Home Management of Malaria, Acute Respiratory Infection & Diarrhoea In Ghana

Implementation Guidelines

Ministry of Health/Ghana Health Service

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Foreword

Effective and sustainable control of childhood illnesses including malaria, acute respiratory infection (ARI) and diarrhoea in several countries has been achieved through strategic approaches of community engagement and participation, training and updating the skills of health workers and reorienting them. Critical to these are case management with efficacious drugs and sound vector control-strategies (where relevant) and above all, political commitment at all levels of governance. Home management of malaria and other childhood illnesses referred to as home-based care (HBC), takes into consideration the overall goals of Ghana’s Malaria Strategic Plan and Child Health Policy: reducing the malaria disease burden by 50% by the year 2010 and by 75% by 2015 and reducing child mortality to 40 deaths per 1,000 live births by 2015.

This document, the Implementation Guideline on Home Management of Malaria, Acute Respiratory Infection and Diarrhoea is designed to serve as guide for the management of malaria and other childhood illnesses in the home or as near home as possible. The document’s features include sections on:

- Disease transmission and morbidity
- Description of the home management strategy
- Implementation arrangements
- Collaboration within the health sector and with other public and private sectors implementing HBC
- Engagement with local communities and other stakeholders
- Pharmacovigilance
- Monitoring and evaluation

The document specifies the activities to be undertaken according to the main component strategies and the expected outputs. It takes into account available health infrastructure and resources for an integrated approach to the control of malaria, diarrhoea and ARI in Ghana. The process of de-regulation of Artesunate-Amodiaquine and Amoxycillin has begun by the Food and Drugs Board; once deregulated, these essential drugs should be made available to communities for the management of malaria, ARI and diarrhoea. Access to the drugs should be facilitated through the National Health Insurance Scheme. Services provided by community-based agents, who are part of the sub-district health system should be catered for by the scheme.

It is my hope that this Implementation Guideline will serve to firmly place management of malaria, ARI and diarrhoea in the home in the country’s effort to reduce the burden of childhood illnesses and that it will provide a platform for all stakeholders to rally around the common goal of controlling these life-threatening illnesses.

DR. GEORGE S.A. YANKEY  
HON. MINISTER OF HEALTH
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## List of Abbreviations and Acronyms

