



MINISTRY OF HEALTH

**A NATIONAL FRAMEWORK  
AND PLAN OF ACTION  
FOR IMPLEMENTATION OF  
INTEGRATED COMMUNITY CASE  
MANAGEMENT (iCCM) IN KENYA  
2013 – 2018**

**A strategy for management of childhood illnesses  
in under five years**

AUGUST 2013 EDITION

# FOREWORD

The Government of Kenya is committed to the achievement of national, regional and international targets, including the Millennium Development Goals (MDGs), to improve maternal, newborn and child health and development indicators. Globally, most deaths in children are caused by preventable and easily treated diseases, namely pneumonia (18%), diarrhea (11%) and malaria (7%), and newborn related conditions (pre-term birth complications – 14% and intrapartum related complications 9%). More than a third of deaths in children under-five can be attributed to under nutrition (UNICEF, WHO, WORLD BANK, 2012).

It is estimated that in 2011, a total of 188,928 children under five died in Kenya, and out of this, 38,892 deaths were caused by diarrhoea, 20,666 by malaria and 30,406 by pneumonia (WHO, 2011). Neonatal deaths account for approximately 60% of the infant mortality in Kenya, as per the Kenya Demographic Health Survey (KDHS 2008-09). Appropriate management of diarrhea, malaria, and pneumonia is one of the most cost effective interventions towards the reduction of the global burden of disease (Black et al, 2010). There exist evidence-based high-impact interventions that can ensure a visible impact on reduction of childhood mortality. Addressing newborn deaths through timely identification within the two days of birth and referral by trained CHWs is a cost effective high impact practice (Baqui AH et al, 2009).

Kenya is one of the countries in Africa that is not on track for the attainment of MDG 4 despite improvements in child mortality rates. The global annual reduction rate in under five mortality is 1.4% per annum (UNICEF, WHO, WORLD BANK, 2012). The under-five mortality rate decreased from 115/1,000 live births in 2003 to 74/1,000 in 2009, while the infant mortality rate decreased from 77/1,000 in 2003 to 52/1,000 in 2009 (KDHS 2003, 2008-09). Kenya needs to reduce the under-five mortality rate to 33 deaths per 1,000 live births if MDG 4 is to be achieved by 2015. To achieve this, a minimum annual mortality reduction rate of 4.4% is needed.

The health system in Kenya experiences challenges that are known to counter efforts towards the control and management of common childhood illnesses. This is clearly demonstrated in the 2010 Kenya Service Provision Assessment, which shows that healthcare workers are not managing children as per standard protocol. Many children in Kenya continue to die unnecessarily due to poor access to recommended treatment particularly pneumonia and diarrhea.

The Integrated Community Case Management (iCCM) implementation framework presents a platform for acceleration of the control and management of childhood diarrhoea, malaria, pneumonia, neonatal causes and malnutrition at the community level, thus contributing to the attainment of the MDG 4 by reducing significantly mortality attributed to the five conditions.

This framework is anchored on the Ministry of Health (MOH) Community Health Strategy (MOH, 2007) and Child Survival and Development Strategy (MOPH, 2010) as well as the 'Policy Guidelines on Control and Management of Diarrhoeal Diseases in Children below Five Years'. The iCCM implementation framework addresses key areas including policy and coordination, case management, commodity logistics, advocacy, supervision and quality assurance, communication and social mobilization (CSM) and monitoring and evaluation (MacGorman L et al, 2012). It also aims to strengthen the health system, building upon the facility-level integrated management of childhood illness (IMCI) activities.

All stakeholders are urged to utilize this implementation plan for resource mobilization and for the accelerated implementation of related high-impact interventions.

It is our sincere hope that implementation of this five-year plan, alongside other areas covered in the Community Health Strategy, will go a long way in reducing child morbidity and mortality in Kenya.



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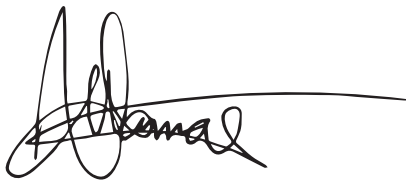
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A handwritten signature in black ink, appearing to read 'Annah Wamae', with a long horizontal line extending to the right.

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# LIST OF ABBREVIATIONS

<b>ACSM</b>	Advocacy communication and social mobilization
<b>ACT</b>	Artemisinin-based combination therapy
<b>AIDS</b>	Acquired Immunodeficiency Syndrome
<b>AL</b>	Artemether-lumefantrine
<b>ARI's</b>	Acute respiratory infections
<b>AWP</b>	Annual Workplan
<b>BCC</b>	Behavior change communication
<b>CBOs</b>	Community Based Organizations
<b>C4D</b>	Communication for Development
<b>CCM</b>	Community case management
<b>CDF</b>	Constituency Development Fund
<b>CHEW</b>	Community Health Extension Worker
<b>CH</b>	Child Health
<b>CHC</b>	Community Health Committees
<b>CHERG</b>	Child Health Epidemiology Research Group
<b>CHIS</b>	Community Health Information System
<b>CH-ICC</b>	Child Health Interagency Coordinating Committee
<b>CHIM</b>	Community Health Information System//management
<b>CHMT</b>	County Health Management Team
<b>CHS</b>	Community Health Strategy
<b>CHW</b>	Community Health Worker
<b>CU</b>	Community Unit
<b>CIDA</b>	Canadian International Development Agency
<b>C-IMCI</b>	Community-Integrated Management of Childhood Illness
<b>CHAPs</b>	Community Health Action Plans
<b>CHC</b>	Community Health Committee
<b>CSD</b>	Child Survival and Development
<b>CSDS</b>	Child Survival and Development Strategy
<b>CUs</b>	Community Units
<b>DCAH</b>	Division of Child and Adolescent Health
<b>DCHS</b>	Division of Community Health Services
<b>DHIS</b>	District Health Information System

<b>DHMIS</b>	District Health Management Information System
<b>DOMC</b>	Division of Malaria Control
<b>DVI</b>	Division of Vaccine and Immunization
<b>EBF</b>	Exclusive breastfeeding
<b>EHS</b>	Essential Health Services
<b>ESP</b>	Economic Stimulus Project
<b>FGD</b>	Focus Group Discussion
<b>GAPP</b>	Global Action plan for Prevention of Pneumonia
<b>GDP</b>	Gross Domestic Product
<b>GOK</b>	Government of Kenya
<b>HCW</b>	Health Care Worker
<b>HEW</b>	Health Extension Worker
<b>HIV</b>	Human Immunodeficiency Virus
<b>HMT</b>	Health Management Team
<b>HRIO</b>	Health Records and Information Officer
<b>HSSF</b>	Health Sector Support Fund
<b>iCCM</b>	Integrated Community Case Management
<b>IMCI</b>	Integrated Management of Childhood Illness
<b>IMR</b>	Infant Mortality Rate
<b>ITN</b>	Insecticide treated nets
<b>IRS</b>	Indoor Residual Spraying
<b>IYCN</b>	Infant and Young Child Nutrition
<b>KAP</b>	Knowledge Attitudes and Practices
<b>KDHS</b>	Kenya Demographic and Health Survey
<b>KEMRI</b>	Kenya Medical Research Institute
<b>KEMSA</b>	Kenya Medical Supply Agency
<b>KHDS</b>	Kenya Health Demographic Survey
<b>KNPP</b>	Kenya National Pharmaceutical Policy
<b>KSPA</b>	Kenya Service Provision Assessment
<b>LLITN</b>	Long Lasting Insecticide Treated Net
<b>LMIS</b>	Logistics Management Information System
<b>MBB</b>	Marginal budgeting for bottlenecks

<b>MDG</b>	Millennium Development Goal
<b>MICs</b>	Malaria Indicator Surveys
<b>MNCH</b>	Maternal, Newborn and Child Health
<b>MOH</b>	Ministry of Health
<b>MUAC</b>	Mid Upper Arm Circumference
<b>NASCOP</b>	National Aids and STD Control Programme
<b>NGOs</b>	Non Governmental Organizations
<b>NHIF</b>	National Hospital Insurance Fund
<b>NHSSP</b>	National Health Sector Strategic Plan
<b>ORS</b>	Oral Rehydration Salt
<b>ORT</b>	Oral Rehydration Therapy
<b>PHC</b>	Primary Health Care
<b>PHO</b>	Public Health Officer
<b>PHT</b>	Public Health Technician
<b>POA</b>	Plan of Action
<b>RDT</b>	Rapid diagnostic tests
<b>RED</b>	Reaching Every District
<b>RUTF</b>	Ready-to-use therapeutic food
<b>SCHMTs</b>	Sub County Health Management Teams
<b>SOPs</b>	Standard Operating Procedures
<b>UHC</b>	Universal Health Coverage
<b>UNDP</b>	United Nations Development Programme
<b>UNICEF</b>	United Nations Children's Fund
<b>USAID</b>	United States Agency for International Development
<b>WHA</b>	World Health Assembly
<b>WHO</b>	World Health Organisation

# 01

## Introduction and Background

Kenya adopted a Community Health Strategy (CHS) (MOPHS, 2006) in line with the primary health care principles as its overarching approach to health promotion in communities. The strategy features a flagship project aimed towards the attainment of Vision 2030 and MDGs. It was based on the second National Health Sector Strategic Plan (NHSSP II), which set out to reverse the decline in the health status of Kenyans by shifting emphasis from a disease-centered approach to the promotion of individual and community health. The overall goal of the strategy is to ensure that Kenyan communities have the capacity and motivation to play an essential role in health care delivery. It aims at enhancing community access to health care to improve productivity, and thus, reduce poverty, hunger, and child and maternal deaths, as well as improve education performance across all the stages of the life cycle. The strategy places a strong emphasis on community involvement in health care.

NHSSP II outcomes clearly highlight the limitations of focusing on formal, facility-based interventions to improve health outcomes. The premise of CHS is the assumption that there is an informal corps of willing and committed workers at the community level actively providing aspects of care—but without structures and systems linked to the formal health system. CHS recognizes the community as a service delivery point (or Level 1) that can strengthen this linkage.

### **Why Community Health Strategy approach?**

The major reasons for the development and implementation of the CHS include the following:

- Recognition that communities are already actively engaged in health activities for the survival of their households. Their actions for health could be strengthened through increased knowledge and skills as well as better planning of activities.
- A great proportion of deaths among children under age 5 years and maternal deaths occur due to predictable, preventable, and treatable causes that can be managed using low-cost interventions at the household level.
- Potential cost saving associated with utilization of local knowledge systems community-level volunteers and mobilization of local financing options, as well as local governance structures.

- The strengthened linkage between the formal health providers and community level providers will ensure better acceptance of services provided and compliance with treatment. The CHS approach prioritizes the management of pregnant mothers, newborns and children to significantly reduce maternal, newborn and child deaths. Integrated community case management provides an opportunity to address the leading causes of child mortality, namely diarrhoea, malaria, pneumonia, and malnutrition. It also includes referral of the newborn delivered at home, and any newborn or mother with danger signs.

Integrated community case management is a proven evidence-based strategy that trains, equips, and supports various cadres of community health providers to deliver high-impact treatment interventions in the community (CORE Group, et al., 2010). It is an important component of Integrated Management of Childhood Illness (IMCI), which was developed by the World Health Organization (WHO) in the 1990s. It builds upon progress made and lessons learnt in the implementation of community IMCI and aims to augment health facility-based case management.

WHO and UNICEF have published joint statements that provide evidence that iCCM works (WHO/UNICEF, 2012). This evidence includes community treatment of malaria, pneumonia and diarrhoea by trained and properly supervised community health workers who have the potential to produce favorable health outcomes. Global commitment to CCM is evident in the WHO and UNICEF 2008 Global Action Plan for Prevention of Pneumonia (GAPP). The Joint Statement on iCCM (WHO, UNICEF, 2012) also presents a strong case and overall guidance for country implementation of the strategy.

# 02

## Situation Analysis

### 2.1 Economics

Kenya is divided administratively into 47 counties, which are further divided into sub-counties. Kenya's population is estimated at 40 million of which 15.5% (6.2 million) are children below age 5 years; 3.6% are children below 1 year; and 24% are women of reproductive age (15–49 years). The majority of the population (68%) resides in rural areas (Kenya National Bureau of Statistics, 2009). The country's gross domestic product (GDP) is estimated as KES 1,539.3 billion (KNBS Economic Survey, 2012). Currently, only 4.5% of GDP is allocated for health interventions through the Ministries of Health. It is important to note that 46% of the population lives below the poverty line (World Bank, 2011).

### 2.2 Situation of women and children

Mortality amongst children below 5 years of age has significantly decreased over the years with the greatest reduction witnessed in the 5-year period prior to 2008. The mortality rate for children under age 5 years declined by 36 percent from 115 deaths per 1,000 live births in the 2003 Kenya Demographic and Health Survey (KDHS) 2008–09 to 74 deaths per 1,000 live births; the infant mortality rate dropped by 32 percent from 77 deaths per 1,000 live births in the 2003 survey to 52 deaths per 1,000 live births; and the neonatal mortality declined from 33 deaths per 1,000 live births in the 2003 KDHS 2008–09 to 31 deaths per 1,000 live births in the 2008–09 KDHS.

Despite these efforts, the country is not on track to achieve the MDG 4 target of 32 deaths per 1,000 live births in children under age 5 years. The 2008–09 DHS also showed regional differences: Nyanza and Western provinces had the highest under-5-years mortality rates of 149 per 1,000 live births and 121 per 1,000 live births, respectively, while Central and Eastern provinces had the lowest under-5 years mortality rates of 51 per 1,000 live births and 52 per 1,000 live births, respectively.

Of the estimated 189,000 children who die in Kenya each year before celebrating their fifth birthday, the majority die due to neonatal causes (26%), diarrhoea (21%), pneumonia (16%),

and Malaria 11% (WHO, 2011). HIV and malnutrition are the main underlying causes. Overall coverage of high-impact, preventive interventions against these main killers has increased over the years, but access to treatment for the sick child remains very low (Childhood Epidemiology Reference Group [CHERG] 2010).

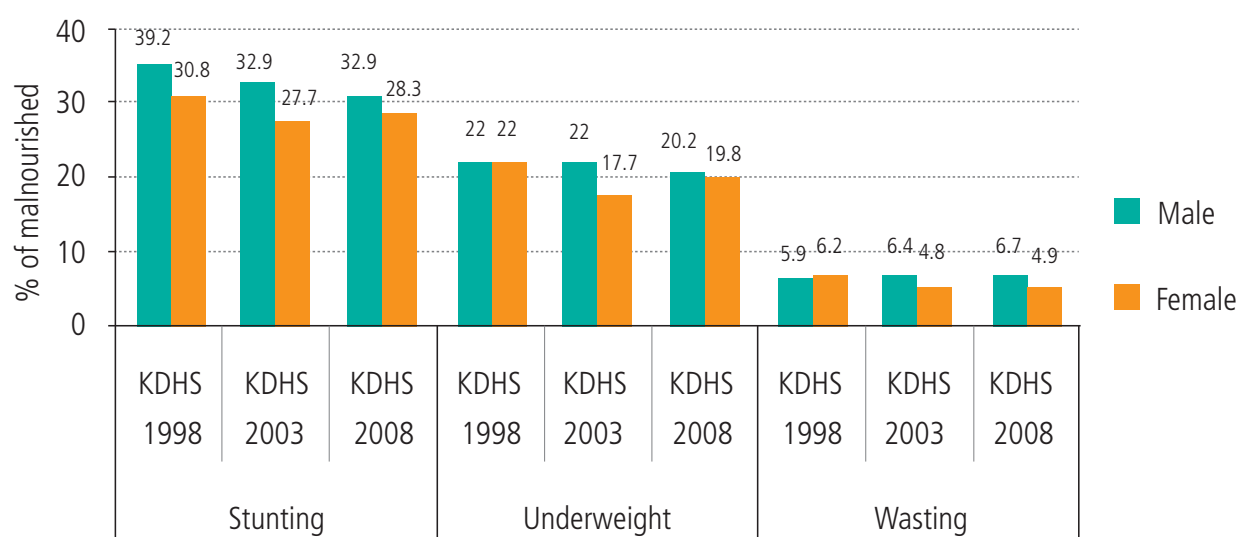
In the past 10 years, Kenya has experienced a rapid increase in the number of health facilities due to increased investment in health through devolved funds. There are currently 8,250 health facilities, of which 46% are managed by the Ministry of Health (MoH, MFL, 2013). It is estimated that 18% of the population, however, lives more than 5 kilometers from a health facility. Disparities exist across regions with the majority of those in rural areas and northern arid and semi-arid regions travelling more than 50 kilometers to access basic health services. The 2010 Kenya Service Providers Assessment (KSPA) estimates that 94% of the health facilities provide treatment for sick children; however, only 70% provide all of the three basic services: immunization, outpatient services, and growth monitoring.

Only 50% of children with suspected pneumonia are treated with antibiotics. Less than 1% of children with diarrhoea are provided Zinc and only 39% are provided oral rehydration salts (ORS) (KDHS, 2008/09). A similar pattern is observed in care-seeking behaviours, with only 49% of children with diarrhoea and 56% with acute respiratory tract infections (ARIs) seeking advice or treatment from health facilities or qualified health care providers (KDHS, 2008-09).

Malaria remains a major killer among children less than 5 years in Kenya and accounts for nearly 60% of all observed morbidity among pregnant women in malaria-endemic regions. Seventy percent of the population reside in malaria-endemic and highland epidemic-prone regions and are considered at risk of malaria (Malaria Indicator Survey, 2011). The 2008–09 DHS found that 46.7% of children younger than age 5 years sleep under an insecticide-treated net (ITN). In the malaria-endemic regions of Nyanza and Western, respectively, 61% and 55% of children younger than 5 years of age sleep under an ITN. It is estimated that only 50% of children in these regions seek treatment from health facilities within 48 hours of developing a fever, with only 11% taking the recommended antimalarial Artemisinin Combination Therapy (ACT). Access to recommended treatment/care for the sick child is thus still limited in Kenya, with low education, poverty and residence in rural areas as the main social determinants.

Malnutrition in Kenya remains a big public health problem, leading to poor quality of life, death and high economic losses. The high burden of malnutrition in Kenya is a threat to achieving MDGs and Vision 2030. According to the 2008–09 KDHS, 35% of children under the age of 5 years are stunted; 16% are underweight; and 7% are wasted. Figure 1 indicates the trend of malnutrition among children under the age of 5 years from 1998 to 2008/09, which shows little or no improvement for both males and females. The male child is more affected. Today in Kenya, an estimated 2.1 million children are stunted, which is a serious national development concern, as these children will never reach their full physical and mental potential.

Figure 1: The trends of malnutrition among children under the age of five years from 1993 to 2008/09



(Source: KDHS)

Regional disparities in nutrition indicators in Kenya are significant with North Eastern province having the highest proportion of children exhibiting severe wasting (8%) and Eastern province having the highest level of stunted children (44%).

### Care seeking

The KDHS 2008–09 shows that only 56% of children with symptoms of pneumonia were taken to a health facility, with urban/rural disparity 66% and 54% respectively. Of these, only 50% received antibiotic treatment. Regional differences exist in pneumonia prevalence, with Coast Province having the highest (13%), and the lowest in Eastern and Western Provinces (6%).

The poor care-seeking practices coupled with low coverage of some of the high-impact interventions, such as exclusive breastfeeding (EBF), ITN use, vitamin A supplementation, hand washing and sanitation, result in high morbidity and mortality at the community level. According to KDHS 2008–09, vitamin A deficiency among children under 5 years stands at 84.4%. Data on infant and young child nutrition shows that the median duration of breastfeeding has remained at 21 months as compared to the recommended 24 months. Although the data indicate a significant improvement in EBF of children less than 6 months old, which is at 32% compared to 11%, there is still need for improvement (KDHS 2003 and 2008–09). The iCCM approach is the most feasible way of scaling up the implementation of the high-impact child survival interventions.

Improvements in care at health facilities through IMCI and other initiatives are necessary but not sufficient. Children from rural communities and from the poorest families are less likely to be brought to health facilities. Therefore, the most appropriate way of increasing access to treatment for the common childhood illnesses is through a community-based approach, using human resources available at community level (e.g., CHWs and Community Health Extension Workers [CHEWs]).

## 2.3 Gap Analysis

Analysis of health systems performance in delivering high-impact iCCM interventions is critical to effective programming. A total of six health systems determinants (availability of commodities and supplies, availability of skilled human resources, geographic or physical access to services, utilization of services, continuity of delivery of services and quality/effective coverage) were used to analyze current health systems bottlenecks in delivering effective quality interventions against iCCM-targeted conditions. For each determinant, at least one indicator was used to analyze bottlenecks or constraints in performance.

