success of the programme largely depends on adequate financing for all proposed activities to be undertaken during the life of this cMYP. It will be the responsibility of UVIS through the Ministry of Health to ensure that the programme gets adequate financial and others.

This cMYP takes cognizance of the two levels of governance in Kenya and their roles in Health services delivery. Most of the gaps in delivery of immunization services identified in the situation analysis will be carried out by county governments. It is therefore imperative that the National government and County governments engage each other and agree on terms of reference for executing this cMYP.

In this section, we review the cost implications of the proposed programme activities, and relate these to the known available finance for respective cost categories of the programme to derive information relating to financial gaps. The cMYP includes a series of interventions, which have associated activities, and inputs needed to actualise. These are illustrated in the Table below.

Annex 1: Objectives and Milestones

Annex2: Annual work plan

9 ANNEX 3: INDICATORS FOR IMMUNIZATIONS

Table 10: Immunization Commodity Management Indicators

Level	What to monitor (Indicator)	Indicators Definition	Data Source(s)	Indicative target	Acceptable result
Monitoring Output	Reporting (Rate)	% of facilities submitting (timely, complete, accurate) commodity consumption reports to the central level for priority program	MOH 710, DHIS2	100%	95%
Monitoring Output	Stock Status	% of facilities with current stocks within the Min-Max level (not overstocked, under-stocked; or stocked out)	MOH 710 DHIS2	100%	90%
Outcome Assessment	Stock Outs	% of facilities providing the service that did not experience a stock out of a tracer health commodity (Pentavalent vaccine)	MOH 710 DHIS2	100%	100%
Outcome Assessment	Expiries	% of facilities having expiries of at least one commodity from the tracer commodities list (Pentavalent vaccine)	Survey, Data Audits of vaccine ledgers	0%	5%
Monitoring Output	Forecasting Performance	% difference between consumption forecast and actual consumption	Survey, Data Audits of vaccine ledgers and permanent register, DHIS-2	0%	5%

Monitoring Output	Ensuring Vaccine commodity security/coordination	Existence of an active County and sub county coordination committee that works on Immunization services and vaccines stocks	Survey,	Yes	Yes

Annex 4: Immunization Service Indicators