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ADR</td>
<td>Adverse drug reaction</td>
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<tr>
<td>ANC</td>
<td>Antenatal care</td>
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<td>ARI</td>
<td>Acute respiratory infection</td>
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<tr>
<td>AS-AQ</td>
<td>Artesunate-Amodiaquine</td>
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<tr>
<td>BCC</td>
<td>Behaviour change communication</td>
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<td>CBA</td>
<td>Community-based agents</td>
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<td>CBO</td>
<td>Community-based organisation</td>
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<td>CDD</td>
<td>Community drug distributors</td>
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<td>CBSV</td>
<td>Community-based surveillance volunteers</td>
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<td>CHC</td>
<td>Community health compound</td>
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<td>CHIM</td>
<td>Centre for Health Information Management</td>
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<td>CHPS</td>
<td>Community-Based Health Planning and Services</td>
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<td>C-IMNCI</td>
<td>Community integrated management of childhood illnesses</td>
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<tr>
<td>DA</td>
<td>District Assembly</td>
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<td>DHMT</td>
<td>District health management team</td>
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<td>DHS</td>
<td>Demographic health survey</td>
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<td>ES</td>
<td>Environmental sanitation</td>
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<tr>
<td>FBO</td>
<td>Faith-based organisation</td>
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<td>FDB</td>
<td>Food and Drugs Board</td>
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<tr>
<td>GDP</td>
<td>Gross domestic product</td>
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<td>GHS</td>
<td>Ghana Health Service</td>
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<td>HBC</td>
<td>Home-based care</td>
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<td>HEW</td>
<td>Health extension workers</td>
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<td>HIRD</td>
<td>High impact rapid delivery</td>
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<td>HMM</td>
<td>Home management of malaria</td>
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<tr>
<td>IDSR</td>
<td>Integrated disease surveillance and response</td>
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<tr>
<td>IEC</td>
<td>Information education and communication</td>
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<tr>
<td>IMNCl</td>
<td>Integrated management of neonatal and childhood illnesses</td>
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<tr>
<td>IPTp</td>
<td>Intermittent preventive treatment in pregnancy</td>
</tr>
<tr>
<td>IRS</td>
<td>Indoor residual spraying</td>
</tr>
<tr>
<td>ITMs</td>
<td>Insecticide-treated materials</td>
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<tr>
<td>Abbreviation</td>
<td>Full Form</td>
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<td>--------------</td>
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</tr>
<tr>
<td>ITNs</td>
<td>Insecticide-treated nets</td>
</tr>
<tr>
<td>KNUST</td>
<td>Kwame Nkrumah University of Science and Technology</td>
</tr>
<tr>
<td>LCS</td>
<td>Licensed chemical seller</td>
</tr>
<tr>
<td>LLINs</td>
<td>Long-lasting insecticide treated nets</td>
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<tr>
<td>LMIS</td>
<td>Logistics management information system</td>
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<td>MDAs</td>
<td>Ministries, departments and agencies</td>
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<td>MICS</td>
<td>Multiple-indicator cluster survey</td>
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<td>MIS</td>
<td>Malaria indicator survey</td>
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<td>MMDAs</td>
<td>Metropolitan, municipal and district assemblies</td>
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<td>MOH</td>
<td>Ministry of Health</td>
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<td>NGOs</td>
<td>Non-governmental organisations</td>
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<td>NHIA</td>
<td>National Health Insurance Authority</td>
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<td>NHIS</td>
<td>National Health Insurance Scheme</td>
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<td>NMCP</td>
<td>National Malaria Control Programme</td>
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<tr>
<td>OPD</td>
<td>Outpatients’ department</td>
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<td>ORS</td>
<td>Oral rehydration salt</td>
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<td>PPME</td>
<td>Policy, planning, monitoring and evaluation</td>
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<td>QA</td>
<td>Quality assurance</td>
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<td>RBM</td>
<td>Roll back malaria</td>
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<tr>
<td>RCC</td>
<td>Regional Co-ordinating Council</td>
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<tr>
<td>SDHT</td>
<td>Sub-district health team</td>
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<tr>
<td>SP</td>
<td>Sulfadoxine-Pyrimethamine</td>
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<tr>
<td>sp.</td>
<td>Species</td>
</tr>
<tr>
<td>sl</td>
<td>Sensu latum</td>
</tr>
<tr>
<td>SSDM</td>
<td>Stores, supplies, distribution and management</td>
</tr>
<tr>
<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
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<tr>
<td>VHC</td>
<td>Village health committee</td>
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<tr>
<td>WHO</td>
<td>World Health Organisation</td>
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<tr>
<td>WHO-TDR</td>
<td>WHO-Tropical Diseases Research</td>
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Chapter One

Introduction

1.1 Country Background

Ghana is a developing country that lies on the West Coast of Africa. It gained political independence in 1957 and is currently governed as a constitutional democracy. It has a total land area of 230,940 sq km and shares borders with Côte d’Ivoire to the west, Burkina Faso to the north, Togo to the east and the Atlantic Ocean to the south. The country has an estimated population of approximately 22.4 million, with population growth rate of 1.9%, projected from the 2000 Population Census. Accra is the capital city (a metropolitan city with a population ranging between 3 to 4 million). Administratively, Ghana is divided into ten regions and 170 districts.

The country has an estimated per capita GDP of $1,400, and the economy revolves around agriculture, which accounts for about 35% of GDP employing about 55% of the workforce, mainly small landholders.

Ghana has a three-tiered health-care system: primary, secondary and tertiary. The primary level consists of community-based agents, community health compound (CHC-CHPS) and sub-district health teams (SDHTs). The sub-district level, including the health centre and CHPS compound, is responsible for providing clinical, public health and maternity services to the catchment population using a combination of clinic-based, regular outreach and mass campaigns in close collaboration with communities, community institutions and village-based health workers. The secondary level, consisting of the district hospitals, serves as the first referral point for the primary level. The tertiary level consists of regional hospitals that serve as the secondary point of referral. In addition, there are teaching hospitals, which form the apex of specialised care in the country.