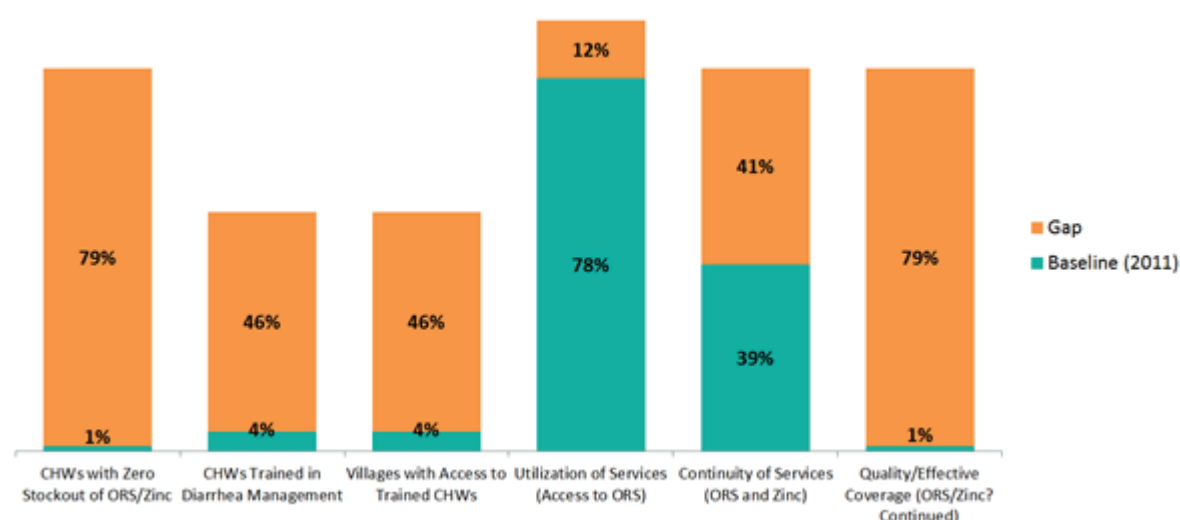
### Bottleneck analysis

To better understand the major constraints or bottlenecks in the service delivery pathway, a bottleneck analysis was undertaken at a regional iCCM Gap Analysis workshop held at African Medical and Research Foundation (AMREF) in Kenya in June 2012. Baseline data for each indicator linked to the determinants were obtained from published surveys or studies where available or through expert opinion of key health managers for each determinant. Graphs were developed to better visualize the magnitude of gaps for each determinant.

### Community Case Management: ORS and Zinc

A bottleneck Analysis for effective coverage of management of diarrhoea (Figure 2) indicates major constraints in availability of Zinc as well as trained CHWs to deliver treatment for diarrhoea. Zinc has until recently been a prescription-only drug thereby limiting its availability at community level. Although Oral Rehydration Solution (ORS) has been available at health facilities, it has not been made available to CHWs. Less than 1% of the targeted 80% of CHWs have stocks of ORS. This, along with the lack of adequate numbers of trained CHWs in home management of diarrhoea, results in less than 1% of children with diarrhoea receiving treatment Zinc and 39% receiving ORS (KDHS, 2008–09).

Figure 2: Health systems bottlenecks: diarrhea treatment (ORS/ZINC)

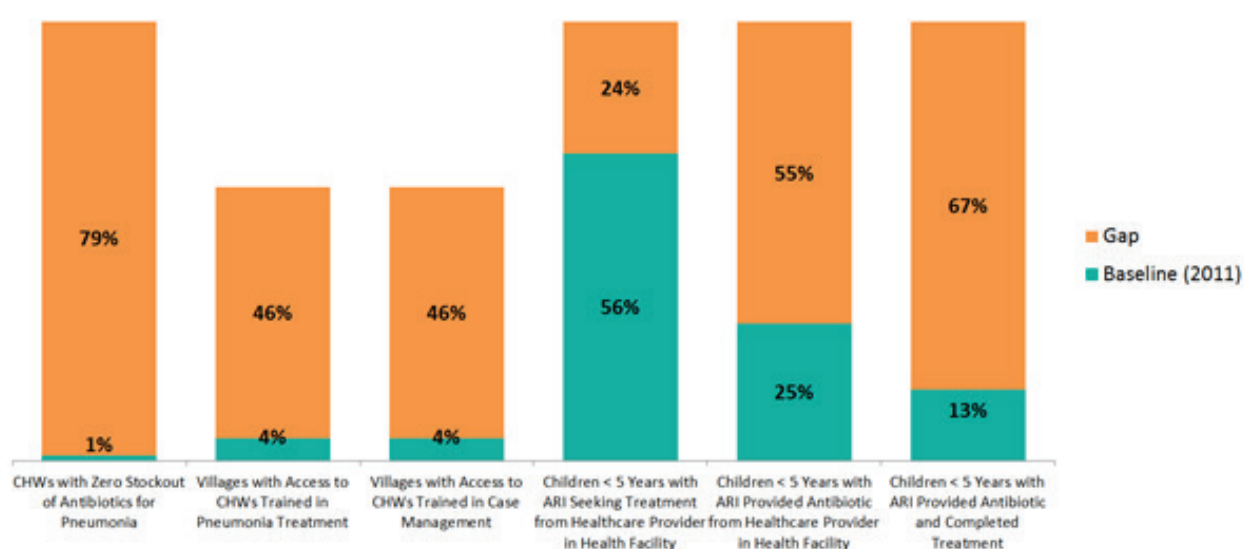


(Source: Kenya Gap Analysis and filling the gaps workshop in Nairobi, unpublished report, UNICEF KCO & AMREF Kenya, 2012)

## Community Case Management for pneumonia with antibiotics

An analysis of bottlenecks on the use of antibiotics for management of pneumonia (Figure 3) indicates major gaps in the availability of antibiotics to CHWs and access to CHWs trained in case management due to policy restriction. The majority of children with suspected pneumonia do not have access to timely and appropriate treatment. A similar scenario is seen in the use of ACT for malaria treatment.

Figure 3: Health systems bottlenecks: Pneumonia treatment

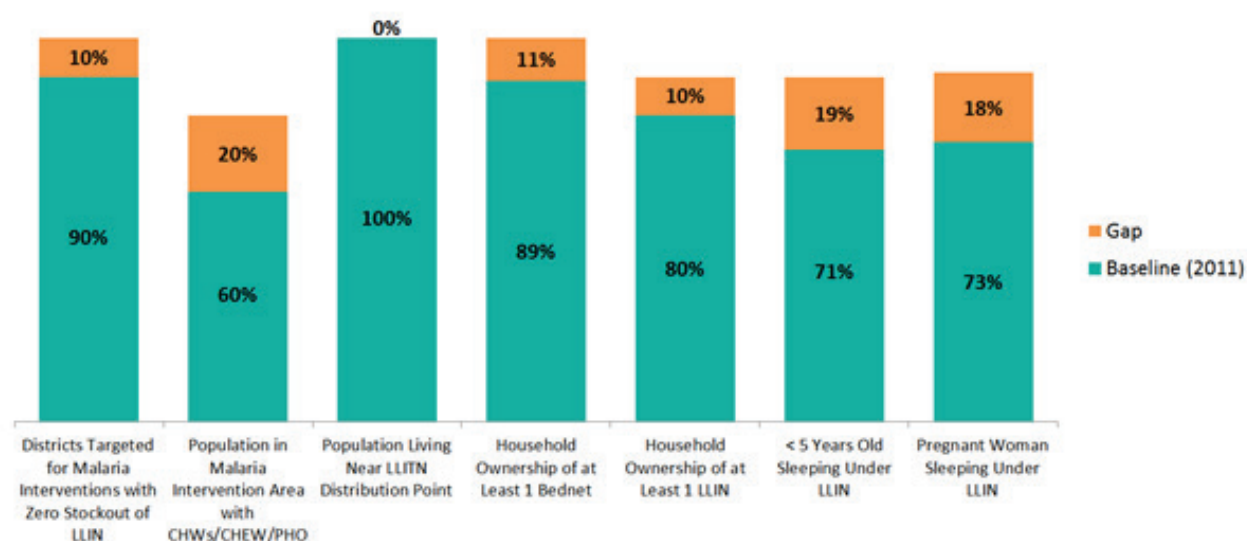


(Source: Kenya Gap Analysis and filling the gaps workshop in Nairobi, unpublished report, UNICEF KCO & AMREF Kenya, 2012)

## Access to preventive interventions (ITN)

ITN use (sleeping under an ITN) by children and pregnant women was analyzed to identify the bottlenecks within the health systems for preventive interventions targeting the main killers of children (Figure 4). Although ITNs are available in 80% of households, only 70% of children and pregnant women sleep under them. The availability of adequate human resource to deliver messages at the household and community levels in addition to other behaviour-changing approaches is also a constraint to effective use.

Figure 4: Health systems bottlenecks: Malaria prevention (ITN)



(Source: Kenya Gap Analysis and filling the gaps workshop in Nairobi, unpublished report, UNICEF KCO & AMREF Kenya, 2012)

### Root cause analysis for bottlenecks

The major root causes for the existence of the above bottlenecks include the following:

- There was no national policy for use of antibiotics, ACT and Zinc at community level.
- Few CHWs are trained to deliver treatment at the community level, including prescribing ORS. This is mainly due to lack of training, job-aids, mentorship, and supportive supervision.
- The retention system for CHWs is poor due to a weak incentive system.
- iCCM is yet to be implemented at scale due to inadequate funding and lack of clear guidelines, implementation framework and plan of action.
- Inadequate knowledge of key danger signs at the household level affects timely care seeking for sick children and causes poor utilization of preventive interventions.
- There is a gap in the quality of services at health facilities: stockouts are linked to a weak commodity management system; there are few diagnostic facilities to confirm malaria diagnosis; there is inadequate interaction between caregivers and health workers; among healthcare providers at health facilities, there is a gap in knowledge, skills and practice.

### 2.3.3 Emerging opportunities

By the end of the first quarter of the 2012–2013 financial year, Kenya had registered a total of 30.4 million subscriptions in the mobile telephone market segment, giving an overall mobile phone penetration of 78% nationwide. The mobile data/Internet subscriptions continued to dominate the Internet market contributing to 99.2% of the total Internet data subscriptions. Estimated Internet users stand at 16.2 million. The tremendous growth in the Internet/data market segment presents several opportunities in the health field.

If the trend continues based on current data, then the estimated projection is that a majority of the households will be progressively shifting to more feature-friendly phones. This suggests that more dynamic health solutions can be applied through the use of mobile technology (through hybrid solutions that combine Short Message Service (SMS) and Android-based solutions). The increased Internet access also implies that there is an opportunity to explore how to empower community health workers with technology that can enable them to carry out basic diagnosis while linked to a central point of medical experts.

The mobile money platform availed by the different providers also presents a unique emerging opportunity to explore solutions at the community level that are geared at costs subsidies for the marginalized and vulnerable population and or exploring ways the community can save towards accessing different medical services in the form of micro health insurance and health vouchers. The facility can also be used to address effective payment (stipends) to community health workers and or other community level staff who are supporting different initiatives.

There is an emerging cadre of CHWs and, with this development, opportunities to execute action research expand. Those opportunities include progressively exploring how the cadre can be empowered to execute basic treatment at household level; thereby contributing to the reduction in the loss of lives at the community level (CCK, 2013).

In conclusion, the mobile platform can be used to institute innovative solutions to increase coverage of high-impact, low-cost interventions at the community level, using CHWs, as well as health care workers at the facility level.

# 03

## Evidence and Experiences in Community Case Management of Childhood Illness

### 3.1 Global experiences

**Evidence for iCCM:** The Lancet Child Survival Series (2003) defined a list of key high-impact interventions, including iCCM, for child survival. Global commitment for community case management (CCM) is evident in the WHO and UNICEF 2008 Global Action Plan for Prevention and Control of Pneumonia (GAPP). The 2012 iCCM joint statement proposes evidence-based program elements, implementation tools and commitment to provide technical support in this respect (WHO/UNICEF, 2012).

There is sufficient evidence for iCCM as a high-impact intervention; ORS given to a sick child with diarrhoea can reduce mortality due to severe diarrhoea by up to 93% (Munos, 2010); Zinc is effective in reduction of mortality from diarrhoea by up to 23% (Fischer Walker, et al., 2010). There is also evidence that CCM of malaria can reduce overall and malaria specific mortality by 40% and 60%, respectively (Kidane & Morrow, 2000); Sirima, et al., 2003).

A review by CHERG showed that CCM of pneumonia could result in a reduction of up to 70% mortality of children (Theodoratou, 2010). In Nepal, the government used illiterate female health volunteers and community health workers to give Septrin (an antibiotic), ORS, and Zinc to treat patients with pneumonia and diarrhoea with dehydration. Results showed that 98% of children were given the correct dosage of Septrin with timely follow-up. Correct treatment of pneumonia in intervention districts was two times that in control districts (JSI/NFHP, 2006).

In Ethiopia, CHWs correctly treated two times the number of sick children with diarrhoea, pneumonia and malaria as compared to facility health workers. In addition, during the project period, the number of sick children being brought to see CHWs for treatment increased for all three diseases. CHWs also showed competence when assessed for their skills at intervals, hence supporting the observation that they are competent when properly trained and well-supervised (Degefie, et al., 2009). In Zambia, a cluster, randomized-control trial study concluded that CHWs, given training together with a job aid, can improve malaria diagnosis at the community level in comparison to a job aid alone or training alone (Harvey, et al., 2008). In Tanzania,

(Mubi, et al., 2010), a randomized crossover trial found increased referral rates for patients with malaria in the Rapid Diagnostic Tests (RDT) weeks; increased adherence to treatment informed by RDT results compared to pure clinical diagnosis; and reduced irrational use of ACTs in negative patients. They concluded that RDTs can improve early and well-targeted ACT treatment in malaria patients at the community level.

## Global Partnerships

Global consortia in support of iCCM have been formed. The **iCCM Task Force** is made up of a steering committee, which includes WHO, UNICEF, USAID and Save the Children. It hosts the CCM Central Web site, which shares global and country resources and experiences in CCM. Other global groups involved in CCM are the **Global Action Plan for the Prevention and Control of Pneumonia (GAPP)**, **Roll Back Malaria (RBM) Partnership**, Canadian International Development Agency (CIDA) and the Bill & Melinda Gates Foundation. The CORE Group played a key role in the development of the “CCM Essential Guide for Program Managers” and has hosted a CCM Technical Advisory Group that outlined key bottlenecks for iCCM in developing countries and proposed several strategies (including mobile-Health) for better country coordination, CHW supervision and supply chain management. The Bill & Melinda Gates Foundation support the “Supply Chain for CCM” projects which strive to demonstrate that supply chain constraints can be overcome, and also the “Inscale” project, which provides CCM in Mozambique and Uganda.

## Summary of Programmatic evidence

Programmatic evidence for successful iCCM implementation has been generated in Ethiopia, Rwanda, Nepal, Mali, Senegal, Uganda and Pakistan. Examples include the following.

- **Ethiopia:** CHWs correctly treated 2.5 times the number of children with three diseases compared to health centre workers (Degefie, et al., 2009)
- **Rwanda:** Outcomes of over 97% recovery rate after successful treatment for all three diseases (Concern Worldwide, 2011)
- **Nepal:** 98% of children with pneumonia received the correct Septrin treatment dosage by CHWs, who also provided timely follow-up ((JSI/NFHP, 2006)
- **Mali:** CHWs gave correct age-appropriate Zinc dosage and the correct treatment schedule as well as health centre workers (Winch, 2006)
- **Zambia:** CHWs were competent in the use of RDTs for diagnosis of malaria, and in using RDTs in decision making for referral of cases to the next level of care (Harvey, et al., 2008)

The following Global Benchmarks (William, T., et al., 2013) have been agreed upon by global partners to be applied by countries implementing iCCM:

- Coordination and Policy Setting
- Financing
- Human Resources
- Supply Chain Management
- Service Delivery and Referral
- Communication and Social Mobilization
- Supervision and Performance Quality Assurance
- M&E and Health Information Systems

The benchmarks are outlined in more detail in Annex 1.

## 3.2 Experiences in Kenya

### 3.2.1 Community Health Strategy as a platform for Community Case Management

In 2006, the Government of Kenya introduced Community Health Strategy to re-engineer Primary Health Care (PHC). PHC had been rolled out in 1980 after adoption by World Health Assembly in 1979 following the Alma Ata Declaration of 1978. PHC strategy failed to deliver Health For All (HFA) by the year 2000. The Community Health Strategy model for Kenya was developed to complement PHC in reversing the declining health indicators as articulated in National Health Sector Strategic Plan II. The distinct features of Community Health Strategy that strengthens the PHC pillars include:

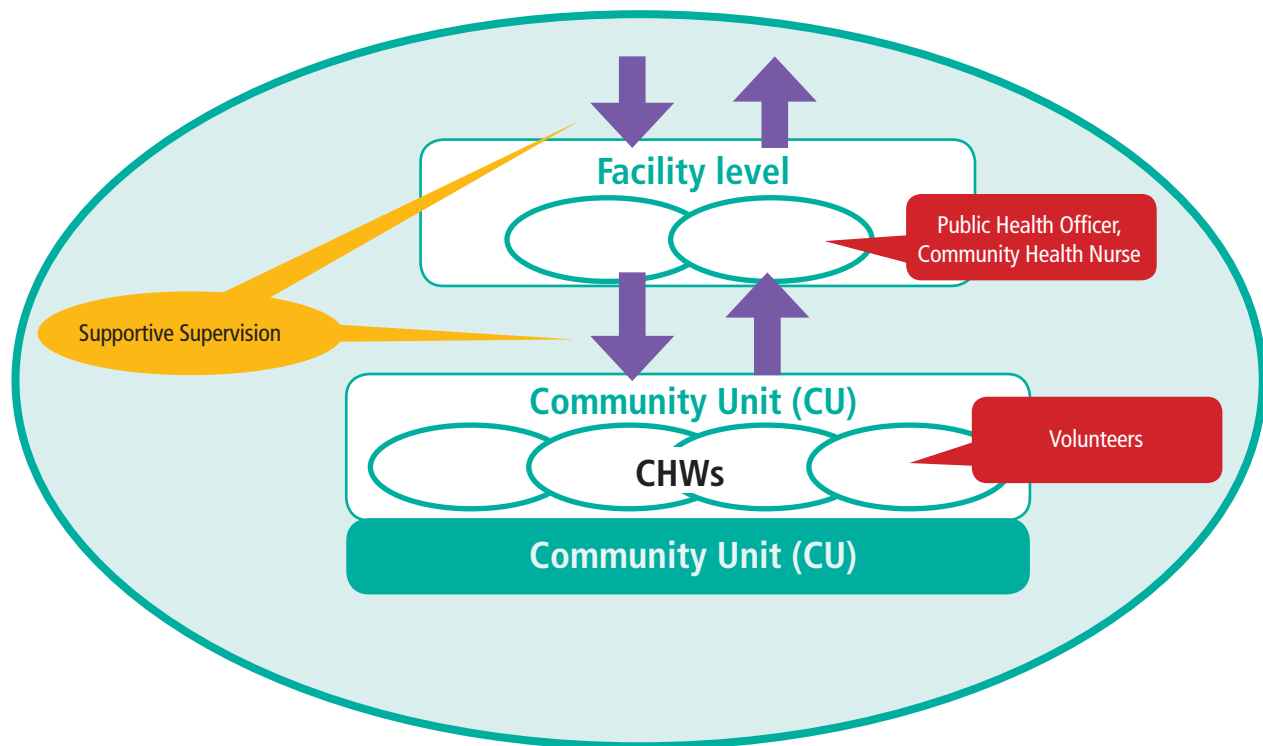
- Community participation: Empowerment of communities to manage their own health (training, volunteerism, participatory planning and implementation, motivation, governance structure and linkage to existing health system)
- Intersectoral collaboration: Stakeholders' forum at all levels
- Appropriate technology: Preference given to high-impact interventions
- Empowerment of individuals at the household level to take charge of managing their own health

The CHS model is based on models from India, Iran, Ethiopia, Malawi, Rwanda and other community initiatives proven to deliver community-level services.

### 3.2.1.1 Community health strategy model

The structure of CHS (Figure 5) is made operational through a Community Unit, which serves a population of 5,000. CHWs offer services at the community level under supervision from the CHEWs. The governance structure for the unit includes: Community Health Committee, a community-based health information system linked to the DHIS, commodity supply system and CHEWS deployed with a mandate to supervise the CHWs.