Infectious diseases are major public health problems; malaria stands out prominently as the first among the top ten causes of morbidity and mortality in the country. A survey conducted to determine the economic burden of malaria in Ghana using Chloroquine indicated that malaria costs €1,475,430 (US$78.90) of per capita income; that is, in every household, €3,789, 555.00 (US$405.30) is spent on malaria treatment alone, representing 9.74% of government health expenditure per capita at the time the study was conducted. The MOH/GHS estimates the cost per case to be GH¢ 8.24.1

Episodes of malaria, pneumonia and diarrhoea can occur concurrently, and mortality among children sick with both pneumonia and diarrhoea or malaria is greater than mortality from either illness alone.2

1.2 Childhood Illnesses

Child survival is a major public health concern in Ghana. Under-five mortality in Ghana remains high (111 deaths per 1,000 live births in 2001–2006); rates have remained stagnant over the past two decades. The causes of mortality in this age group, as shown in Figure 1, are malaria (25%), pneumonia (20%), diarrhoea (17%), and problems in the early neonatal period (27%). Malnutrition is associated with more than half (53%) of all deaths (Analytic review of Integrated Management of Neonatal and Childhood Illnesses, 2005). The majority of these child deaths are caused by conditions that are preventable or treatable with simple, low-cost interventions. Addressing child survival, therefore, requires reaching the majority of children with these interventions.

Figure 1: Causes of Under-Five Mortality in Ghana

Source: Lancet Child Survival Series with Adjustments for Ghana

1.2.1 Malaria Situation

Malaria is hyper-endemic in all parts of Ghana. Transmission occurs all year round with slight seasonal variations during the rainy season from April to July. In the northern areas, however, seasonal variation is clear, and malaria transmission is lower during the prolonged dry season from September to April.

The country can be stratified into three malaria-epidemic zones: the northern savannah in the northern part; the tropical rainforest in the middle belt and the coastal savannah (with some mangrove swamps) in the South. The predominant malaria vector species throughout the country are *Anopheles gambiae sl.* and *Anopheles funestus*. Characteristically, these species are highly anthropophilic and bite late in the night (after 10:00 pm). They are commonly found in the rural and peri-urban areas where human activities create breeding sites.

The main parasite species causing malaria in Ghana are *P. falciparum* (80-90%), *P. malariae* (20-36%), and *P. ovale* (0.15%). Mixed infections of *P. falciparum* and *P. malariae* are not uncommon. The crude parasite rates ranges from 10% to 70%. Figure 2 presents a map showing the prevalence of malaria in Ghana.
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Figure 2: Prevalence of Malaria in Ghana

Ghana: Malaria Prevalence Model
Everyone is at risk of acquiring malaria, but children younger than five, pregnant women and non-immune visitors are at greatest risk.

Malaria is a leading cause of under-five mortality, a significant cause of adult morbidity, and the leading cause of workdays lost due to illnesses. In addition, malaria impacts productivity adversely on all sectors of the economy. More than 70% of malaria episodes in rural areas and more than 50% in urban areas are treated at home.

During the past five years, between 3.1 and 3.5 million cases of clinical malaria were reported in public health facilities each year, of which more than 900,000 cases were infections of children younger than five (2007 NMCP Annual Report). From 1994 to 2003, malaria accounted for 44.5% of all outpatient illnesses, 36% of all admissions, and 33.4% of all under-five deaths. Amongst pregnant women, it accounted for 13.8% of all out-patient department (OPD) attendances, 10.6% of admissions and 9.4% deaths.

Since 2003, when the country benefited from Global Fund Round 2, and in 2005, from Global Fund Round 4, a significant reduction has occurred in morbidity and mortality from malaria. In 2007 malaria accounted for 37.5% of all outpatient illnesses, 24% of all admissions and 19% of all deaths. The impact has been greatest among children younger than five. A drop has occurred in malaria-attributable deaths from the 2003 level of 33.4% to 29.4%.

1.2.2 Acute Respiratory Infections (ARI) and Diarrhoea Situations

In Ghana, diarrhoea and pneumonia are leading causes of mortality among children younger than five and together are estimated to account for 37% of under-five mortality (Analytic Review of IMNCI, 2005). The main risk factors of diarrhoea are linked to contaminated water and unhygienic practices related to food preparation, hand washing and disposal of waste. The prevalence of diarrhoea varies seasonally. A geographical difference in prevalence of diarrhoea among children is clear; in the northern regions, a higher prevalence of diarrhoea is seen than in the rest of the country. In addition, surveys have shown that diarrhoea among children is often managed at home (Ghana DHS 2003, MICS 2006). This finding highlights the importance of the community in the management of diarrhoea. Surveys have also shown that less than half of children with symptoms of acute respiratory infections were taken to a health provider (Ghana DHS 2003, MICS 2006). Figures 3 and 4 show the trends in diarrhoea and pneumonia reported by public health facilities over a four-year period.
In areas where malaria is also a major cause of sickness and death among young children, a
substantial overlap occurs in the clinical presentations of malaria and pneumonia. For both diseases, fever is present in the majority of cases. An integrated approach to management of malaria, pneumonia and diarrhoea is thus crucial for reducing deaths among children younger than five. Early identification and management with antibiotics are necessary for reducing deaths due to pneumonia and other acute respiratory infections. Therefore, children showing signs of pneumonia must be identified and the illness managed early.