Figure 5: Community Health Strategy model illustration



### 3.2.1.2 Community entry process

CHS has defined the community entry process for health action using the following steps:

**STEP 1:** Creating awareness

**STEP 2:** Situation analysis

**STEP 3:** Planning actions for improving the community health status

### **3.2.1.3 Training of CHEWs and CHWs**

To be more effective and efficient, appropriate training is needed. CHWs undergo an intensive 10-day basic training covering the following modules:

- Introduction to Community Health and Development
- Communication, Advocacy and Social Mobilization
- Community Governance and Coordination
- Basic Health Promotion and Disease Prevention
- Basic Case Management and Life-Saving Skills
- Community Health Information Management (CHIM)

Following the basic training, CHWs are taken through the technical training on the following modules:

- Water, Sanitation and Hygiene
- Community Nutrition
- iCCM Maternal and Newborn Health
- Family Planning
- HIV/AIDS, Tuberculosis and Malaria
- Noncommunicable Diseases

#### **Data tools used at community level**

CHS uses evidence-based interventions. As part of this, data is collected and used in the community for evidence-based planning and also to inform policy. The following data tools are used at the community level to collect data:

- MoH 513 CHIS Household Register
- MoH 514 CHW Service Delivery Log Book
- MoH 515 CHEW Summary
- MoH 516 CHIS Chalk Board

### 3.2.2. Lessons learnt from specific program interventions

Implementation of community interventions by various programmes in Kenya has learnt many lessons.

**C-IMCI:** Resource mobilization at country level is feasible; however, government leadership in policy formulation and coordination, stakeholder partnerships, and strong advocacy are all key ingredients for this mobilization.

**Nutrition:** One implementation plan, one coordinating authority and one M&E plan can ensure effective and efficient programming and success in community nutrition interventions.

**Malaria:** Evidence from pilot studies show that CHWs can give efficient treatment at the community level when trained and supervised properly.

**Maternal and newborn health:** The current focus on maternal and newborn care at the facility level has led to some reduction in mortality within this life cohort. We can compliment these efforts through interventions at the community level such as CHW home visits. iCCM and community maternal-newborn care come in to address this gap.

**Immunization:** The Reach Every District (RED) strategy has been used to reach all the targeted yet unvaccinated children in the catchment area. Specifically, strengthening community linkages with immunization services through use of CHWs has led to improvement in defaulter tracing and referrals of unimmunized children to the facility. The resultant outcome is improved immunization coverages in the catchment area.

# 04

## iCCM Operational Strategy

### 4.1 iCCM Vision, Goal and objectives

**Vision:** A Kenya where communities have zero tolerance for preventable deaths of children.

**Goal:** The goal of the Kenya iCCM strategy is to contribute to the reduction of child morbidity and mortality by providing quality community case management for children stricken with malaria, pneumonia, diarrhoea, and malnutrition, and identifying and referring newborns for skilled care services.

**Overall objective:** To contribute to increased access to appropriate and timely management (within 24 hours) of malaria, pneumonia, diarrhoea, and, malnutrition in children age 5 years and younger, and to facilitate assesment, management and referral of newborns.

#### Intermediate objectives and targets

1. Policy and guidelines on community use of antibiotics in the treatment of pneumonia, ACT and RDT in the treatment of malaria and use of Zinc and ORS in the treatment of diarrhoea are adopted by the government by the end of 2013.
2. The proportion of caregivers and community members that have positive health behaviours and practices (e.g., ITN use, completed referral for pneumonia, hand-washing, safe disposal of infant faecal matter, exclusive breast feeding) is increased to at least 80% by 2018.
3. Eighty percent of CHWs and CHEWs are trained on iCCM and are actively providing iCCM in target areas by 2018.
4. At least 80% of health facilities in iCCM target areas have adequate iCCM commodities and supplies and health workers trained on IMCI by 2018.
5. At least 80% of community units implementing iCCM have zero stock-outs of essential medicines/supplies for iCCM by 2018.

6. At least 80% of sick children and newborns who are recommended for referral are received at the next level of care by 2018.
7. At least 80% of newborns receive a home visit within 48 hours of birth by a trained CHW who administers the danger signs check list for the newborn and mother and counsel or refer as necessary, by 2018.
8. Eighty percent of community units implementing iCCM have timely reporting on identified iCCM indicators by 2018.
9. In 100% of counties implementing iCCM, joint annual planning and review for iCCM is undertaken by various programmes (e.g., Child Health, Malaria, Nutrition, Water, Hygiene & Sanitation, and Health Promotion) as part of the community strategy implementation.

## 4.2 Scope of iCCM in Kenya

The scope of iCCM in Kenya (Table 1) is outlined below based upon the country situation and lessons learnt from existing community-based interventions. This scope takes into account global recommendations as well as national policies.

Table 1: iCCM Scope in Kenya

Conditions	Interventions	Comments
Diarrhoea	ORS Zinc	Need to procure ORS/zinc combination
Malaria	ACT RDT	Diagnosis and treatment of malaria based on existing policy and guidelines; continuing monitoring and evaluation of ACT and RDT roll out
Pneumonia	Assessment, classification, management and referral	Implementation research on assessment, classification and treatment by CHWs
Malnutrition	Screening with MUAC tapes	Referral of acute malnutrition and community-level follow up to be ensured  Ready to Use Therapeutic Food (RUTF) at community level
Newborn health	Administration of newborn danger signs checklist for newborn, mother and their referral	Home visit by CHWs within day 1, 3 and 7 to assess to assess the newborn and the mother. Refer to Newborn Checklist in M&E Plan (Annex 7)
Positive healthy behaviours and practices	ITN use, hand-washing, household water treatment, safe disposal of infant faecal matter, exclusive breastfeeding	Focus on community dialogue, interpersonal communication and use of social channels

The legal authorization for use of treatment interventions at community level is found in Annex 3 and 4.

## 4.3 Key implementation principles

In the implementation of iCCM, the following principles will be adopted:

- Effective government leadership and stewardship role
- Building upon CHS targeting hard-to-reach and marginalized communities
- Incremental scaling up of iCCM packages based upon policy environment and availability of resources
- Coordination of stakeholders and implementing partners
- Use of standardized MoH tools and approaches by implementing partners
- An integrated approach to the planning, implementation, and M&E of iCCM activities by all programmes (e.g., child health, immunization, nutrition, maternal and newborn health, malaria, hygiene and sanitation)
- Community participation and ownership of iCCM
- Adequate capacity building at all levels

## 4.4 iCCM Priority Activities at National, County, Sub-County and Community levels

### 4.4.1 Implementation Framework and Steps

In the implementation of iCCM, the government and partners will apply a common framework and share common tools. This framework, implementation principles and implementation steps are outlined as follows:

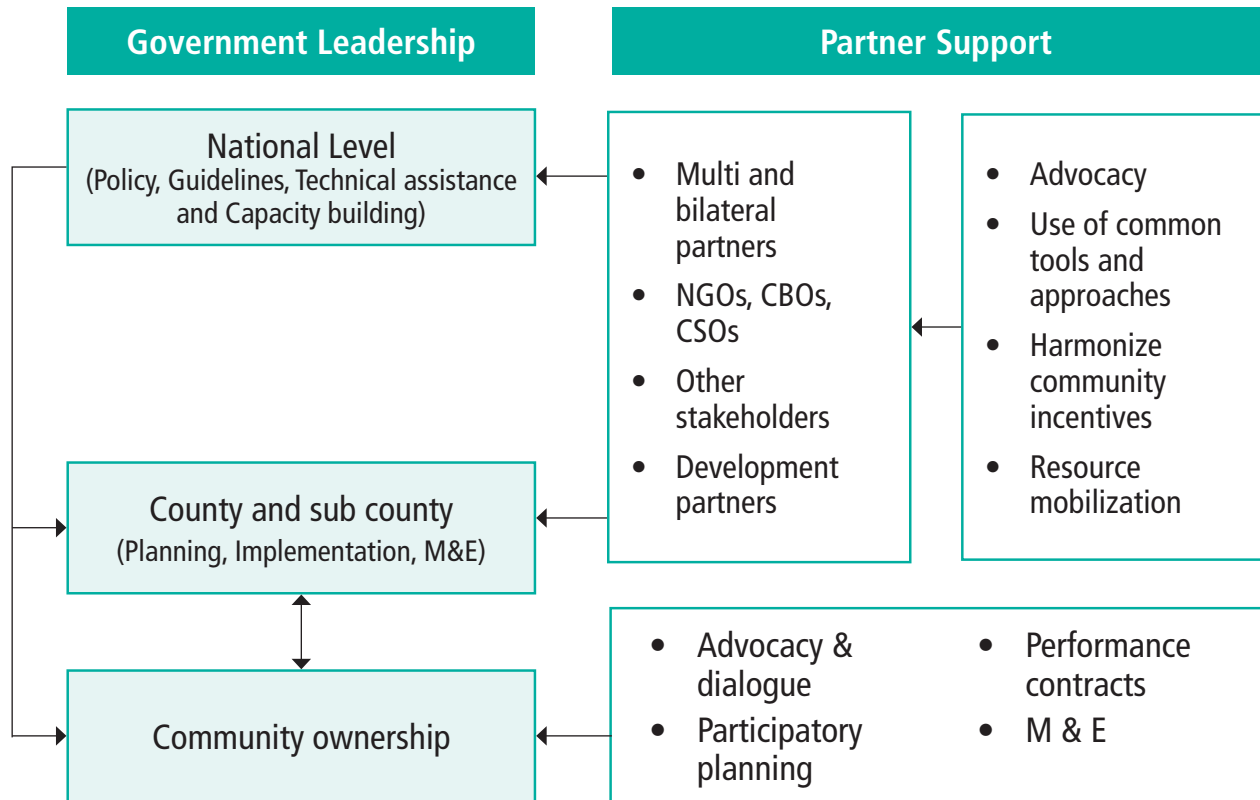
#### **Implementation framework**

The implementation of iCCM is a government-led process with partners in a supporting role (Figure 6). The overall policy framework, guidance and technical assistance will be provided by the national level, whereas planning and implementation in communities will be overseen at the county and sub-county levels.

iCCM is a treatment strategy that has been adopted by the government to be scaled up in all counties with priority focus on the hard-to-reach communities. Community ownership of iCCM activities is critical. Partners supporting the implementation of this strategy are expected to harmonize their interventions and use standardized MoH tools and approaches.

The figure below illustrates the relationships.

Figure 6: iCCM Implementation Framework



#### 4.4.2 Implementation Steps

The following steps (Table 2) have been identified at the national level for adaptation at the county, sub-county and community levels.

**Table 2: iCCM Implementation Steps**

STEPS	IMPLEMENTATION GUIDELINES FOR NATIONAL AND COUNTY ADAPTATION
STEP 1	<p>ESTABLISHMENT OF A NATIONAL iCCM TASK FORCE AND PLAN</p> <ul style="list-style-type: none"> <li>National-level sensitization of MOH heads of departments /divisions, line ministries and other stakeholders on CHS and iCCM</li> <li>CHS and iCCM partner mapping through MOH and Stakeholder consultations for joint planning and implementation. Resource gap analysis</li> <li>Formulation of Policies and Guidelines</li> <li>Training of national and county facilitators</li> <li>County-level advocacy and sensitization of county health teams, line ministries and other partners</li> <li>Development and review of tools</li> </ul>
STEP 2	<p>DEVELOPMENT OF COUNTY iCCM IMPLEMENTATION PLANS</p> <ul style="list-style-type: none"> <li>Situation analysis (county health data) and capacity needs assessment</li> <li>Sub-county partner mapping for CHS and iCCM</li> <li>Sensitization and orientation of health workers, line ministries and other partners And extension workers from other sectors</li> <li>Selection and training of sub-county TOTs</li> <li>Agreement on criteria for selection of target community units and CHWs</li> <li>Establishment and strengthening of commodity and supply chain management</li> <li>Defining CHW incentives and mobilization of resources</li> <li>Ensuring quality assurance and effective management (including supportive supervision, mentoring, M&amp;E)</li> </ul>
STEP 3	<p>SUB-COUNTY LEVEL READINESS</p> <ul style="list-style-type: none"> <li>Orientation of sub-county health management teams (SCHMTs) and partners to CHS and iCCM</li> <li>Sensitization of primary level healthcare workers</li> <li>Strengthening of commodity supply chain management at community and primary care levels</li> <li>Management and monitoring of CHW incentives; administering performance-based incentives</li> <li>Ensuring quality assurance and effective management (including supportive supervision, mentoring, M&amp;E)</li> </ul>
STEP 4	<p>IMPLEMENTATION: COMMUNITY ENTRY</p> <ul style="list-style-type: none"> <li>Community-level advocacy for acceptance, participation and ownership targeting community leaders, women groups and gatekeepers etc</li> <li>Sensitization of CHCs, CHEWs, and health workers on iCCM</li> <li>Selection and training of CHEWs and CHWs on iCCM (including commodity management, communication and use of the treatment register)</li> <li>Distribution of tools and iCCM commodities and supplies</li> <li>Post-training follow-up of CHWs (4-6 weeks post training) and mentoring</li> <li>On-going community mobilization and sensitization using all communication channels – Barazas, religious institutions, schools, etc.</li> </ul>
STEP 5	<p>QUALITY ASSURANCE, MONITORING AND EVALUATION</p> <ul style="list-style-type: none"> <li>Administer Sub County Health Management Team (SCHMT) supervisory check list</li> <li>Administer CHEW supervisory check list</li> <li>Monitor use of CHW iCCM Treatment Register</li> <li>Monitor appropriate use of iCCM medicines and Pharmacovigilance</li> <li>Report and use data for community level-advocacy and action; also feed data into HMIS</li> <li>Perform regular monitoring, quarterly and annual reviews</li> <li>Provide documentation, reporting and feedback to communities and to stakeholders</li> </ul>

### 4.4.3 Criteria for selection of community Units and Community Health Workers

#### Selection of community units

The following criteria shall be applied in the selection of CUs targeted for implementation of iCCM:

- CU's which have been established according to the CHS guidelines
- CU'S which have CHW's already trained on the basic modules in CHS using the national curriculum (Where CUs have not been established, it is essential to first establish these units and conduct the basic CHS training prior to training identified CHWs on iCCM.)
- Prioritization based on maternal, newborn and child health indicators and hard-to-reach communities

#### Selection of Community Health Workers

The following criteria shall be applied in the selection of CHWs to be trained on iCCM in line with CHS guidelines.

- Permanent residents in the community
- Mature and responsible members of the community
- Acceptable and respected members of the community
- Self-supporting members of the community
- Ready and willing to volunteer services to the community
- Form four leaver and literate, unless situation does not allow
- Strong leadership qualities and skills

### 4.4.4 Policy and Coordination

The goal and objectives of the iCCM strategy can be achieved if the policy environment is supportive and if there is active involvement of all partners from both public and private sectors, along with strong leadership by the government.

Policy change is critical to allow CHWs to administer essential iCCM medicines, especially antibiotics in the treatment of pneumonia.

Improved coordination and better use of resources would result in minimizing duplication of efforts and ensuring the scale-up of iCCM activities leading to increased access to quality of care, especially by vulnerable groups and hard-to-reach communities.

## Coordination structures

In the implementation of iCCM, existing coordination structures at various levels will be organized as outlined below:

**National Level:** iCCM will be part and parcel of the agenda for the relevant Interagency Coordinating Committees (ICC) (e.g., Child Health ICC, Malaria ICC and Community Health Services ICC). The ICCs will provide opportunities for advocacy and deliberations on the desired policy changes and for mobilization of resources for scaling up the implementation of iCCM.

The ICC's will report to the Health Sector Coordinating Committee (HSCC) where policy issues are discussed.

Further, a national iCCM Technical Working Group (TWG) has been established and will be strengthened to, inter-alia, support the coordination of partners. The Terms of Reference for this TWG are as follows:

- Undertake advocacy at all levels.
- Review the existing CHW tools to incorporate the iCCM indicators.
- Develop the criteria for selection of priority areas for iCCM implementation.
- Define the implementation framework and budget.
- Map partnerships and resources.
- Promote joint planning of iCCM activities by partners and national programmes.
- Provide oversight in monitoring, supportive supervision (quarterly and annual reviews) and evaluation.
- Develop and update a supervision checklist.
- Define the benchmark indicators for iCCM implementation and supervision (all levels).
- Document lessons learnt & best practices in iCCM.
- Ensure that training manuals and guidelines are up to date.
- Facilitate the training of the national TOTs.
- Strengthen the supply chain for iCCM commodities.

- Mobilize resources for iCCM.
- Coordinate with iCCM stakeholders.

The membership of iCCM TWG will include: Relevant Government divisions or Units, Donors, Partners and NGO's at National level, Donor organizations supporting MNCH activities in the country.

TWG will establish working committees and co-opt members according to need.

Advocacy is to be done to the to all levels of of government and partners for increased resource allocation.

DCHS will spearhead the CHS review and ensure inclusion of iCCM issues in the CHS document(s).

At the national level, regular progress reports and updates will be given to the iCCM stakeholders and the relevant ICCs. The systems that will ensure monitoring and evaluation of the iCCM implementation plan will be established and strengthened at all the levels through quarterly review meetings of the Annual Work Plans (AWP) at national, county and sub-county levels.

### **County and sub-county levels**

It is envisaged that in all targeted counties, joint annual planning for iCCM will be undertaken by various programmes, as part of CHS implementation.

Coordinated efforts to strengthen the AWP process and mainstream the iCCM package at the county and sub-county level are expected to yield results.

The county health management teams (CHMTs) and the sub-county health management teams (SCHMTs) will each provide leadership in the planning, implementation, M&E of iCCM activities.

In addition, stakeholder forums at county and sub-county levels will be strengthened to provide an opportunity for partners to share experiences and lessons learnt in the implementation of iCCM. The CHMTs and SCHMTs will undertake the following:

- Advocate for allocation of county and sub-county resources for maternal, newborn and child health services.
- Support the scale-up of implementation of the CHS.
- Ensure inclusion of iCCM in the county and sub-county AWP.
- Undertake partner mapping, especially on CHS and iCCM.
- Ensure that health facilities know their catchment populations and undertake quantification of commodities and supplies for CCM.

- Strengthen level 2 health facilities and build their capacity to support CCM and health promotion.
- Facilitate the training of trainers, recruitment of CHEWs and training of CHWs.
- Conduct supportive supervision to improve quality of iCCM activities.
- Ensure timely and complete reporting of community level data/information and reporting through HMIS.
- Conduct quarterly reviews of CHS implementation with a focus on iCCM.
- Facilitate CUs to advocate for iCCM implementation and promote community ownership.

#### 4.4.5 The roles of key stakeholders in iCCM implementation

Implementation of iCCM involves GOK and its partners. Table 3 outlines key stakeholders and their roles:

Table 3: iCCM Stakeholders and roles

Level	Stakeholders	Roles
National Level	GOK Ministry of Health and other Line Ministries (Water, Agriculture, Education); Provincial/ County Administration;	Policy and guidelines formulation Advocacy and social mobilization Development of training manuals, Job aids, M&E framework, etc.
	iCCM national TWG	Budgeting for iCCM for national level activities
	UN and bilateral agencies	Promote integrated support to iCCM by national programmes. Provide technical assistance and capacity building to counties
	KEMRI	Support capacity building
	Professional organizations e.g., Kenya Paediatric Association NGOs, CBOs	Quality assurance

Level	Stakeholders	Roles
<b>County Level</b>	<p>GOK: Ministry of Health and other Line Ministries (Water, Agriculture, Education); Regional/ County Administration; /CHMT;</p> <p>NGOs, CBOs; Religious institutions</p>	<p>Advocacy, social mobilization and communication for development. Mobilization of resources</p> <p>Budgeting for iCCM, Ensuring sub-counties include iCCM in Annual Work Plans</p> <p>Promoting integrated planning and support for iCCM implementation</p> <p>Strengthening Tier 2 – training of health workers on IMCI,</p> <p>Ensuring effective supply chain management</p> <p>Supporting capacity building activities in sub-counties</p> <p>Orientation of SCHMTs</p> <p>Distribution of training manuals and Job-aids</p> <p>Undertake M&amp;E.</p> <p>Quality assurance</p> <p>Ensure and Implement CHW incentives</p> <p>Promote active involvement of line ministries</p>
<b>Sub-County Level</b>	<p>GOK and partners; extension workers from Line Ministries (Water, Agriculture, Education); County Administration; PHMT/ CHMT; NGOs, CBOs; Religious institutions</p> <p>Community Health Committees (CHCs)</p> <p>CHEWs</p> <p>CHWs</p>	<p>Community level advocacy and social mobilization; communication for development</p> <p>Ensuring budgeting for iCCM, including for supplies and commodities; sub-counties to include iCCM in Annual Workplans</p> <p>Strengthening Tier 2 – training of health workers on IMCI, ensuring effective supply chain management</p> <p>Orientation of SCHMTs</p> <p>Support capacity building activities in sub-counties including TOTs, CHEWs and CHWs.</p> <p>Distribution of training manuals and job-aids</p> <p>Undertaking M&amp;E</p> <p>Quality assurance; supportive supervision</p> <p>Information gathering, analysis and reporting</p> <p>Implement CHW incentives</p> <p>Promote active involvement of line ministries (e.g. Education sector promoting role of school children as change agents in their homes and communities – promoting use of ITNs, promoting immunization for their siblings, hand washing; Water sector to promote household water treatment; Agriculture to promote food security, etc.).</p>

Level	Stakeholders	Roles
<b>Community Level</b>	CHMTs and SCHMTs	Community level advocacy, social mobilization; communication for development – holding of dialogue days
	CHCs	Information gathering, analysis and use at community level for advocacy
	Community leaders	Timely and complete reporting of information
	CHEWs	Promote parent to child initiative
	CHWs	Involve extension workers from line ministries to promote health in communities
	Extension workers from other sectors	Advocate for communities to have zero tolerance on deaths of children.
	Religious institutions	
	Schools	

#### 4.4.6 Human Resources: Building Capacity for iCCM implementation

Implementation of iCCM is closely linked with IMCI at the health facility level.

Capacity building for iCCM takes into account the health workers' capacity on IMCI at the link health facility which acts as the referral facility for the community unit. The health facility staff also provides other support, such as training, supervision, and logistics support.

iCCM training will be undertaken in functional CUs where training of the CHWs on the basic package has been done.

##### Training Components

During introduction of iCCM and scale-up, various cadres will be either oriented or trained (Tables 4 and 5), depending on their role in iCCM implementation. The components are:

- resource mobilization, advocacy and communication, leadership and governance (covered in the basic package);
- CCM (knowledge, skills and attitudes—competency-based assessment, classification, treatment and referral);
- data management;
- commodity management (kit storage, essential registers);
- mentorship and supportive supervision;
- community maternal and newborn care (home visits, health promotion, counseling on antenatal care, delivery, postnatal care).

Table 4: Groups targeted for iCCM orientation

Community level	Health Facility	Sub-County level	County level	National level
Service consumers Key stakeholders at all levels (IRCK, Ministry of Agriculture, social services, Ministry of Water, Ministry of Education)	All health providers	Sub-county governance, line ministries (Agriculture, water, social services, roads, Education) etc., health management teams, health care providers, partners.	County governance, line ministries (Agriculture, water, social services, roads, Education) etc., health management teams, health care providers, partners.	National health policy makers, department/division heads, line ministries, partners.

Table 5: Groups targeted for iCCM training

Community level	Health Facility	Sub-County level	County level	National level
CHWs	Health care workers and CHEWs partners	SCHMT and the health care providers, partners	County Government, CHMT and other stakeholders	Trainers and supervisors

## Materials for iCCM orientation and training

Materials for orientation:

- An orientation package (PowerPoint presentation) to be developed

Materials for training:

- iCCM CHW training manual (Participants' & Facilitators' manuals)
- CHW job aids
- Community Maternal and Newborn Health manual (CMNH)

For health workers:

- IMCI materials and the iCCM manuals

### 4.4.7 Communication and social mobilization for iCCM

Communication is a key element for behaviour change in health service provision. Changes in the Kenyan communication in the last decade have opened up new avenues and challenges for communication, which need to be reflected in an updated strategy. In any communication strategy it is important to have integrated and multimedia approaches to address different target groups.

In the recent past, there has been a steady shift from purely Information Education Communication/ product oriented activities to more process-driven, strategic, behavioural change communication

approaches. These allow for a more flexible approach for better identification of specific target behaviours and barriers and suggest communication activities, key messages, and supportive services needed to achieve and sustain the desired behaviour.

In recognition of the fact that behavioural change is sometimes dependent on the broader social context, a more integrated strategy that encompasses advocacy, communication, and social mobilization (ACSM) is now preferred to bring about sustainable social and individual behaviour change. Advocacy primarily targets public leaders or decision makers; communication generally targets individuals or subpopulations in the public; and social mobilization aims to secure support from the broad population and specific communities. Used together, the interventions are believed to produce more lasting change.

ACSM is increasingly becoming a valued and integrated element in a wide spectrum of disease prevention and control interventions. They are key to creating an enabling environment, motivating behavioural change, and mobilizing society to embrace and sustain a culture of disease prevention and control. This strategy is more integrated and encompassing to bring about sustainable social and individual behaviour change, and this will be important to address the cultural/social barriers in implementation of iCCM activities.

#### **4.4.7.1 Communication and social mobilization needs for iCCM**

The following are the identified communication and social mobilization needs:

- Review of existing information, education, and communication (IEC) materials for iCCM
- Identification of communication gaps for iCCM
- Identification of locally available communication channels
- Integration of iCCM into the sub-committee
- Harmonization of existing iCCM-related communication strategies
- Development of an iCCM communication implementation plan
- Updating of the communication module in the CHW training curriculum to include iCCM
- Orientation of ACSM members on the national iCCM implementation plan
- Training of CHEWs and CHWs on communication skills
- Audience segmentation and standardization of messages to facilitate better communication with audiences
- Documentation of lessons learnt

#### **4.4.7.2 Advocacy needs for iCCM in Kenya**

Identified advocacy needs include

- integration, harmonization and linkage of all iCCM interventions;

- intersectoral and intrasectoral collaboration in planning and implementation at all levels;
- environments that support long-term, sustainable change;
- engaging and motivating civic society around a common cause, to educate and provide support to communities and families;
- policy change for CHWs to treat pneumonia with antibiotics at community level;
- resource mobilization and allocation for implementation of iCCM plan;
- consolidation of funds from partners to avoid duplication;
- an advocacy plan (within the iCCM master budget that includes human resources, equipment and logistics);
- development of an economic impact model that shows the benefits of iCCM.

#### **4.4.7.3 Addressing the social determinants that affect iCCM implementation**

The identified social determinants include the following:

- Myths and misconceptions regarding health promotion, disease prevention and treatment
- Poverty, inequality, infrastructure, and water
- Level of education
- Lifestyle and socio-cultural barriers
- Economic hardships
- Hard to reach areas

To address sociocultural determinants are to

- carry out baseline formative research;
- develop culturally appropriate communication interventions by having structured community dialogue with targeted stakeholders, community leaders and gate keepers;
- use participatory methodologies to develop community action plans;
- create awareness in the community on the expanded work of CHWs;
- integrate positive community coping mechanisms in planning;
- identify best practices in the community and build on them; and
- establish exchange programmes for community leaders/gate keepers for learning purposes.

#### **4.4.7.4 Harmonization of Communication for Development (C4D): ACSM activities**

Harmonization of communication for development will involve:

- build on existing structures and ensure strategic packaging of information and messages
- community involvement in decision
- raising awareness, providing accurate information and motivating individual, communities and families to act and adopt the right practices and behaviours to enable service utilization
- influencing positively knowledge, attitudes, and care-seeking behaviours;
- mobilize support for the implementation of iCCM
- understand the facilitating factors and the barriers to achieving the desired outcomes and addressing them

#### **4.4.7.5 Communication capacity building at county and community levels**

Capacity building will be done among the following groups:

- County Health Management Teams
- Health workers and CHEWs
- CHC members and CHWs
- Community leaders (gate keepers)
- Caregivers including men

Annex 3 highlights key communication elements that CHWs need to know so as to build their capacity to effectively promote preventive practices in communities.

### **4.4.8 Supply Chain Management**

The goal of the Kenya National Pharmaceutical Policy (KNPP) (sessional paper No. 4 of 2012) is to be a well-governed pharmaceutical sector, making essential medicines and health technologies accessible to all Kenyans and contributing to social and economic development. In the revised KNPP it is noted that pharmaceutical sector problems have manifested in stock-outs of essential medicines amongst other challenges, such as: unauthorized dispensing, unlicensed outlets and inappropriate medicines utilization leading to wastage and poor health outcomes.

The overall objective of the policy is to ensure equitable access to essential medicines through the public, faith-based, NGO and private providers. This is especially important at the community level where CHWs are endeavoring to mitigate the problems of children dying from pneumonia, malaria, diarrhoea and malnutrition. The specific objectives outlined in the KNPP demonstrate the government's commitment to fulfillment of the overall objective and goal of the policy.

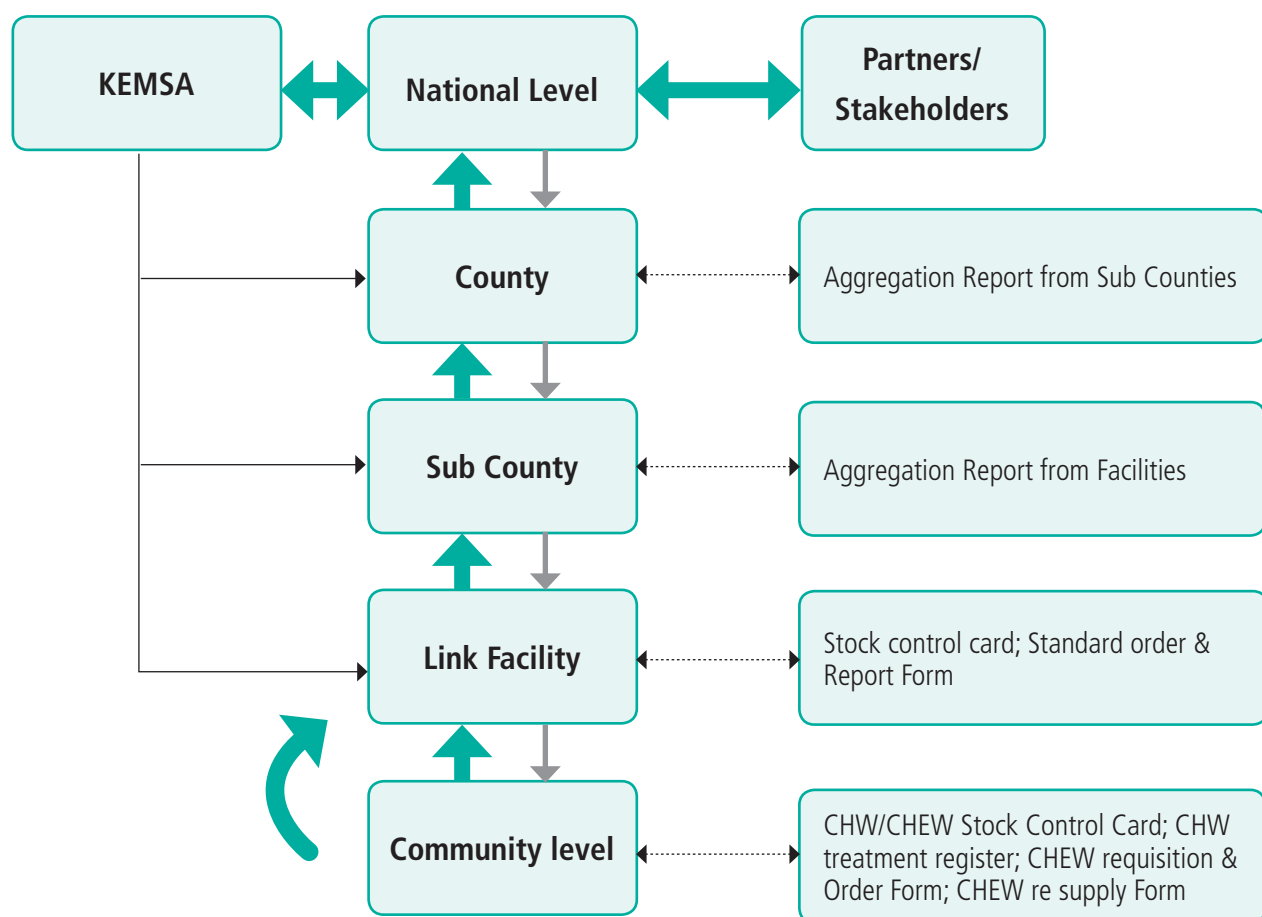
## The iCCM Logistics Management Information System

The collection of information occurs through tools developed for different levels and serving different functions. The set of tools developed for collecting information at the community and link facility level include:

1. CHW treatment after treatment and tracking register
2. CHW iCCM Monthly Summary
3. CHW/CHEW stock control card
4. CHEW requisition and order form
5. CHEW resupply form
6. CHEW/CHW inventory card

The illustration below shows the logistics management information system, with information from the lower levels feeding upwards to inform decision making on the supply chain system. The higher levels also give information (feedback) to the lower levels, as shown by the solid line pointing downwards.

Figure 7: iCCM Logistics Management Information System Flow chart



At the sub-county and county levels, there will be aggregation reports of information transmitted from the community and link facility levels.

The planning for logistics takes place at the national level using this information, hence forecasting and quantification (F&Q). This F&Q is consolidated from GOK programmes (e.g., Division of Malaria Control for ITNs, RDTs and ACTs; Division of Child and Adolescent Health for Zinc and ORS). This information is also useful for the national and county level to use for other functions, such as strategic planning, resource allocation and health system monitoring.

KEMSA, will provide policies, technical assistance and capacity for:

- Forecasting & Quantification,
- Commodity procurement and supply
- Supply chain system monitoring

There is need for high-level advocacy with policy and decision makers to prioritize: a streamlined logistics management information system (LMIS); allocation of resources for iCCM commodities; and F&Q to include iCCM drugs and product specifications (formulation and packaging) for community. This will allow the procuring agency to buy the correct quantities and formulations of these products.

Further, all partners involved in the funding, selection, quantification and procurement of the products to be purchased should have a coordinated approach to this process.

Priority will be given to:

- MoH programmes,
- Counties,
- Development partners,
- KEMSA,
- Manufacturers.

## CHW Kit

The CHW Kit content has already been identified (Table 6) as follows:

Table 6: CHW Kit Contents as outlined in the Community Health Strategy

Category	S.No.	Item Description	Unit of Measure	Replenishment Plan
Medicines	1	Albendazole 400mg	Tablet	Quarterly
	2	Paracetamol 500mg	Tablet	Quarterly
	3	Tetracycline Eye Ointment 1%	Tube	Quarterly
	4	Low Osmolarity Oral Rehydration Salts (ORS) 20.5g/L	Satchet	Quarterly
	5	Zinc Sulphate 20mg	Tablet	Quarterly
	6	Combined Oral Contraceptives	Tablet	Quarterly
	7	Povidone Iodine Solution	Bottle	Quarterly
Equipment	8	Salter Scale	No.	Once
	9	Colour Coded Salter Scale	No.	Once
	10	Digital Thermometer	No.	Once
	11	ARI Timers	No.	Once
	12	MUAC Tape	No.	Once
Others	13	First aid box (spirit, disposable gloves cotton, wool, strapping, crepe bandage)	No.	PRN
	14	Chlorine / flocculant (coagulant and disinfectant) – for turbid water	Satchet	Quarterly
	15	Chlorine – clear water	Tablet	Quarterly
	16	Lavibond Comparator (For measuring chlorine level in drinking water)	No.	Once
	17	DPD Tablets (used with Lavibond Comparator)	Tablet	Quarterly
	18	IEC materials	No.	PRN
	19	Commodity Register	No.	PRN
	20	Male condoms	No.	Quarterly
	21	Medical Dispensing Envelopes	Pack	Yearly

## iCCM Basic Package

The iCCM commodities will be introduced in phases. In the immediate period, given current policies, implementing partners and county teams where resources are available will make the following supplies (Table 7) available to trained CHWs.

Table 7: Phased introduction of iCCM commodities and supplies

Phase 1: 2012 – 2013	Phase 2: Malaria endemic areas: 2013 – 2014	Phase 3: Plus pneumonia management from 2014
<ul style="list-style-type: none"> <li>• Bag</li> <li>• ORS</li> <li>• Zinc</li> <li>• Thermometer</li> <li>• Respiratory timers</li> <li>• MUAC tapes</li> <li>• First aid kit</li> <li>• IEC materials</li> <li>• CHS-iCCM register/n</li> <li>• Newborn checklist</li> <li>• Badge</li> <li>• T-shirts (3)</li> <li>• Job aid</li> </ul>	<p>ADD COMMODOTIES LISTED BELOW:</p> <ul style="list-style-type: none"> <li>• ACT(in Malaria endemic areas)</li> <li>• RDTs</li> </ul>	<p>ADD COMMODITIES THESE BELOW:</p> <ul style="list-style-type: none"> <li>• Amoxicillin</li> <li>• ACT(in Malaria endemic areas)</li> <li>• RDTs</li> </ul>

## Quantification

Quantification is critical to ensure that the right products are procured in adequate quantities to last for the project period (i.e., quarter or financial year).

Quantification for commodities for the country should now be more accurate because the CHW Kit will be reconstituted at the health facility level. This will require the availability of appropriate tracking documentation, such as treatment registers and bin card books, from which information on consumption and medicine use will be extracted by CHWs and shared with CHEWs. The CHEWs will be expected to compile the requirements of the CHWs under their jurisdiction and incorporate the requirements alongside those of the health facilities.

Following the determination of quantities, a budget will have to be worked out and funds solicited to cover the needs of the CHWs implementing iCCM, as well as those of the primary care facilities.

## Procurement

The approved kit contents list and its funding should then be forwarded to the procuring entity for the public procurement process. It is important to consider issues, such as financial year planning and public procurement processes, so that the procurement of the kit coincides with the procurement of normal essential medicines. This will ensure timely delivery of all commodities to the procuring entity.

## **Distribution**

Receipt of the CHW Kit at the procuring agency should be timely so that the distribution schedule of the kit is concurrent with the distribution of other essential medicines and medical supplies to primary care-level health facilities. Improved uptake of the kits by CHWs will be achieved only if the same are delivered to the door steps of all the dispensaries and health centres in the country.

Support on monitoring the movement of commodities from the KEMSA warehouse to primary care facilities and confirmation of receipt of the same by the facility in charge is required; this will have a positive impact on the uptake of the kits by CHWs.

## **Utilization**

In order to improve the utilization of the commodities in the kit, a number of existing gaps need to be addressed:

- Training of all health workers in commodity management
- Adequate supply of tracking tools in all health provision levels need to be maintained (e.g., bin cards, prescription books)
- Adaptation of existing tools, such as the malaria ACT tools, to have them more integrated
- Provision of adequate tools for stock control of iCCM commodities both at Levels 2 and 3, as well as at the community level

# 05

## Service Delivery

### 5.1 Introduction

The strengthening of the health system is critical to successful implementation of iCCM. It is important to pay attention to the building blocks of a health system as per WHO definition, namely

- service delivery,
- health workforce,
- information,
- medical products, vaccines and technologies,
- financing, and
- leadership and governance.

Good **health services** are those which deliver effective, safe, quality personal and nonpersonal health interventions to those that need them, when and where needed, with rational use of resources.

- A well-performing **health workforce** is responsive, fair, and efficient in order to achieve the best health outcomes possible given available resources and circumstances.
- A well-functioning **health information** system is one that ensures the production, analysis, dissemination and use of reliable and timely information on health determinants, health system performance and health status.
- A well-functioning health system ensures equitable access to essential **medical products, vaccines and technologies** of assured quality, safety, efficacy, cost-effectiveness and their sound and rational use.
- A good **health financing** system mobilizes adequate funds for health in ways that ensure people can use needed services and are protected from financial catastrophe or impoverishment associated with having to pay for them. It provides incentives for providers and users to be efficient.

- **Leadership and governance** involves ensuring that strategic policy frameworks exist and are combined with effective oversight, coalition building, regulation, attention to system-design and accountability.

These building blocks provide a useful way of clarifying essential functions of the health system, while at the same time identifying the challenges faced by the country in providing the required services at these levels of health service delivery.

## 5.2 Strengthening primary care level to support iCCM implementation

The immediate referral facilities for community health services are the primary healthcare facilities, Level 2 (dispensaries and health centres). There is therefore need for a strong linkage between the community and the formal health facilities. This will facilitate better use of services and improve community participation in the promotion of their own health. The framework for action at level 2 should address the urgent need to improve the performance of health systems in order to effectively support the implementation of iCCM. For effective delivery of services, there is a need for an integrated response that recognizes the inter-dependence of each part of the health system.

### **Determine the health systems needs**

One of the key aspects of strengthening the primary healthcare level facilities (dispensaries and health centres) is building the competencies of health service providers through training. Through these trainings, service providers will acquire skills, among other things, in quantification, ordering, stock management, storage of commodities, and appropriate use of the same. Apart from patient focused activities, technical staff (listed below) will also be involved with various aspects of supply management to ensure that the commodities needed are always available. The target group for training includes

- nurses,
- clinical officers,
- lab technician and technologists,
- pharmaceutical technician and technologists,
- public health technician/public health officers,
- health records and information officer (HRIO),
- nutrition officers, and
- other healthcare workers in child health care

Some of the key training needs for the above service providers include the following:

- IMCI, Emergency Maternal and Newborn Care (for clinical health workers), Community Management of Acute Malnutrition, Infant and Young Child Nutrition (depending on regional need)
- iCCM Strategy
- Data management skills (collection, analysis, utilization & dissemination)
- Health promotion and prevention
- Leadership and management skills
- Supply management and utilization
- Resource mobilization and management (establish partnerships between the government, partners, and the community for resource mobilization)

### **Support required for Primary level care**

The following areas need to be addressed so that there is a strong level of health care provision:

- **Supplies and equipment.** Selection (ordering) and quantification of the correct commodities and equipment is necessary to enable provision of appropriate health care.
- **Financial resources.** Sustained funding for supplies and commodities for the primary level facilities countrywide will ensure iCCM implementation strategy is successful. Recognition of, support of, and investment in community-based solutions and actions should be encouraged to ensure that the gains already achieved are sustained.
- **Human resources.** It is critical that the right people be in the right place at the facility level. This is especially so with commodity management where pharmaceutical technologists are very few at the primary level facilities or not available at all. This means that the bulk of the work that should be done by them has to be done by the clinical officers and/or nurses which takes them away from their clinical duties.
- **Infrastructure.** The architectural design of primary care facilities should facilitate service delivery. For example, all health facilities should have laboratories and other diagnostic facilities that are properly staffed and equipped. There should also be adequate facilities for storing and dispensing the required commodities.
- **Commodity management and patient care.** This requires standard operating procedures (SOPs) to standardize the service delivery. All health workers and support staff need to be aware of and apply the Health Facility Pharmaceutical Services SOP manual. This will ensure that every facility has good records that can be inspected by those responsible for support supervision.