1.3 Control Strategy

1.3.1 Malaria Control Strategy

The National Malaria Control Program in Ghana aims to “reduce malaria disease burden (morbidity and mortality) by 75% by the year 2015, using 2006 as baseline.”

To address the problem of malaria, Ghana has adopted the Roll Back Malaria (RBM) Strategy that employs a multipronged approach involving:

- Multiple Prevention Methods: Several preventive methods are implemented to reduce malaria in the population, especially the vulnerable groups. These strategies include the use of insecticide-treated nets (ITNs) and insecticide treated materials (ITMs), chemoprophylaxis or use of intermittent preventive treatment for pregnant women (IPTp), targeted killing of larvae and adult mosquitoes (like indoor residual spraying [IRS]) in targeted districts and environmental management.

- Improved Case Management: Prompt and appropriate case management when a patient visits a health facility and prompt and effective home management of malaria. This intervention also seeks to refer promptly those patients who cannot be managed at home or in a local health facility.

- Focused Research: All feasible and effective interventions are implemented.

- Improved Partnerships at all levels: Control of malaria can only be achieved through multi-sectoral collaboration.

1.3.2 ARI and Diarrhoea Control Strategy

The Child Health Strategy outlines the key approaches for addressing pneumonia and diarrhoea among children younger than five. The strategy is organised along the continuum of care for the mother and child (pregnancy, birth and the immediate postpartum period, neonatal period, infants and children). Community-based management of pneumonia and diarrhoea are among the key approaches for delivering care.

The Child Health Policy and strategy documents recommend the use of oral rehydration salts
(ORS), zinc and increased home-available fluids for the management of diarrhoea and the
management of pneumonia with oral antibiotics (Under-5 Child Health Policy, 2008: Child
Health Strategy 2009). Improving early recognition of illness and care-seeking from appropriate
providers is essential for both of these conditions.

Routine administration of measles and *Haemophilus influenzae* type b (Hib) vaccines and the
promotion of good personal hygiene are the prevention strategies for pneumonia and diarrhoea.

### 1.4 History of Home Management of Malaria (HMM)

HMM implementation began on a trial basis in Ghana in 1999 as part of the WHO/TDR-funded
multi-country study. HMM became possible as a result of prepackaging antimalarial drugs, as
documented by Pagnoni et al. (1997). Due to the similarity between malaria and pneumonia,
the study included treatment with prepacked chloroquine and cotrimoxazole for treating infants
with a respiratory rate greater than 50 per minute or a rate greater than 40 per minute among pre-
school children (1–6 years old), which was the operational definition of ARI set for the study.
At the time, chloroquine was the drug of choice for malaria in Ghana. For the purpose of the
study, the dosage of chloroquine was formulated as 75mg base daily for 3 days for infants and for
children aged 1–6, a tablet of 150 mg base daily for 3 days.

A network of community-based agents (CBAs) was selected by the communities guided by
criteria agreed upon by the study team. Apart from the core interventions, training updates,
qualitative surveys, and information, education and communication (IEC) sessions were
organised. In communities where these activities were regular, compliance was found to be very
high (Browne et al., 2001).

The use of prepacks was found to be acceptable and health-seeking Behaviour improved
remarkably, with a compliance rate of 91% (Browne et al, 2001). Just as the HMM team was
negotiating with the Ministry of Health (MOH) and stakeholders to adopt the use of prepacks for
HMM country-wide, the malaria drug policy was changed because a high resistance (over 25%) to
chloroquine was found.

In 2005, the malaria drug policy was revised and Artesunate-Amodiaquine (AS-AQ) was adopted
as the preferred drug. The HMM team was commissioned to conduct a feasibility study using
Artesunate-Amodiaquine, for home management of malaria. The findings showed that AS-AQ was
feasible for use in HMM.