- **Support supervision and mentorship.** This is critical for this system to function efficiently. Support supervision visits will be carried out by county and sub-county health management teams or whatever structure the government will have in place. These teams must have a pharmaceutical focal point (a pharmacist) who takes responsibility for guiding the health facility teams on the documentation and reporting for commodity management that will facilitate quantification. The role of the support supervision team is to work with the facility staff to ensure that the guidelines are being followed and tools are being used.

### **Refresher/on-job-training**

It is a well-known fact that health workers move frequently from their stations and new employees join the system. Measures will be put in place to ensure that mentors and TOTs are available at the health facilities to train and re-train staff as necessary. This means that there should always be people in-post who will empower the communities of practice mentioned earlier.

### **Clear ToRs and deliverables**

Staff at the health facilities need clear TORs with respect to the role of iCCM in the implementation of Child Survival and Development Strategy. Each staff members' role and responsibility needs to be well understood by all players. Health workers also need to see that by implementing iCCM, they are ultimately contributing to the achievement of the MDGs and other health related goals.

### **Opportunities available for iCCM implementation**

- Availability of Health Sector Services Fund, Facility Improvement Fund, Constituency Development Fund, and all other devolved government funds
- Existing partners' mapping
- Existing programmes that can be leveraged through joint planning
- Existing public-private partnerships and policies
- trong M&E in some programmes (e.g., HIV and Malaria)—more investment in operational research is needed to allow for data-driven, efficient, and cost-effective programmes on the ground
- Documentations and dissemination of best practices
- Engagement of training and research institutions

## 5.3 Community level service delivery

The delivery of case management services at the community level is anchored upon the community structures established in line with the CHS guidelines. The community entry process outlined in the iCCM implementation steps will ensure effective community ownership of the services delivered by CHWs and other community-based providers.

The training of community health workers based on the national guideline, and use of specific job-aids with effective supervision will lead to better care of sick and malnourished children.

### **Performance-based incentives and contracting**

The CHS recognizes the need for incentives to be given to CHWs for services they offer. The incentives are either monetary or nonmonetary.

The nonmonetary incentives include but are not limited to: public recognition of CHWs, performance plaques, badges, community certification, refresher trainings, certificate awards after training, bicycles, and bags. Communities and Counties will come up with innovating ways of motivating CHWs.

Performance-based contracting is now an acceptable mode of operation in the GOK. Outputs are measured from the objectives set and the given timeframe.

# 06

## Monitoring, Evaluation and Operations Research

### **Proposed CHWs performance indicators**

The CHW performance indicators will be in line with CHS guidelines. The eight performance indicators are found in the iCCM M&E framework.

A detailed plan for M&E of the iCCM strategy implementation in Kenya has been developed. This section highlights the main components of the M&E plan.

The goal of the national iCCM M&E plan is to monitor the overall implementation of the national iCCM strategy. It has been developed to contribute to the reduction of child morbidity and mortality by providing quality community case management for malaria, pneumonia, diarrhoea, and malnutrition in children ages 5 years and younger, and by identifying and referring sick newborns with danger signs, and referring all newborns delivered at home. The national iCCM M&E plan feeds into the existing CHS M&E framework of the Division of Community Health Services (DCHS).

### **6.1 iCCM indicators**

Kenya has adopted a list of 29 indicators to monitor and evaluate the implementation and results of the national iCCM program in Kenya. These indicators have been developed based on the global indicators for iCCM and adapted to the Kenyan context. The full performance matrix for these indicators, which includes definition, data sources, indicator type (input, output, and outcomes), targets, and level of disaggregation, is presented in Annex 1 of the M&E plan. The indicators capture all eight iCCM benchmark components (coordination and policy setting; costing and financing; human resources; supply chain management; service delivery and referral; communication and social mobilization; supervision and performance quality assurance; and monitoring and evaluation) and several have been recommended for inclusion into the overarching CHS M&E framework to enhance alignment between the two frameworks. Further, as the iCCM program in Kenya includes identification and referral for acute malnutrition cases and sick newborns and newborns born at home, the iCCM M&E framework will include indicators in these technical domains.

The iCCM indicators can be divided into several categories to measure the different aspects of the national iCCM program. These include the following.

The iCCM indicators can be divided into several categories to measure the different aspects of the national iCCM program. These include:

- Indicators of implementation strength. These are routine indicators that measure the critical program processes and outputs (e.g., the degree to which program services have been delivered at a given point in time).
- Indicators that can be potentially collected routinely, but through systems other than the Community Health Information System (CHIS), which is part of the District Health Information System (DHIS), since it may be difficult to add a longer list (other than the implementation strength indicators) to the existing CHIS.
- Indicators that can be collected periodically through surveys or special studies. These indicators can be used to periodically assess specific components of implementation and complement the routinely collected indicators listed above. The indicators can be incorporated into existing periodic surveys such as DHS, Multiple Indicator Cluster Survey (MICS), or can be captured through special survey/studies that are developed for evaluating the implementation of iCCM. Some indicators on quality of care (e.g., correct case management observed) require resource intensive, special studies that involve direct observation of CHWs who provide care, by a qualified provider who acts as a gold standard.
- Indicators that represent national level milestones. These indicators are qualitative and can be used to periodically assess progress towards an environment that supports iCCM.

The specifics of these indicators are given in the full national iCCM M&E plan.

## 6.2 Data collection methods

The main data collection methods required to capture the iCCM indicators include

- a. routine sources (such as HMIS, project reports, government databases, supervision reports, LMIS);
- b. periodic surveys such as household surveys, health facility assessments and CHW surveys; and
- c. other complimentary methods (special studies, document reviews, key informant interviews,).

These are described below.

- Routine data collection: The majority of routine indicators for iCCM, and in particular those for implementation strength, will be collected through **CHIS**. This comprises data

collected by community level workers (CHWs and CHEWs) and aggregated at community unit and facility levels for entry into the online DHIS system.

Tools include the CHW treatment and tracking register, CHW household register (MoH 513), CHEW supervision checklist, CHEW stock records, CHEW monthly summary/ report (MoH 515), which is entered into the national CHIS/DHIS system. Other important sources of routine information include the County Health Management Team (CHMT) supervision checklist and government databases on training. Some of the existing tools already include some iCCM elements, while others will be revised to include them. Another component of the routine system is the **LMIS** used to collect commodities ordering, supply and utilization information from health facilities. Health facilities or sub county stores compile and submit monthly reports to the District.

- Periodic/survey data collection: Several indicators for iCCM, such as treatment coverage, knowledge of care-seeking and dangers signs, and quality of iCCM services by CHWs can be collected through periodic surveys. The main types of surveys include household surveys, facility assessments and CHW surveys. These surveys are critical to help understand program coverage and provide an important source of information to help triangulate data collected through routine sources.
- Complementary methods: Other iCCM indicators, especially the qualitative national milestone indicators, require complimentary sources such as document reviews, focus group discussions and key informant interviews.

## 6.3 Implementation of the M&E plan

Successful implementation of the iCCM framework will require continuous monitoring and adjustment of the implementation process. A comprehensive M&E system is crucial so that lessons learnt from the implementation are captured and timely feedback given to improve the availability, coverage, and quality of services, and to increase service demand in the community. The national indicators and targets developed will be used for on-going performance tracking of the implementation of this framework.

The main activities necessary for implementation of the M&E plan for iCCM are described in detail in the National iCCM Implementation framework Plan of Action (POA).

These include

- i. coordination of iCCM M&E,
- ii. monitoring of the iCCM program,
- iii. development of a data flow plan for the various levels of data collection,

- iv. periodic data and service quality assurance,
- v. data management and use,
- vi. capacity-building of partners and staff at all levels,
- vii. development of detailed evaluation plans,
- viii. specification of operations research and special studies,
- ix. dissemination plan, and
- x. development and implementation of a detailed action plan and resources.

These activities are detailed in the M&E section of the National iCCM Implementation framework POA section.

In brief, monitoring of the iCCM program at the national level will be embedded within the overarching CHS strategy and coordinated by the M&E Unit of the DCAH iCCM secretariat, with support from an M&E subgroup of the iCCM TWG. The M&E subgroup of the TWG will comprise representatives from relevant departments of the MoH and implementing partners such as UNICEF and NGOs. A similar system will be expected at County level.

The M&E Plan identifies several indicators for routine monitoring, with a focus on subset monitoring program implementation strength. The majority of these indicators will be collected through the District Health Information System (DHIS) system as part of the overall CHS monitoring system, which captures monthly data from each community unit. Data for the existing CHS monitoring systems are generated through the CHEW monthly report, which summarizes data for all CHWs in the community unit.

Data for iCCM will flow according to the existing system, starting with the CHWs reporting to the CHEWs, who report to the link facilities and then to the sub-county level (see Table 8 below). Community level data are entered into the online DHIS at sub-county level. In some cases, data are entered at the health facility level or even the community unit level if computers and Internet services are available. Once entered into the DHIS, the data are available for use at any level. Details on the data flow for commodities are provided in the supply chain management section.

Table 8: Data collection and reporting

Level/cadre	Main data collection & reporting responsibilities	Data collection & reporting forms
Community – CHW	<ul style="list-style-type: none"> <li>✓ Track services provided and commodities received and consumed</li> <li>✓ Prepare monthly report and submit to CHEW</li> </ul>	<p><u>Existing:</u> CHW logbook; Sick child recording form; Household registers; CHW report</p> <p><u>New:</u> CHW treatment and tracking register; stock records; newborn checklist</p>
Community unit – CHEW	<ul style="list-style-type: none"> <li>✓ Supervise CHWs according to schedule and document using standard checklist</li> <li>✓ Review and compile CHW data, stock records and supervision records and submit report to link facility</li> </ul>	<p><u>Existing:</u> CHEW report (+ iCCM elements)</p> <p><u>New:</u> Supervision checklist for CHWs; stock records; stock report?</p>
Link Facility – Facility in charge/HRIO	<ul style="list-style-type: none"> <li>✓ Supervise CHEWs according to schedule and document using DHMT checklist</li> <li>✓ Review and compile CHEW data and submit to sub-county/enter into DHIS</li> <li>✓ Provide feedback to CHWs</li> </ul>	<p><u>Existing:</u> CHEW report (+ iCCM elements)</p> <p><u>New:</u> Supervision checklist for CHWs; stock records; stock report?</p>
Sub-county – DMHT - CHS	<ul style="list-style-type: none"> <li>✓ Supervise link facilities and CHEWs</li> <li>✓ Manage data compilation and entry into DHIS for the sub-county and provide to county</li> <li>✓ Rapid data Quality Assesment (RDQA)</li> <li>✓ Provide feedback to facilities and community units</li> </ul>	<p><u>Existing:</u> SCHMT supervision checklist (+iCCM elements), other?; SCHMT training inventory</p> <p><u>New:</u> Any reports</p>
County – CHMT CHS focal person	<ul style="list-style-type: none"> <li>✓ Supervise sub-county level</li> <li>✓ Review sub-county level data and maintain county level information and reports</li> <li>✓ Prepare reports and provide feedback to sub-county</li> </ul>	CBHIS linked to DHIS;
National – DCHS M&E officer	<ul style="list-style-type: none"> <li>✓ Review county level data and</li> <li>✓ Prepare reports and provide feedback to counties/other departments</li> </ul>	CBHIS linked tIS;

## 6.4 Evaluation

The outcome of the iCCM interventions will be evaluated using different methods. Primary evaluation questions for the iCCM program in Kenya as well as proposed data collection methods are given in Table 9. These evaluation questions can be answered in part through national-level surveys such as DHS, MICS, MIS; however, others will require special studies. In addition, it is recommended that qualitative methods be included to help provide context and to illuminate the underlying factors and issues. These special studies will require additional resources and implementing partners should be coordinated through the M&E subgroup of the iCCM TWG to address them in their evaluation plans as part of any program funding proposal.

Table 9: iCCM evaluation questions

Evaluation question	Data collection methods
<ul style="list-style-type: none"> <li>What was the impact of the iCCM program on coverage of treatment for iCCM conditions? What was the coverage of early PNC home visits for newborn? Equity?</li> </ul>	<ul style="list-style-type: none"> <li>Representative household survey comparing baseline to endline - ideally with comparison area</li> <li>Qualitative interviews with families to assess perceptions of iCCM services</li> </ul>
<ul style="list-style-type: none"> <li>What was the use of iCCM services? How did it vary by iCCM condition and age group (child vs. newborn) and why?</li> </ul>	
<ul style="list-style-type: none"> <li>What was the demand of iCCM services? Were there changes in care-seeking for newborn and child illness? How effective were the behavior change strategies?</li> </ul>	
<ul style="list-style-type: none"> <li>How well did referral work for children and newborns? What was the range of experience? What were the challenges?</li> </ul>	<ul style="list-style-type: none"> <li>Special study tracking referrals made by CHWs to assess referral compliance and outcomes</li> <li>Qualitative interviews with CHWs and families to understand referral barriers and facilitators</li> </ul>
<ul style="list-style-type: none"> <li>What was the quality of iCCM services provided by CHWs? What was the quality of case management services provided at link facilities?</li> </ul>	<ul style="list-style-type: none"> <li>Special study of CHWs with direct observation and clinical re-examination</li> <li>Qualitative interviews with families to assess perceived quality of care</li> </ul>
<ul style="list-style-type: none"> <li>How was the supply of commodities at various levels (CHW, community unit, link facility)? What was the range of stock-outs and the reasons for stock-outs?</li> </ul>	<ul style="list-style-type: none"> <li>Review of routine records and reports on commodity supplies at CHW, community unit, and link facility levels</li> <li>Periodic CHW/link facility surveys to assess availability of supplies and stock-outs</li> </ul>
<ul style="list-style-type: none"> <li>What are the major factors that are critical to expand or scale up iCCM at various levels?</li> </ul>	<ul style="list-style-type: none"> <li>Qualitative interviews with staff at various levels (community, facility, sub-county, county, national)</li> </ul>

## 6.5 Operations Research

To help countries better implement iCCM, the Global iCCM Task Force has identified 30 operational/implementation research questions that need to be answered. The follow-up to the GAPP meeting held in Kenya in January 2011 unveiled several questions that stood in the way of iCCM implementation in Kenya. An implementation research consultative meeting led by the Division of Child and Adolescent Health, with technical support from WHO and UNICEF listed key research questions for Kenya.

Table 10 lists the 10 key implementation research questions and their rankings.

The research component in the iCCM implementation shall be used to improve access to cost-effective, high impact newborn and child health interventions by developing practical solutions to common, critical problems in the implementation of these interventions. The objectives to be addressed within the framework shall include the following:

- Identify common implementation problems, and their main determinants, which prevent effective access to interventions, and determine which of these problems are susceptible to research.
- Develop practical solutions to these problems and test whether new implementation strategies based on these solutions can significantly improve access to interventions.
- Introduce these new implementation strategies into the programmes and facilitate their full-scale implementation, evaluate them, and modify as required.

The research questions identified for iCCM in Kenya (Table 10) were prioritized based on the following criterion: answerability by research; likeliness to reduce maternal and child mortality; addresses the main barriers to scaling up; innovativeness and originality; likely to promote equity; and likeliness of use of the research results by policy makers.

Several of the priority implementation research questions (Rank #1, 3, 9) could be feasibly embedded within iCCM programmes as part of an evaluation. Programmes should allocate at least two years, with about six months for planning and preparation, one full year of run-time and another six months for assessment and analysis. Other questions are directly related to indicators in the national iCCM M&E framework, but would require special studies.

Table 10: List of Priority Operations Research Questions

Research Question	Rank
How can care seeking for sick newborns be improved?	1
What is the effectiveness of different approaches for scaling up CHW perinatal home visits?	2
How can care seeking for child with cough or difficult breathing, fever and diarrhoea be improved?	3
How can we improve early postnatal care for mothers and newborns?	4
How can care seeking for early antenatal care be improved?	5
Can the use of different technological modalities (mobile phones-based algorithm, computer-based algorithm, treatment charts, etc.) improve health worker performance and increase compliance with standard management guidelines?	6
What is the effectiveness of different options (financial and non-financial) to attract, and retain skilled doctors, nurses, technicians and community health workers in rural areas and in hard to reach areas?	7

Research Question	Rank
What is the effectiveness of different approaches (e.g. health facility boards, village health committees) to enhance community-health facility linkage for improving MNCH service utilization?	8
Can trained, supervised and well supplied community health workers perform iCCM correctly, including pneumonia management with antibiotics, in hard to reach areas in order to increase coverage with effective interventions, within the context of the MOH Community Health Strategy?	9
What is the appropriate delivery channel of health service to ensure equity of service for hard to reach populations (urban and rural)?	10

The M&E subgroup of the iCCM TWG will be responsible for coordination of the overall research agenda to avoid duplication of efforts. Implementing partner agencies with research capacity are encouraged to include these questions in their proposals for research and/or program funds. As with the M&E plan, the research agenda and questions will be reviewed and updated annually.

## 6.6 Review of the M&E plan

The M&E plan for iCCM will be updated regularly and reviewed every 3 years. The M&E subgroup of the National iCCM TWG will be responsible for bringing MoH and implementing partners together to share data, update the indicator matrix with available data, revise and refine indicators and M&E activities plus the work plan, as needed.

# 07

## iCCM Plan of Action: Activity Matrix-5 Year Framework

The National iCCM framework has a detailed POA, which comprises a goal, overall objectives and subobjectives. The subobjectives are fulfilled through specific activities which operationalize the plan of action. Annex 2 gives the detailed POA of the iCCM framework. The framework details the implementation steps at all levels (national, county and sub county).

# 08

## Budget

This budget estimate was developed by a country team comprised of MoH and partners using the iCCM Gap analysis tool at a regional workshop supported by UNICEF and AMREF in Nairobi in June 2011. The Unit Cost estimates (Table 11) are based on country data as well as global estimates, where appropriate. An adjustment for consumption was made by the country team. The estimates for commodities, supplies, and human resources take into consideration estimated coverage and prevalence of the targeted diseases as outlined in the gap analysis tool.

### Gap analysis-Quantity and Cost of Commodities and Supplies

An estimated additional USD 261 million is required to procure commodities and supplies over the 5- year period to eliminate existing gaps (Tables 12: Commodities and supplies status and gaps, and Table 13: Human resource needs and gaps). The bulk of the funds will go towards procurement of RDTs and ITNs especially for planned a mass distribution campaign of long-lasting insecticide treated nets (LLITNs) in 2014 and routine distribution through MNCH clinics in subsequent years until 2017.

Table 11: Unit cost for commodities

	Unit Cost
Total cost per net	\$ 7.58
Total cost per malaria rapid diagnostic test (RDT)	\$ 0.70
Total cost per antibiotic treatment drug	\$ 0.20
Total cost per anti-malarial drug (ACT)	\$ 1.25
Total cost per ORS sachet	\$ 0.08
Total cost per Zinc tablet	\$ 0.09
Total cost per MUAC tape	\$ 0.06
Total cost per Respiratory timer	\$ 5.00

Commodity	Quantity/Cost	2013	2014	2015	2016	2017
Antibiotics	Total needs	1,082,480	1,402,179	1,904,144	2,434,964	2,995,920
	Available	680,000	680,000	0	0	0
	Gap	402,480	722,179	1,904,144	2,434,964	2,995,920
	Cost of Gap (USD)	80496.0151	144435.8569	380828.7604	486992.8457	599184.0303
MUAC	Total needs	10 MUAC tape per CHW				
	Available	50,000				
	Gap					
	Cost of Gap (USD)					
Respiratory timers (Numbers)	Total needs	3,797	6,594	9,390	12,187	14,984
	Available	0	0	0	0	0
	Gap	3,797	6,594	9,390	12,187	14,984
	Cost of Gap (USD)	18984	32968	46952	60936	74920
Total commodities	Cost of Gap (USD)	5,691,954.78	100,991,239.87	38,987,744.12	45,766,847.79	70,026,141.46

### Analysis of Human resources requirements

Currently, in the endemic regions of Nyanza and Western Provinces that are targeted for malaria and pneumonia CCM in selected districts, 15,050 CHWs and 1,000 CHWs are available, respectively. This is just 14% and 3% of estimated need to deliver the estimated health outcomes. The plan intends to scale up availability of CHWs to at least 60% and 49%, respectively, for malaria and pneumonia treatment.

Table 12: Estimated gaps and costs for commodities

Commodity	Quantity/Cost	2013	2014	2015	2016	2017
LLIN	Total needs	2,945,475	14,906,057	2,965,686	3,029,793	3,093,900
	Available	2,887,475	2,940,000			
	Gap	58,000	11,966,057	2,965,686	3,029,793	3,093,900
	Cost of Gap (USD)	439,640.00	90,702,712.06	22,479,899.88	22,965,830.94	23,451,762.00
ACT	Total needs	17,988,185	17,056,333	16,453,052	15,308,785	14,117,077
	Available	17,988,185	17,056,332	16,453,052	15,308,784	0
	Gap	-	-	-	-	14,117,077
	Cost of Gap (USD)	0	0	0	0	17646346.25
RDT	Total needs	9,565,231	17,196,521	24,595,512	32,395,363	40,000,000
	Available	2,204,038	2,985,539	1,921,524	987,664	0
	Gap	7,361,193	14,210,983	22,673,987	31,407,700	40,000,000
	Cost of Gap (USD)	5,152,834.768	9,947,687.818	15,871,791.03	21,985,389.72	28,000,000
ORS	Total needs	1,192,503	2,042,952	2,603,406	2,845,501	2,739,127
	Available	4,000,000	0	0	0	0
	Gap	(2,807,497)	2,042,952	2,603,406	2,845,501	2,739,127
	Cost of Gap (USD)	0	163,436.1374	208,272.452	227,640.0688	219,130.1597
Zinc	Total needs	298,126	510,738	650,851	711,375	684,782
	Available	298126	510738	650,851	266,284	298126
	Gap	-	-	-	445,091	386,656
	Cost of Gap (USD)	0	0	0	40058	34799.0174

Table 13: Gap analysis: Human resources

Intervention		Baseline (2011)	2013	2014	2015	2016	2017
Malaria treatment (malaria endemic regions)	Number of HR needed	15050	24,839	34,628	44,416	54,205	63,994
	Availability	14%	23%	33%	42%	51%	60%
Pneumonia treatment	Number of HR needed	1000	3,797	6,594	9,390	12,187	14,984
	Availability	3%	12%	22%	31%	40%	49%

Table 14 summarizes in USD resources needed for operations by major budgetary items and implementation year. A total of USD 80 million is required for operations over the 5-year period.

Table 14: Budget Summary: operations

Operational costs (USD)	2013	2014	2015	2016	2017
Salary/incentive per CHW per Year	8,275,688	11,912,927	15,550,165	19,187,404	22,824,642
Other HR costs	5,000	5,000	5,000	5,000	5,000
Training	60,000	60,000	60,000	60,000	60,000
Supervision	6,000	6,000	6,000	6,000	6,000
Micro planning	-	-	1,500	-	-
Monitoring (M&E)	20,000	20,000	20,000	20,000	20,000
Coordination	500	500	500	500	500
Other costs for research and evaluation	1,500	1,500	1,500	1,500	1,500
Social mobilization	400,000	400,000	400,000	400,000	400,000
Procurement	100,000	100,000	100,000	100,000	100,000
Warehousing	20,000	20,000	20,000	20,000	20,000
Delivery Logistics	100,000	100,000	100,000	100,000	100,000
<b>Total</b>	<b>8,988,688</b>	<b>12,625,927</b>	<b>16,264,665</b>	<b>19,900,404</b>	<b>23,537,642</b>

# ANNEX 1: iCCM GLOBAL BENCHMARKS

	Advocacy and Planning	Pilot and Early Implementation	Expansion/Scale-up
<b>Component One: Coordination and Policy Setting</b>	Mapping of CCM partners conducted	MOH leadership to manage unified CCM established	MOH leadership institutionalized to ensure sustainability
	Technical advisory group (TAG) established including community leaders, CCM champion & CHW representation		
	Needs assessment and situation analysis for package of services conducted		
	Stakeholder meetings to define roles and discuss current policies held	Discussions regarding ongoing policy change (where necessary) completed	Routine stakeholders meetings held to ensure coordination of CCM partners
	National policies and guidelines reviewed		
<b>Component Two: Costing and Financing</b>	CCM costing estimates based on all service delivery requirements undertaken	Financing gap analysis completed	Long-term strategy for sustainability and financial viability developed
	Finances for CCM medicines, supplies, and all program costs secured	MOH funding in CCM program invested	MOH investment in CCM sustained
<b>Component Three: Human Resources</b>	Roles of CHWs, communities and referral service providers defined by communities and MoH	Role and expectations of CHW made clear to community and referral service providers	Process for update and discussion of role/expectations for CHW in place
	Criteria for CHW recruitment defined by communities and MOH	Training of CHWs with community and facility participation	Ongoing training provided to update CHW on new skills, reinforce initial training
	Training plan for comprehensive CHW training and refresher training developed (modules, training of trainers, monitoring and evaluation)		
	CHW retention strategies, incentive/motivation plan developed	CHW retention strategies, incentive/motivation plan implemented and made clear to CHW; community plays a role in providing rewards, MoH provides support	CHW retention strategies reviewed and revised as necessary.
	Advancement, promotion, retirement to CHWs who express desire offered		
<b>Component Four: Supply chain management</b>	Appropriate CCM medicines and supplies consistent with national policies (inclusion of RTIs where appropriate) and included in essential drug list	CCM medicines and supplies procured consistent with national policies and plan	Stocks of medicines and supplies at all levels of the system monitored (through routine information system and/or supervision)
	Quantifications for CCM medicines and supplies completed		
	Procurement plan for medicines and supplies developed		
	Inventory control and resupply logistic system for CCM and standard operating procedures developed	Logistics system to maintain quantity and quality of products for CCM implemented	Inventory control and resupply logistics system for CCM implemented and adapted based on results of pilot with no substantial stock-out periods

	Advocacy and Planning	Pilot and Early Implementation	Expansion/Scale-up
<b>Component Five: Service Delivery and Referral</b>	Plan for rational use of medicines (and RDTs where appropriate) by CHWs and patients developed	Assessment, diagnosis and treatment of sick children by CHWs with rational use of medicines and diagnostics	Timely receipt of appropriate diagnosis and treatment by CHWs made routine
	Guidelines for clinical assessment, diagnosis, management and referral developed	Review and modify guidelines based on pilot	Regular review of guidelines and modifications as needed
	Referral and counter referral system developed	Referral and counter referral system implemented: community information on where referral facility is made clear, health personnel also clear on their referral roles	CHWs routinely referring and counter referring with patient compliance, information flow from referral facility back to CHW with returned referral slips
<b>Component Six: Communication and Social Mobilization</b>	Communication strategies including prevention and management of community illness for policy makers, local leaders, health providers, CHWs, communities and other target groups developed	Communication and social mobilization plan implemented	Communication and social mobilization plan and implementation reviewed and refined based on monitoring and evaluation
	Development of CSM content for CHWs on CCM and other messages (training materials, job aids etc)	Materials and messages to aide CHWs	
	Materials and messages for CCM defined, targeting the community & other groups	CHWs dialogue with parents and community members about CCM and other messages	
<b>Component Seven: Supervision &amp; Performance Quality Assurance</b>	Appropriate supervision checklists and other tools, including those for use of diagnostics developed	Supervision visit every 1-3 months, includes reviewing of reports, monitoring of data	CHWs routinely supervised for quality assurance and performance
	Supervision plan, including number of visits, supportive supervision roles, self-supervision etc. established	Supervisor visits community, makes home visits, provides skills coaching to CHWs	Data from reports and community feed-back used for problem solving and coaching
	Supervisor trained in supervision and has access to appropriate supervision tools	CCM supervision included as part of 'he CHW supervisor's performance review	Yearly evaluation that includes individual performance and evaluation of coverage or monitoring data
<b>Component Eight: M &amp; E and Health Information Systems</b>	Monitoring framework for all components of CCM developed and sources of information identified	Monitoring framework tested & modified accordingly	Monitoring and evaluation through HMIS data performed to sustain program impact
	Standardized registers and reporting documents developed	Registers and reporting documents reviewed	OR and external evaluations of CCM performed as necessary to inform scale-up and sustainability
	Indicators and standards for HMIS and CCM surveys defined		
	Research agenda for CCM documented and circulated	CHWs, supervisors and M&E staff trained on the new framework, its components, and use of data	

## ANNEX 2: iCCM NATIONAL PLAN OF ACTION

iCCM National Plan of Action 2013-2018					
<b>Goal of iCCM:</b> Is to reduce Child morbidity and mortality by providing quality community case management for malaria, pneumonia, diarrhoea and malnutrition to sick children and identifying newborns who require referral at community level					
<b>Overall Objective:</b> To increase access to appropriate and timely (within 24hours) treatment at community level for Malaria, Diarrhoea, Pneumonia and Malnutrition by children aged below 5 years to 80% by 2017					
Activities	Timeframe	Indicators	Responsible	Means of Verification	Resources
<b>Intermediate Objective 1:</b> Policy and Guidelines on use of antibiotics in the treatment of Pneumonia, ACT in the treatment of malaria and use of ORS and Zinc in the treatment of diarrhoea are adopted by the government by Dec 2013					
1. Launch the iCCM package within Community Health Strategy: National and County Levels	National: By end of June 2013-County: By end of Dec 2013	Launch conducted	DCAH	Launch Reports	GOK & Partners
2. Advocate for strong Government leadership in the planning, implementation, monitoring and evaluation of iCCM	Present iCCM to Health Sector Coordinating Committee and to the relevant ICCs by end May 2013	iCCM is adopted as top priority in AWWPs	DCAH and iCCM TWG	Quarterly and Annual reports	GOK & Partners
3. Organize quarterly forums with Key high level stakeholders (CH stakeholders, MOH, Manufacturers as registered by PPB) to advocate for the policy change with PPB	By Dec 2013	No. of Forums Held	DCAH, DoP & relevant partners	Meeting Reports & Minutes	GOK & Partners
4. Update iCCM stakeholders and Child Health ICC on the status of ACTs and RDTs deregulation	Monthly starting in March 2013. Complete by end April 2013	Confirmation of receipt of emails, participation in update activities by key iCCM	DOMC, DCAH and DoP	Emails sent, participants lists	Gok & relevant partners
5. Organize quarterly forums with Key high level stakeholders (CH stakeholders, MOH, Manufacturers as registered by PPB) to advocate for the policy change with PPB: Antibiotics for treatment of Pneumonia at community level	By Dec 2013	No. of Forums Held	DoP, DCAH & Partners	Meeting Reports & Minutes	Gok & relevant partners
6. Facilitate/conduct Operational research to generate local evidence for use of antibiotics for treatment of pneumonia by CHWs	Up to 2015	No. Operational Research projects conducted	DCAH, DoP & Partners	OR Progress reports, final research reports	Gok & relevant partners

Activities	Timeframe	Indicators	Responsible	Means of Verification	Resources
7. DCAH to submit comprehensive evidence including local evidence to the policy makers and relevant ICCs to allow for use of antibiotics by CHWs	By 2015	Evidence dossier submitted to the Director in charge of Health	DCAH iCCM Secretariat, Partners, DoP	Minutes of meeting with Director	GOK & Partners
8. Continue advocacy at the National policy level & with National Professional Bodies for adoption of WHO and UNICEF recommendations based on global experiences and evidence on use of iCCM commodities in the communities.	By June 2013	No. Of Forums held	CH-ICC (DCAH, DCHS, DOMC, DO-Nut), PPB, DoP/NMTC & Partners	Approval letter from Director in charge of Health	GOK & relevant Partners
9. Advocate at the national and county levels for increased allocation of resources for community health strategy and procurement of iCCM commodities and supplies	Ongoing	# Advocacy meetings conducted	DCAH, DOP, DPH, DOMC, DoNut, KEMSA	minutes of Advocacy meetings, Advocacy documents compiled, Evidence dossier (approved budget estimates)	GOK & Partners
10. Coordinate development of Job Aids and other tools for iCCM	By April 2013	Job Aids developed	DCAH (inc. relevant divisions) & DOMC, DoP	Job Aids printed	GOK & Partners
<b>Intermediate Objective 2:</b> Increase the proportion of caregivers and community members that have positive health behaviours and practices (e.g., ITN use, completed referral for pneumonia, hand-washing, safe disposal of infant faecal matter, exclusive breast feeding) to at least 80% by 2017.					
1. Under the stewardship of iCCM TWG, Convene an Intersectoral ACSM meeting to review TORs, existing communication training materials for CHWs and CHEWs and Develop a communication activities timeline (Plan of action)	By Sep-2013	TORs for Updated Training materials developed & Communication Plan of Action	DHP, DCAH Secretariat, DoP	Communication Action Plan & TORs adopted Updated training materials	GoK & partners
2. Conduct desk review on existing research on iCCM components	From July- Sep 2013	Desk review conducted	Intersectoral ACSM, DCAH Secretariat, Consultant	Desk Review Report	GoK & relevant partners
3. Conduct formative research informed by Desk review on iCCM	July – Sep 2013	Formative research report	Intersectoral ACSM, DCAH iCCM Secretariat, Consultant	Formative Research Report	GoK & relevant partners

Activities	Timeframe	Indicators	Responsible	Means of Verification	Resources
4. Harmonize the existing Communication strategies ( Malaria, CSD, ORT) and develop a communication implementation plan for iCCM within the Child Survival & Development Strategy (audience segmentation, channels and standardized messages)	Sept -Oct 2013	Existing iCCM Communication strategies harmonized; Communication implementation plan for iCCM with M&E framework developed	Intersectoral ACSM, DCAH Secretariat, Consultant	Printed harmonized Communication Strategy for iCCM, Harmonization workshop report	GoK & relevant partners
5. Editing and printing of the Communication Implementation Plan and Dissemination plan for iCCM	By Nov 2013	Communication Implementation Plan for iCCM & finalized & printed Dissemination plan finalized & printed	National level: DCAH Secretariat, Consultant County level: County Director of Health	Workshop report, Approved/ Printed Communication Implementation Plan and Dissemination Plan available at National, County & Community level	GoK & relevant partners
6. Dissemination of the iCCM implementation Plan at National and county & community levels	By end Dec 2013	Reports + No. of Dissemination workshop/ meetings reports at National, County & Community levels	DHP & DCAH iCCM Secretariat, Consultant	Dissemination workshop reports, Participants lists Document dissemination list	GoK & relevant partners
7. Develop and share proposals for resource mobilization at National, County and Sub-county levels	Continuous	No. of proposals sent to Stakeholders (GoK, partners, private sector) and Funding Agencies	DCAH iCCM Secretariat, Intersectoral ACSM County: County Director of Health	Published proposals & reports Minutes of briefing meetings	GoK & relevant partners
8. Develop targeted advocacy briefs	Continuous	No. of advocacy brief prepared	Intersectoral ACSM, DCAH iCCM Secretariat, DHP, DoNut, DOMC, DoP	Printed Advocacy briefs	GoK & relevant partners
9. Conduct briefings Advocacy meetings with Parliamentarians, Media, CSOs, and religious leaders at National, County and Community levels	Oct-2013	No. of Briefings held	DCAH iCCM Secretariat Intersectoral ACSM, , DHP, DoNut, DoP, & other relevant divisions	Briefing Meeting Minutes & Reports	GoK & relevant partners

Activities	Timeframe	Indicators	Responsible	Means of Verification	Resources
10. Include priority communication iCCM activities in the county & sub-county AWP	July-2013	No. of county & sub-county AWP Plans with iCCM activities	County and sub-county HMT	Published plans that include iCCM communication activities	GoK & partners
11. Conduct quarterly community dialogue days to package messages and use appropriate local channels of communication	Aug-Sep 2013 and continuously thereafter	No. of community dialogue day sessions	County & sub-county HMT, CHEWs/ CHWs	iCCM Dialogue Days Reports	GoK & partners
12. Identify iCCM communication Champions at National, County, sub-county & Community level	July 2013	No. of Champions identified & on board	Intersectoral ACSM, CHMT, SCHMT & CHC	Lists/ reports of champions at national, county, sub-county and community level	GoK & relevant partners
13. Develop, print and disseminate technical guidances & IEC materials to the CU resource Corners	July-Aug 2013	No. of technical guidance documents No. of dissemination workshops/ meetings, No. of TG and IEC materials at the CU resource corners	Intersectoral ACSM, CHMT, Sub-county HMT & CHC	TG development workshop reports, Technical guidances & invoices, Dissemination workshop/ meeting reports, Communications from the CU resource corners	GoK & relevant partners
14. Document and disseminate best practices in iCCM for resource mobilization & Advocacy at National, County and Sub-county level	Sep-Dec 2013	Documentary No. of Guidelines for Best Practices for Resource Mobilization & Advocacy developed	National: Intersectoral ACSM, DCAH iCCM Secretariat, DHP County: County Director for Health,	Slots Aired on National TV & Spot Radio adverts, Workshop reports, Dissemination lists	GoK & relevant partners
<b>Intermediate Objective 3:</b> 80 per cent of CHWs, and CHEWs are trained on iCCM and are actively providing iCCM services in target areas by 2017.					
<b>Trainings</b>					
1. Finalize draft iCCM training materials	By April 2013	No. training materials (for facilitators & participants) produced	DCAH iCCM Secretariat	List of training materials Facilitators manual Participants manual	GoK & relevant partners

Activities	Timeframe	Indicators	Responsible	Means of Verification	Resources
2. Pre Test and Finalization of the training materials and CHW iCCM Job Aid	By May 2013	No. of Training manuals and Job Aids finalized Pre-testing programme	iCCM TWG, DCAH iCCM Secretariat	Pre Testing Reports, Copy of Job Aids, Copy of iCCM training manual and Job Aid, Training reports	GoK & relevant partners
3. Adaptation of CHWs iCCM Job Aid following pre-test	By June 2013	No. Job Aids Adapted	DCAH iCCM Secretariat, iCCM TWG	Printed adapted job aids Workshop reports	GoK & relevant partners
4. Printing of iCCM Manuals and Job Aid	By June 2013	No. of materials printed	DCAH iCCM Secretariat	Copies of iCCM Training Manuals Delivery notes for CHW training manual and Job Aids	
5. Training of National Master Trainers (5days)	By July 2013	No. of master trainers trained	DCAH iCCM Secretariat/ DCHS	Training reports Participants lists	
6. Train County /TOTs (5days)	By Feb 2013	No. County TOTs trained	DCAH iCCM Secretariat/ DCHS	Training reports Participants lists	
7. Train Sub County TOTs (5days)	April 2013 onwards	No. of Sub-county TOTs trained	County Director of Health, DCAH iCCM Secretariat	Training reports Participants lists	
8. Train CHEWs as TOTs (5days)	May 2013 onwards	No. CHEWs Trained as TOTs	SCHMT, DCAH iCCM Secretariat	Training reports Participants lists	
9. Train CHWs (5 days)	June 2013 onwards	No. CHWs Trained	SCHMT, DCAH iCCM Secretariat DCAH/DCHS	Training reports Participants lists	
iCCM service Delivery					

Activities	Timeframe	Indicators	Responsible	Means of Verification	Resources
10. Pre-test the draft CHW data collection and reporting tools (DCRT)	Apr- June 2013	Pre-testing schedule No. CHW data collection and reporting tools to be pre-tested Guideline for application of data collection & reporting tools	DCAH iCCM Secretariat/ DCCHS	Pre-testing protocol for CHW DCRT	GoK & partners
11. Revision of draft of the CHWs data collection and reporting tools	June 2013 onwards	#Tools distributed, #CUs with CBHIS	DCAH iCCM Secretariat, DCCHS	Workshop Report Final draft of CHWs data collection and reporting tools	GoK & partners
12. Print final copies of the CHW data collection and reporting tools	June 2013	No. of final copies of the CHW data collection and reporting tools printed	DCAH iCCM Secretariat	Copies of of the CHW data collection and reporting tools Invoices/ Delivery notes	GoK & partners
13. Dissemination of the CHW data collection and reporting tools and training of CHWs on use of tools	July 2013 onwards	No. dissemination workshops No. CHWs trained	DCAH iCCM Secretariat, County & Sub-county HMT	Dissemination workshop reports Lists of CHWs trained	GoK & partners
14. Harmonize incentive scheme for CHWs (Monetary & Non-Monetary)	Jan 2013 onwards	Guideline for Harmonized incentive scheme for CHWs	iCCM TWG, MoH, MoF, Salary and Review Commission, Min. of State for Public service (or equivalent of all these Ministries as established by GoK)	Meeting minutes & reports	GoK & partners
15. Provide incentives to CHWs (Monetary & Non-monetary)	Jan 2013 onwards	No. of CHWs receiving Incentives, Type of incentives on time	DCAH iCCM Secretariat, DCCHS	Payment Schedules & Reports	GoK & relevant partners
16. Quantify & Procure Job Aids for CHWs	June 2013 onwards	No. CHWs with Job Aids	DCAH iCCM Secretariat, DCCHS	Distribution Lists, Quarterly Reports	GoK & relevant partners

Activities	Timeframe	Indicators	Responsible	Means of Verification	Resources
17. Bi Annual national level support supervision for SCHMT	Bi -Annually	No. of support supervision visits	iCCM TWG	Supervision Visit Reports	GoK & relevant partners
Intermediate Objective 4: At least 80 per cent of health facilities in iCCM target sub-counties have adequate iCCM commodities and supplies and health workers trained on IMCI by 2017.					
1. Train County and Sub County TOTs on iCCM	April 2013 onwards	No. of County & Sub county managers trained on iCCM	DCAH iCCM Secretariat, DCHS	Training Workshop Reports	GoK & relevant partners
2. Orientation of County and Sub County Mangers on iCCM	April 2013 onwards	No. of County & Sub-county managers oriented	DCAH iCCM Secretariat, DCHS	Orientation Reports	GoK & relevant partners
3. Train Health care workers on IMCI (primary care level) ensuring appropriate use of drugs	April 2013 onwards	No. of Health workers trained on IMCI	CHMT& SCHMT	Workshop training reports	GoK & relevant partners
4. Orientation of Health workers on iCCM (primary care level)	April 2013 onwards	No. Health Workers on iCCM	SCHMT	Orientation workshop Reports, OJT reports	GoK & relevant partners
5. Train health workers on medicines and supplies quantification and forecasting	Continuous	No. of health workers trained on quantification and forecasting	SCHMT,DoP	Workshop training Reports, OJT Reports	GoK & relevant partners
6. iCCM and supplies in the pull system	Continuous	List of ring-fenced	CHMT, HMT	Supervision reports	
7. Health facilities to conduct quarterly logistics management review meetings	Continuous	No of quarterly logistics review meetings held	Facility HMT	Meeting minutes Supervision reports	GoK & relevant partners
8. Support Supervision	April 2013 onwards	# of Supervision visits	TWG/CHMT/ Sub CHMT/ CHEW	Supervision reports	GoK & relevant partners
Intermediate Objective 5: At least 80% of community units implementing iCCM have zero stock-outs of essential medicines/ supplies by 2017					
Develop a 5 year Integrated rolling commodities/Supplies plan for the Community Units (Items, quantities, specifications, packaging and color coding)	July 2013 onwards (for 5 years)	Updated national level commodities and supply plan developed	Department of primary health care, DoP, DCAH iCCM Secretariat	Supply Plans	GoK & relevant partners
		No of iCCM counties and Sub Counties with updated supply plan	iCCM Secretariat	Minutes of planning meetings	GoK & relevant partners

Activities	Timeframe	Indicators	Responsible	Means of Verification	Resources
Finalize contents of CHWs Kit and Respiratory Counters	Apr-May 2013	Approved commodity list for CHW Kit	DCAH iCCM Secretariat/DCHS, DoP, KEMSA	Letter of approval signed by DMS and DPHS or appropriate authority	GoK & partners
Develop, pre-test, review and disseminate commodity forecasting tool for use by the CHEWs	Annually	Forecasting tool	County & sub county CSD focal persons	Commodity forecasting tool (Formula similar to the EPI one)	GoK & relevant partners
Procurement and warehousing of iCCM commodities	Annually (5 years)	Supply Lead time <9months	Head KEMSA, MEDS, Kenya Pharma, DCAH iCCM Secretariat, DCAH	Tender Reports	GoK & relevant partners
				KEMSA website	
Quantify the no. of CHW kits and Respiratory Counters based on no. of CHWs in the CUs nationally	June 2013	No. CHW kits required nationally identified	DCAH iCCM Secretariat/DCHS, DoP, KEMSA	Quantification Report Approved list of CHW kit commodities from MoH	GoK & partners
Procure the CHW Kits and Respiratory Counters according to quantification report	July 2013 onwards and annually thereafter in accordance with procurement timetables	No. of kit components procured	KEMSA, MoH (DoP), DCAH iCCM Secretariat	Notification of award letters Tender Committee Minutes Delivery notes	GoK & partners
Link facilities place orders for the CHW kit commodities through the Standard Order Forms (SOF)	Oct 2013 onwards	No. of orders placed	Facility HMT, Sub-county HMT, County HMT, KEMSA	SOF copies (KEMSA, S)	GoK & partners
Distribution of CHW Kit commodities and Respiration Counters to the link Health Facilities (PH or hospitals)	Nov 2013 onwards	No. or %? facilities receiving CHWs commodities as per the order within 1 <sup>st</sup> week of due date	KEMSA, Facility HMT, CHC	Distribution Schedules Packing lists Delivery notes Invoice Statements	GoK & partners

Activities	Timeframe	Indicators	Responsible	Means of Verification	Resources
		% of facilities receiving drugs within one week of dispatch from KEMSA warehouse	KEMSA, Facility HMT, CHC	Copies of waybills	GoK & partners
		% of facilities with stock levels of commodities below re order levels	Head KEMSA, Facility HMT	Electronic records of receipts	GoK & partners
Distribute CHW Kit commodities and Respiration Counters to the CHWs according to SOFs at link Health Facilities	Nov 2013 onwards	No. of CHWs receiving kit commodities as per order	CHEWs, Facility HMT	CHW Standard Order Forms Stock Control Cards Delivery Notes Statements CHW Stock Management Tool	GoK & partners
Develop a Phone based/web based commodity tracking and information system at district level (linked to HMIS?)	By Dec 2013	No. of facilities/ communities with functional HMIS system	DHMIS, DoP, KEMSA	Functional web based and phone based commodity tracking system	GoK & partners
Assess and improve the existing LMIS at all levels	Continuous	No. of facilities using LMIS for reporting	DHMIS, KEMSA, DoP		GoK & partners
Support County/ sub-county pharmacist to monitor utilization of commodities and undertake re distribution	Continues	No. of pharmacists supported	DoP, Head County pharmaceutical service	Support supervision reports	GoK & partners
Supply buffer stocks for essential drugs and supplies at facility level for hard to reach regions	Quarterly	% of health facilities in hard to reach areas targeted for ICCM with buffer stocks for at least 3 months	Head DCAH, County & Sub County CSD Focal persons; Head KEMSA	Stock Bin cards at facility level	GoK & partners
Assess health facility capacity to store drugs, quantification, commodity management	from Sept 2013	Assessment tool/ checklist	KEMSA, CHMT, SCHMT	SCHMT Supervisory checklist Completed evaluation checklist	GoK & partners

Activities	Timeframe	Indicators	Responsible	Means of Verification	Resources
Train HCW & CHEWs in quantification, commodity management	From April 2013 onwards as per need	% of HCW & CHEWs trained	MOH, D (DoP) CAH, CSD Focal person, KEMSA	Training report	GoK & partners
		% of Health facilities with at least 50% of the HCWs handling commodities for children trained on commodity management	MOH, DECAH, CSD Focal person	Training report	GoK & partners
Review and Print tools for commodity management including Prescription Books for all levels (County, sub-county, Health Facility & CUs)	By Dec 2013	% of facilities utilizing agreed tools for commodity management including prescription books		# of commodity management books printed/distributed to facilities	GoK & partners
Orientate CHWs/CHC on commodity management	By Dec 2013	%of CHWs oriented in commodity management	SCHMT, DoP, KEMSA, CHEW	orientation report	GoK & partners
	By Dec 2013	% of CUs with at least 80% of the CHWs handling commodities for children trained in commodity management	SCHMT, DoP, CHEW	Consumption report by CHWs	GoK & partners
Print pediatric protocols	By Dec 2013	% of HF with at least 3 copies of the pediatric protocols	MOH & CSD Partners	at least 3 copies at HFs	GoK & partners
Disseminate SOP for commodity management of drugs	By Dec 2013	% of HF with recommended SOPs	DoP, County pharmacist	SOPs at Health facilities	GoK & partners
Monitoring , Quality control and Auditing	Continuous	No. of audit visits	County/ Sub County HMT, DCAH	audit report	GoK & partners

Activities	Timeframe	Indicators	Responsible	Means of Verification	Resources
Mobilize resources for procurement of the CHW Kits and Respiratory Counters	Apr 2013 onwards	No. of meetings No. of correspondence to potential funders	MoH, DCAH iCCM Secretariat, CH- ICC	Meeting minutes Reports Correspondence files	GoK & partners
	Continuous	No. of advocacy meetings with parliamentary committee of Health, Treasury etc.	Cabinet Secretary for Health, DoP	Minutes of meeting Budget allocation	GoK & partners
	Continuous	% increase in sustained funding for child health commodities	Cabinet Secretary for Health, DoP	Treasury Reports?	GoK & partners
Intermediate Objective 6: At least 80% of sick children and newborns who are recommended for referral are received at the next level of care by 2017.					
Advocacy undertaken towards achieving zero tolerance in the communities for preventable child deaths	Continuous	No of community dialogue sessions in which advocacy on zero tolerance is undertaken	CHEW, CHWs, SCHMT	Monthly CU progress report Dialogue Day Reports	GoK & partners
Counseling of caregivers on danger signs and benefits of completing referral	Continuous	No. of caregivers counseled by CHWs	CHEWs, CHWs	Monthly CU progress report	GoK & partners
Distribution of referral cards to CHWs and monitoring use	Continuous	No. of CUs with no stock out of referral cards	CHEWs, CHWs	Monthly CU progress report	GoK & partners
Scheduled monthly CHW meetings to review referred cases	Continuous	No. of monthly meetings in which referred cases have been discussed.	CHC, CHEWs, CHWs Rep. SCHMT	Monthly CU progress report	GoK & partners
Orientation of health workers at primary care levels on triage that allows referred cases to receive prompt attention.	Continuous	No. of health workers oriented on triage to give priority to referred sick children	Facility HMT	Support supervision reports	GoK & partners

Activities	Timeframe	Indicators	Responsible	Means of Verification	Resources
Intermediate Objective 7: At least 80% of newborns receive visit within 48 hours of birth by trained CHWs who administer the danger signs check list for the newborn and mother and refer as necessary by 2017.					
All CHCs, CHEWs and CHWs to be oriented on why postnatal visits within 48 hrs are critical to preventing newborn deaths	Continuous	No. of CHWs oriented on newborn danger signs	CHC, CHEWS, CHWs	SCHMT training inventory	GoK & partners
CHWs to register all pregnant women and make regular home visits.	Continuous	No. of Pregnant women visited before delivery	CHEWS, CHWs	Monthly progress reports	GoK & partners
CHWs to conduct home visits and administer danger signs check list for the newborn and the mother and refer accordingly	Continuous	No of newborns visited within 48 hrs. of birth; No. of newborns and mothers referred	CHEWS, CHWs	Monthly progress reports	GoK & partners
CHWs to counsel the mother and other care givers on danger signs for the newborn and the mother	Continuous	No. of mothers and caregivers counseled	CHEWS, CHWs	Monthly progress reports	GoK & partners
Intermediate Objective 8: 80% of community units implementing ICCM have timely reporting on identified ICCM indicators by 2017					
National					
1. Meeting on harmonization of iCCM indicators and incorporation into CHS tools	July-Aug 2013	M & E Meeting including discussions on Harmonized iCCM indicators	DCAH iCCM Secretariat, DCHS	Meeting report	GoK & relevant partners
2. Presentation of agreed iCCM indicators to the Division of Community health strategy ICC/ Child Health ICC (with agreed reporting deadlines)	October 2013	List of proposed harmonized iCCM indicators	DCAH iCCM Secretariat	Minutes of ICC meetings (DCHS, CHS)	GoK & relevant partners
3. Incorporation of iCCM indicators into HMIS	Dec 2013	100% ICCM indicators incorporated in HMIS	DCAH iCCM Secretariat, DCHS, DHMIS	Review of online DHIS	GoK & relevant partners
4. Orientation of all the levels (County, Sub-county, link facility, Community) on the CHIS	Mar 2014	Number of counties oriented on CHIS	DCAH iCCM Secretariat, DCHS, DHMIS	Orientation meeting reports List of participants	GoK & relevant partners
		Number of health care workers oriented on CHIS			


Activities	Timeframe	Indicators	Responsible	Means of Verification	Resources
5. Distribution of the tools	From March 2014 onwards	Proportion of CUs that have all CHW reporting tools	DCAH iCCM Secretariat, DCHS, DHMIS	Support supervision reports	GoK & relevant partners
6. Convening of quarterly review meetings	Quarterly	No of quarterly review meetings held	DCAH iCCM Secretariat,	Quarterly review meeting report	GoK & relevant partners
7. Support supervision for county teams	Quarterly	No. of supervision visits conducted	DCAH iCCM Secretariat, DCHS	Supervision Report	GoK & relevant partners
8. Bi-annual Stakeholders forums	Biannual	No. of stakeholders' forums attended	DCAH iCCM Secretariat, DCHS	Stakeholder's forum report List of participants	GoK & relevant partners
9. Review of the reporting tools	By 2015	No. of reporting tools reviewed	County Health team	Review meeting report & Action plans	GoK & relevant partners
10. Development of mobile platform for routine data collection	In 12 months time	No of Stakeholders held	County Health team	Meeting report	GoK & relevant partners
11. Field test mobile phone application for CHS & iCCM data reporting	Apr-13	Proportion of CUs using mobile phone technology for real time reporting	KEMRI, DCAH, DCHS	Collection of data and reporting by use of phones	GoK & relevant partners
		No. of iCCM indicators reported through the Mobile phone			
<b>County</b>					
Support supervision	Quarterly	No of supervision visits conducted	DCAH iCCM Secretariat, DCHS, CHMT	Supervision reports	GoK & relevant partners
Quarterly review meetings	Quarterly	No of Review meetings held	CHMT	Review meeting report & Action plans	GoK & relevant partners
Bi-annual Stakeholders forums	Biannual	No of Stakeholders meetings held	CHMT	Meeting minutes, reports	GoK & relevant partners

Activities	Timeframe	Indicators	Responsible	Means of Verification	Resources
Long Time National review	every 2 years	No. of Review meetings held every 2 years	DCAH iCCM Secretariat, DCHS, CHMT	Meeting minutes Reports	GoK & relevant partners
Evaluation of iCCM Programme	every 3 years	# of evaluation meetings every 3 years	DCAH iCCM Secretariat	Meeting minutes Evaluation reports	GoK & relevant partners
<b>Sub-county</b>					
Support supervision	Quarterly	No of conducted	County Health team	Supervision reports	GoK & relevant partners
Quarterly review meetings	Quarterly	No of Review meetings held	County Health team	Review meeting report & Action plans	GoK & relevant partners
Bi-annual Stakeholders forums	Bi annual	No of Stakeholders meetings held	County Health team	Meeting report	GoK & relevant partners
<b>Community</b>					
Quarterly review meetings	Quarterly	No of Review meetings held	County Health team	Review meeting report & Action plans	GoK & relevant partners
Bi-annual Stakeholders forums	Biannual	No of Stakeholders held	County Health team	Meeting report	GoK & relevant partners
scale up the use of Mobile phone data reporting	April 2014	# CHEWs & CHWs using phones	CHEW	Phone data reports	GoK & relevant partners
Facilitate/Strengthen Community dialogue meetings to share data	Continuous	# of Dialogue meetings held	CHEW	Community Dialogue reports/ Community Action plans	GoK & relevant partners
Monthly data quality review by CHW, CHEW & DHMT Focal person	Continuous	# no of Monthly meetings held	DHMT focal person	Minutes Monthly reports	GoK & relevant partners
Maintenance of a Data Reporting Time log	Monthly Continues	# of CU reporting at least 80% reporting	Facility HMT, CHEW	Reports	GoK & relevant partners
GOK ehealth strategy	On-going	No. reports received	AMREF, CHS, Safaricom, GOK (E-health Dept)	E-health strategy reports	GoK & relevant partners

Activities	Timeframe	Indicators	Responsible	Means of Verification	Resources
Intermediate Objective 9: In 100% of Counties implementing ICCM, joint annual planning for ICCM is undertaken by various programmes e.g. Child Health, Malaria, Nutrition, Hygiene/Sanitation, Health Promotion as part of community health strategy implementation.					
Strengthen the annual work plan process (AWP) and mainstream ICCM package at the County & Sub County level	Annual	ICCM Package included in the AWP	Province/ County/Sub County HMTs	AWP	GOK & Partners
Strengthen Quarterly review meetings for the AWP at county and sub county levels	Quarterly	ICCM included / discussed in the quarterly review meetings	Province/ County/Sub County HMTs	Quarterly review reports	GOK & Partners
Undertake ICCM partner mapping including resource envelop, at the county and sub county level	From January 2013, then annually		Province/ County/Sub County HMTs	Completed ICCM partner Matrix	GOK & Partners
Establish/ Strengthen functional stakeholder forums at County & Sub County level	From January 2013, then annually	Functional Stakeholders forums	Province/ County/Sub County HMTs	Reports of Stakeholder forums	GOK & Partners
Establish ICCNM TWG with clear TORs at the County & Sub county level	Jun-13	ICCM TWG established	Province/ County/Sub County HMTs	ICCM TWG document reports of meetings & activities	GOK & Partners

## ANNEX 3: COMMUNICATION - WHAT CHWS NEED TO KNOW

Area of intervention	Key Messages	Target Audience
	Cohort 1 (pregnancy~ up to 2 wks)	
Breastfeeding	<p>Start breast feeding immediately after birth, within one hour.</p> <p>Exclusively breast feed a baby for 6 months without giving any food or fluids</p> <p>Breast milk protects the child from diseases like diarrhea, pneumonia</p> <p>Breastfeeding nourishes ,helps to keep the baby warm and promotes bonding with the mother</p> <p>Breastfeeding helps mothers expel the placenta faster, reduce bleeding, helps shrink the uterus and get the abdomen back to shape , prevent breast swelling (breast engorgement)</p>	<ul style="list-style-type: none"> <li>• Mothers/</li> <li>• Caregivers of under 5</li> <li>• Fathers</li> <li>• Mother in-laws</li> <li>• Community leaders</li> <li>• Opinion leaders</li> <li>• Policy Makers</li> </ul>
Newborn temperature management	<p>Keeping the baby in skin to skin contact with the mother helps baby to get heat from the mother's body (kangaroo mother care)</p> <p>Keep the baby warm with clothes and wrapped, cover the head, and ensure the room where the baby is kept warm</p>	<ul style="list-style-type: none"> <li>• Mothers/</li> <li>• Caregivers of under 5</li> <li>• Fathers</li> <li>• Mother in-laws</li> <li>• Community leaders</li> <li>• Opinion leaders</li> <li>• Policy Makers</li> </ul>
	<p>Delay bathing the new born baby on the day of birth (at least 24hrs after birth), just wipe dry and keep warm.</p> <p>Babies should always be bathed in warm water and be dried immediately after bathing.</p>	
Immunization	<p>Immunization is important, it saves lives, and every child needs to complete immunization in the first year of life.</p> <p>Take your baby to the health facility for the first immunizations (BCG and oral polio) within 2 weeks after birth</p> <p>Immunization services are free of charge in all public hospitals</p> <p>All immunizations that children receive are recorded in the MCH booklet</p>	<ul style="list-style-type: none"> <li>• Mothers/Care givers</li> <li>• Fathers</li> <li>• Mother in-laws</li> <li>• Community leaders</li> <li>• Opinion leaders</li> <li>• Policy Makers</li> </ul>

Area of intervention	Key Messages	Target Audience
Continued exclusive breastfeeding from birth to 6 months of age.	<p>Cohort 2 (2 weeks to 5 years)</p> <p>Giving a baby any food or drink other than breast milk increases the risk of diarrhea and other illness.</p>	<ul style="list-style-type: none"> <li>• Mothers/Care givers</li> <li>• Fathers</li> <li>• Mother in-laws (S)</li> <li>• Community leaders (T)</li> <li>• Opinion leaders (T)</li> <li>• Policy Makers (T)</li> <li>• Teachers (S)</li> </ul>
<p>Complementary feeding -Introduction of other foods other than breast milk at 6 months).</p> <p>Eg thick uji made from any type of cereals such as maize, sorghum, millet etc enriched with sugar, milk, groundnuts, margarine and fat or oils: NB mixing of cereals should have only one 1 or 2 cereals: more than 2 are not easy for the child to digest)</p>	<p>Introduce nutritious foods at 6 months and continue breast feeding up to at least 24months</p>  <p>(Refer to MCH Booklet on feeding recommendations during sickness, health and care for development)</p>	<ul style="list-style-type: none"> <li>• Mothers/Care givers</li> <li>• Fathers</li> <li>• Mother in-laws (S)</li> <li>• Community leaders (T)</li> <li>• Opinion leaders (T)</li> <li>• Policy Makers (T)</li> <li>• Teachers (S)</li> </ul>
Vitamin A Supplementation	Every child who is 6 months old and above needs two doses of Vit A every year until the child is 5 years of age	<ul style="list-style-type: none"> <li>• Mothers/Care givers</li> <li>• Fathers</li> <li>• Mother in-laws (S)</li> <li>• Community leaders (T)</li> <li>• Opinion leaders (T)</li> <li>• Policy Makers (T)</li> <li>• Teachers (S)</li> </ul>

Area of intervention	Key Messages	Target Audience
Malnutrition	<p>Take your child for growth monitoring once a month till the child is 5 years old, to assess how the child is growing.</p> <ul style="list-style-type: none"> <li>• If a child is not gaining weight for 2 consecutive months, then something is wrong</li> <li>• Children need Vit A to prevent diseases and prevent visual impairment (Food rich in Vit A are Fruits, vegetables, oils, eggs etc)</li> <li>• Children need iron rich food to protect their physical and mental health (Fish, Egg, etc)</li> <li>• Iodized salt is essential to prevent disability and delayed development in children</li> <li>• During illness children need to continue eating regularly</li> <li>• After an illness, children need at least one extra meal every day for at least a week</li> </ul> <p>Refer to MCH Booklet</p>	<ul style="list-style-type: none"> <li>• Mothers/Care givers</li> <li>• Fathers</li> <li>• Mother in-laws (S)</li> <li>• Community leaders (T)</li> <li>• Opinion leaders (T)</li> <li>• Policy Makers (T)</li> <li>• Teachers (S)</li> </ul>
Growth and development	<ul style="list-style-type: none"> <li>• Promote mental and psychosocial development (Child's play)</li> <li>• Identify any delayed milestone and take child to health facility</li> </ul> <p>Refer to MCH Booklet</p>	<ul style="list-style-type: none"> <li>• Mothers/Care givers</li> <li>• Fathers</li> <li>• Mother in-laws (S)</li> <li>• Community leaders (T)</li> <li>• Opinion leaders (T)</li> <li>• Policy Makers (T)</li> <li>• Teachers (S)</li> </ul>
Malaria	<ul style="list-style-type: none"> <li>• Malaria is transmitted through mosquito bites</li> <li>• Children and pregnant women should sleep under a long lasting insecticidal treated net (LLITN) every night</li> <li>• Benefit: protect child from bite by mosquito carrying malaria parasites</li> <li>• Children with fever should be tested for malaria and treated if positive</li> </ul> <p><b>Benefit:</b></p> <ul style="list-style-type: none"> <li>• Early diagnosis and treatment saves lives</li> </ul>	<ul style="list-style-type: none"> <li>• Mothers/Care givers</li> <li>• Fathers</li> <li>• Mother in-laws</li> <li>• Community leaders</li> <li>• Opinion leaders</li> <li>• Policy Makers</li> <li>• Teachers</li> </ul>

Area of intervention	Key Messages	Target Audience
Safe drinking water	<ul style="list-style-type: none"> <li>Treat water to make it safe for drinking by methods such as: <ul style="list-style-type: none"> <li><i>Boiling, chemical treatment, filtration and 3 pot system.</i></li> </ul> </li> <li>Store drinking water in clean covered containers</li> <li>Benefit- Drinking safe water helps prevent diarrheal diseases.</li> </ul>	<p>Mothers/Care givers</p> <p>Fathers</p> <p>mother in-laws</p> <ul style="list-style-type: none"> <li>Community leaders</li> <li>Opinion leaders</li> <li>Policy Makers</li> <li>Teachers</li> </ul>
Hand washing	<p>Wash hands with soap and running water at the 4 critical times</p> <ul style="list-style-type: none"> <li>After visiting toilet,</li> <li>before eating,</li> <li>before cooking/preparing food,</li> <li>after wiping a child faeces (after defecating/changing baby nappy)</li> </ul> <p>Safely dispose faeces (including those of children) into a pit latrine/toilet</p>	<p>Mothers/Care givers</p> <p>Fathers</p> <p>mother in-laws</p> <ul style="list-style-type: none"> <li>Community leaders</li> <li>Opinion leaders</li> <li>Policy Makers -Teachers</li> </ul>
Diarrhoea (ORS & Zinc)	<ul style="list-style-type: none"> <li>When your child develops diarrhea; <ol style="list-style-type: none"> <li>for babies on exclusive breast feeding; breast feed more frequently and longer at each feeding, give ORS solution and give zinc tablets</li> <li>for child not on exclusive breast feeding; <ul style="list-style-type: none"> <li>Give extra fluids as much as the child will take, ORS solution, food based fluids such as: soup, rice water, yoghurt drink, Uji, or safe drinking water.</li> </ul> </li> </ol> </li> <li>Continue breast feeding more frequently and longer at each feeding</li> <li>Give zinc tablets until they are finished.</li> <li>If no improvement or has blood in stool, refer to the health facility immediately.</li> <li>Keep the baby's feeding utensils clean and covered to avoid contamination</li> </ul>	<p>Mothers/Care givers</p> <p>Fathers</p> <p>mother in-laws</p> <ul style="list-style-type: none"> <li>Community leaders</li> <li>Opinion leaders</li> <li>Policy Makers</li> <li>Teachers</li> </ul>

Area of intervention	Key Messages	Target Audience
Birth registration: (Either at health facility or the chief's office)	Ensure that birth of your child is registered and collect the birth certificate-this is a child's right  Benefits: <ul style="list-style-type: none"> <li>• Helps government in planning for services such as: schools, medicines, food etc</li> <li>• Needed during enrollment in school</li> </ul>	Mothers/Care givers  Fathers  mother in-laws <ul style="list-style-type: none"> <li>• Community leaders</li> <li>• Opinion leaders</li> <li>• Policy Makers</li> <li>• Teachers</li> </ul>
Pneumonia	<ul style="list-style-type: none"> <li>• Control of indoor air pollution (e.g. adequate ventilation)</li> <li>• Exclusively breast feed</li> <li>• Keep the baby warm</li> <li>• Hand washing with water and soap</li> <li>• Immunization (Pneumococcal vaccine)</li> <li>• Give the child extra feeds and fluids during sickness.</li> <li>• If child coughs and fast breathing, Refer to the health facility as soon as possible</li> </ul>	Mothers/Care givers  Fathers  mother in-laws <ul style="list-style-type: none"> <li>• Community leaders</li> <li>• Opinion leaders</li> <li>• Policy Makers</li> <li>• Teachers</li> </ul>

# ANNEX 4: GOK AUTHORIZATION FOR USE OF ACTS IN COMMUNITY TREATMENT OF UNCOMPLICATED MALARIA BY COMMUNITY HEALTH WORKERS



## MINISTRY OF PUBLIC HEALTH AND SANITATION OFFICE OF THE DIRECTOR

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Ref. No. MPH5/ADM/2/1

Date: 10<sup>th</sup> January 2013

Dr.  
Provincial Director of Public Health and Sanitation  
Nyanza Province

Dear

**RE: AUTHORITY TO PROVIDE TRAINED COMMUNITY HEALTH WORKERS WITH ARTEMETHER LUMEFANTRINE FOR TREATMENT OF MALARIA**

Malaria still remains the number one killer disease especially in children under the age of five living in endemic areas. According to the malaria indicator survey of 2011, Nyanza, Western and Coast have the highest transmission of malaria.

Prompt and effective treatment of malaria is one of the key strategies of the Ministry in the fight against malaria. Artemether Lumefantrine still remains the first line treatment for uncomplicated malaria owing to its high efficacy and good safety profile. In order to ensure prompt treatment of malaria, the Ministry is in the process of rolling out diagnosis and treatment of malaria at the first level of service delivery (community) where they are established. The rollout will entail task-shifting the diagnosis and treatment of malaria among other diseases, to the CHWs in the community units. Part of the medicines to be delivered by the CHWs will be AL to ensure prompt and effective treatment of malaria. Studies in Lamu and Malindi have indicated that CHWs are able to effectively deliver AL at the community level for the treatment of uncomplicated malaria. Malaria rapid diagnostic tests (RDTs) will also be availed in due course to ensure that all suspected cases are confirmed in line with the current policy.

The purpose of this letter is to authorize you to provide trained community health workers with AL for the treatment of uncomplicated malaria. You are required to ensure that all the medicines and RDTs issued to the CHWs are appropriately accounted for.

Yours sincerely,

DR. S. K. SHARIF MBS, MBChB, M. Med. DLSHTM, MSc.  
**DIRECTOR PUBLIC HEALTH & SANITATION**

**NB: The circular above was also sent to Directors in Western and Coast Provinces.**

# ANNEX 5: GOK AUTHORIZATION FOR USE OF ZINC IN TREATMENT OF DIARRHEA IN CHILDREN UNDER FIVE BY COMMUNITY HEALTH WORKERS



## MINISTRY OF PUBLIC HEALTH AND SANITATION AND MINISTRY OF MEDICAL SERVICES

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NAIROBI.

When replying please quote

8<sup>th</sup> October, 2012

Ref: MPHS/ADM/1/17

To  
All Provincial Directors of Medical Services  
All Provincial Directors of Public Health and Sanitation

### VARIATION OF LEGAL CATEGORY OF ZINC SUPPLEMENTATION

Kenya launched the "Policy Guidelines on Control and Management of Diarrhoeal Diseases in Children below Five years in Kenya" in March 2010. The broad objective of this policy is to reduce diarrhea associated morbidity and mortality. Some of the strategies of this policy guideline are prevention, home-based and facility-based case management. One of the four main principles of home therapy is to give low osmolarity ORS and zinc to all children with diarrhoea.

Zinc supplementation to children with diarrhea has the following benefits:

- Plays a vital role in the quality of the cell membrane and cellular function
- Helps in the recovery of the epithelium
- Helps in functioning of the immunity.
- Reduces the duration and severity of diarrhoea.
- Increases the interval between subsequent bouts of diarrhoea

To ensure that children with diarrhea benefit from Zinc supplementation, the Pharmacy and Poisons Board has approved the change in the schedule of zinc for children with diarrhea aged 0- 5 years from **Pharmacy only to over-the-counter (OTC) medicine**. This will provide increased access of the product to caregivers who first visit medicine outlets to purchase ORS. It will also enable community health workers (CHWs) to provide this medicine to children with diarrhoea in the community. **The dosage of Zinc Sulphate is 10mg once a day for 10 days for children less than 6 months old and 20mg once a day for 10 days for children 6 months old and above**

Enclosed please find, a copy of the approval letter from the Pharmacy and Poisons Board on variation of the legal category of zinc supplementation for your action.

This information should reach all the District Medical Officers of Health, Medical Services Officers, Medical superintendents and pharmacists including those in private sector.

Dr. S. K. Sharif, MBS, MBChB, M. Med. DLSHTM, MSc.  
DIRECTOR OF PUBLIC HEALTH AND SANITATION

Dr. Francis M. Kimani  
DIRECTOR OF MEDICAL SERVICES

## ANNEX 6: COMMUNITY NEWBORN CHECKLIST

<b>Name of the Baby:</b>	
<b>Age in Days:</b>	
<b>Name of CU:</b>	
<b>Date/month/year:</b>	
<b>Name of CHW:</b>	
<b>Refer to the link facility IF ANY of the following danger signs (From number 1-11) are there.</b>	
1. Not able to feed since birth, or stopped feeding well.	Yes <input type="checkbox"/> No <input type="checkbox"/>
2. Convulsed or fitted since birth.	Yes <input type="checkbox"/> No <input type="checkbox"/>
3. Fast breathing: Two counts of 60 breaths or more in one minute (Use a watch)	Yes <input type="checkbox"/> No <input type="checkbox"/>
4. Severe chest in drawing (chest draws in as the baby breathes)	Yes <input type="checkbox"/> No <input type="checkbox"/>
5. High temperature: 37.5°C or more or by touch or mother's report	Yes <input type="checkbox"/> No <input type="checkbox"/>
6. Very low temperature: 35.4°C or less (check extremities feet, hand and body)	Yes <input type="checkbox"/> No <input type="checkbox"/>
7. Only moves when stimulated, or does not move even on stimulation.	Yes <input type="checkbox"/> No <input type="checkbox"/>
8. Yellow sole	Yes <input type="checkbox"/> No <input type="checkbox"/>
9. Bleeding from the umbilical stump	Yes <input type="checkbox"/> No <input type="checkbox"/>
10. Signs of local infection: umbilicus red or draining pus, skin boils, or eyes draining pus	Yes <input type="checkbox"/> No <input type="checkbox"/>
11. Weight chart using color coded scales if RED or Yellow (refer < 2.5kgs or those born less than 36 weeks of age)	Yes <input type="checkbox"/> No <input type="checkbox"/>
12. Follow up and check if baby taken to hospital (if any of the above signs noted)	Yes <input type="checkbox"/> No <input type="checkbox"/>

**NB:** Postnatal visits to be conducted on day 1, 3 and 7 of life of all newborns and postnatal register used for cross reference.

Tick as appropriate.

## ANNEX 7: LIST OF CONTRIBUTORS

Name	Designation	Department/Organization
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## REFERENCES

- Baqui, A. H., Ahmed, S., El Arifeen, S., Darmstadt, G.L., Rosecrans, A. M., Mannan, I., et al. (2009). Effect of timing of first postnatal care home visit on neonatal mortality in Bangladesh: a observational cohort study. *British Medical Journal* 339: b2826.
- Black, R. E., Cousens, S., Johnson, H. L., Lawn, J. E., Rudan, I., Bassani, D. G., et al. (2010). *Child Health Epidemiology Reference Group of WHO and UNICEF*.
- Black, C. L. (2010). Zinc for the treatment of diarrhoea: effect on diarrhoea morbidity, mortality and incidence of future episodes. *International Journal of Epidemiology*, 39, i63-i69.
- Black, R. et al. (2010). Global, regional, and national causes of child mortality in 2008: a systematic analysis. *Lancet*, 375. *State of World Children 2011*.
- Communications Commission of Kenya. (2013). *Quarterly Sector Statistics Report: Second Quarter of the Financial Year 2012/2013*.
- Concern Worldwide (2011): KABEHO MWANA “Life for a Child”-An Expanded Impact Child Survival Program (EICSP) in Gisagara, Kirehe, Ngoma, Nyamagabe, Nyamasheke, and Nyaraguru Districts, Rwanda, A Partnership of Concern Worldwide, the International Rescue Committee, and World Relief.
- CORE GROUP (2010). *Community case management essentials -Treating common childhood illnesses in the community, a guide for program managers*.
- Darmstadt, G. L., Bhutta, Z.A., Cousens, S., Adam, T., Walker, N., de-Bernis, L. (2005). Evidence- based cost effective interventions: How many new born deaths can we save? *Lancet*, 365(9463):977-88.
- Degefie, T. (2009). Community Case Management Improves Use of Treatment for Childhood Diarrhea, Malaria and Pneumonia in a Remote District in Ethiopia’s Oromiya Region of Ethiopia. *Ethiopian Journal of Health Development*, 23(2), 120-126. [http://www.ccmcentral.com/?q=operations\\_research](http://www.ccmcentral.com/?q=operations_research) (accessed June 21, 2012).
- Harvey, S. A., Mulholland, K., Bell, D. R., et al. (2008): Improving community health worker use of malaria rapid diagnostic tests in Zambia: package instructions, job aid and job aid-plus-training. *Malaria Journal*, 6(7), 1-12.
- Jones, G., Steketee, R.W., Black, R.E., Bhutta, Z. A., Morris, S., the Bellagio Child Survival Study Group (2003). How many Child Deaths Can We Prevent? *Lancet*, 362, 65-73.
- JSI/NFHP (2006). *Innovations in Community Based Integrated Management of Childhood Illnesses Family Health Program Technical Brief #4*. Kathmandu.

Kidane, G. and Morrow, H. (2000). Teaching Mothers to Provide Home Treatment of Malaria in Tigray, Ethiopia: A randomised trial, 12;356 (9229):550-5. *Lancet*, 356, (9229).

Marsh, D. R., Peterson, S., Pagnoni, F., Hamer, D. H. (in press 2012). Introduction to CCM research supplement to *American Journal of Tropical Medicine and Hygiene*. Retrieved 19 April 2013 NOTE DATE, from <http://www.coregroup.org/storage/Webinars/iCCM/iCCMsuppltoAJTMHJan2013.pdf>

McGorman, L., Marsh D. R., Guenther, T., Gilroy, K., Barat, L.M., Hammamy, D., et al. (2012). A health systems approach to integrated community case management of childhood illness: methods and tools. *Am J Trop Med Hyg* 87 (Suppl 5): 69–76.

Ministry of Health. (2013). ehealth-Kenya facilities. Retrieved May 8, 2013, from <http://www.ehealth.go.ke/facilities/>

Ministry of Health. (2005). *Reversing the Trends-Second National Health Sector Strategic Plan of Kenya: NHSSPII*. Nairobi.

Ministry of Public Health and Sanitation. (2010). *Child Survival and Development Strategy*. Nairobi.

Ministry of Public Health and Sanitation. (2010). *Policy Guidelines on control and Management of Diarrhoeal disease in Children below five years in Kenya*. Nairobi Kenya National Bureau of statistics (2008/9): Kenya Demographic and Health Survey. Nairobi

Ministry of Public Health and Sanitation. (2006). *Taking Kenya Essential Package for Health to the community; A strategy for delivery of level one services in Kenya*. Nairobi.

Mubi, M., et al. (July 2011). *Malaria Rapid Testing by Community Health Workers Is Effective and Safe for Targeting Malaria Treatment: Randomised Cross-Over Trial in Tanzania*. *PLoS ONE* 6 (7): e19753.

Munos, M. K., Fischer Walker, C., Black, R. E. (2010). The effect of oral rehydration solution and recommended home fluids on diarrhoea mortality. *International Journal of Epidemiology* (39), i75-i87.

National Coordinating Agency for Population and Development, Ministry of Medical Services, Ministry of Public Health and Sanitation, Kenya National Bureau of Statistics and ICF Macro. (2012). *Kenya Service Provision Assessment*. Nairobi.

National Coordinating Agency for Population and Development, Ministry of Public Health and Sanitation. (2010). *Child Survival Indicator Survey*. Division of Child and Adolescent Health, Nairobi.

Schellenberg, J. A., Victora, C. G., Mushi, A., de Savigny, D., Schellenberg, D., Mshinda, H., et al. (2003). Inequities among the very poor: health care for children in rural southern Tanzania. *Lancet* 361, 561–566.

Sirima, S. B., et al. (2003). Early Treatment of Childhood Fevers with Pre-packaged Antimalarial Drugs in the Home Reduces Severe Malaria Morbidity in Burkina Faso'. *Tropical Medicine and International Health*, 8(2), 133-139.

Theodoratou, E., et al. (2010): 'The Effect of Case Management on Childhood Pneumonia Mortality in Developing Countries'. *International Journal of Epidemiology*, 39, i159-i177.

UNICEF and African Medical Research Foundation. (2012). Report of a Gap Analysis and filling the gaps workshop (unpublished report).

Victoria, C. G., Wagstaff, A., Schellenberg, J. A., Gwaitkin, D., Claeson, M., Habicht, J. P. (2003). Applying an equity lens to child health and mortality: more of the same is not enough. *Lancet* 362, 233–241.

UNICEF/WHO/WORLD BANK, (2011): The World Bank Statistics.. Levels & Trends in Child Mortality. Retrieved 24 May 2013, from <http://data.worldbank.org/indicator/SH.STA.BRTC.ZS> . New York:.

World Health Organization (WHO). (2011): World Health Statistics. Retrieved 24 May 2013 from [http://www.who.int/whosis/whostat/EN\\_WHS2011\\_Full.pdf](http://www.who.int/whosis/whostat/EN_WHS2011_Full.pdf)

World Health Organization. (2012). World Health Statistics. Retrieved 24 May 2013, from [http://www.who.int/gho/publications/world\\_health\\_statistics/2012/en/](http://www.who.int/gho/publications/world_health_statistics/2012/en/)

WHO and UNICEF. (2012). Integrated Community Case Management—(iCCM); An equity-focused strategy to improve access to essential treatment services for children. *American J.Trop.Med.Hyg.*, 87 (Suppl 5), 2012, pp.6-10Geneva.

WHO and UNICEF. (2010). Global, regional, and national causes of child mortality in 2008: a systematic analysis. *Lancet*, 2010 Jun 5;375(9730):1969-87.

Williams, T., et al. (2012). Integrated Community Case Management (CCM) Benchmark Indicators, 2012. (in draft).

Young, M.W., Hammamy, D., and Wansi, E. (2011). Technical Updates on Integrated Community Case Management. Nairobi.