As a follow up, UNICEF-Ghana, the Ghana Health Service and the HMM team collaborated to
pilot the programme in Upper East, Upper West and Northern Regions under the Accelerated
Child Survival and Development Programme.

The favourable results of the pilot study as well as the successful implementation in the three
northern regions have prepared the ground for nationwide implementation of HMM.
The Home-Based Care (HBC) Plan

The Home Based Care (HBC) plan for Ghana, which includes home management of malaria is a key component of both the National Malaria Strategic Plan for 2008-2015 and Integrated Management of Neonatal and Childhood Illness (IMNCI) and is fully endorsed by WHO and RBM. The HMM strategy has been identified as both feasible and effective in achieving this target. This strategy ensures that caregivers and parents recognise symptoms and signs of malaria and respond appropriately and promptly within 24 hours of onset by seeking treatment from trained community based-agents (CBAs).

2.1 Operational Definition of HBC

In Ghana, HBC is defined as early case detection and treatment of malaria, ARI and diarrhoea in the community. It includes other malaria-control interventions such as promotion and distribution of insecticide-treated nets (ITN), promotion of intermittent preventive treatment during pregnancy (IPTp) and sensitisation of communities to access indoor residual spraying (IRS).

HBC starts from the mother/caregiver as the first contact with the child and links to the CBA who connects the community and the formal health system.

Pregnant women will also be targeted for education and referral to appropriate health providers to access IPTp.

The main areas of focus are:

- Correct recognition of signs and symptoms of malaria, ARI and diarrhoea
- Provision of correct and timely management for simple/uncomplicated malaria, ARI and diarrhoea in accordance with national protocols
- Recognition of the danger signs of severe illness
- Prompt referral of cases beyond the ability of CBAs/caregivers to the appropriate level
- Provision of adequate support services and care
Chapter Two

• Use of antimalaria suppositories for severe malaria cases before referral to the hospital/clinic.
• Behaviour-change communication on prevention, recognition, early care seeking and full compliance with treatment for malaria, ARI and diarrhea
• Promotion, distribution and retreatment of ITNs
• Promotion of IPT for pregnant women
• Identification and referral of pregnant women due for IPT
• Promotion (community mobilisation and sensitisation) of IRS in targeted districts

2.2 Objectives and Expected Outcomes for HBC

General objectives:

• To increase access within communities to prompt and effective treatment of uncomplicated malaria, diarrhoea and ARI in targeted districts
• To ensure that 90% of caregivers/parents of children younger than five in targeted districts recognise early symptoms of malaria
• To introduce and scale-up community management of diarrhoea and ARI in tandem with home management of malaria in targeted districts

Specific objectives:

• To give access to all communities to community-based treatment for uncomplicated malaria, ARI and diarrhoea in targeted districts
• To ensure that 90% of caregivers and parents in targeted districts will be able to recognise early signs and symptoms of malaria, diarrhoea, and ARI
• To provide 90% of children younger than five with fever in targeted districts with an appropriate Artemisinine-based combination therapy (ACT) within 24 hours of onset
• To identify and promptly refer all severe cases (complicated malaria, fevers due to other causes, bloody and persistent diarrhoea and severe pneumonia)
• To create awareness among 80% of people in communities about the importance and benefits of HBC and the need to obtain it

In addition HBC will contribute to:
• Increasing communities’ use of ITNs from the current level to 80% by 2015

• Increasing demand for indoor residual spraying (IRS) in at least 90% of households in target districts by 2011 and sustain this level of demand until 2015

• Promoting IPT to all pregnant women so as to reach the target that 80% of pregnant women take at least two doses of sulfadoxine-pyrimethamine (SP).

• Increasing the proportion of children having watery diarrhoea receiving oral rehydration therapy (ORT) from 37% (MICS 2006) to 60% in 2011 (GHS five-year strategic framework for child health.)

• Increasing the proportion of children with suspected pneumonia who received appropriate antibiotics from 33% in 2006 (MIC 2006) to 50% in 2011 (GHS five-year strategic framework for child health.)

Expected outcomes:

• Increased proportion of mothers and caregivers recognizing and seeking early treatment for malaria, diarrhoea, and ARI

• Increased number of districts implementing home-based management for malaria

• Increased number of districts implementing home-based management for diarrhoea and ARI

• Improved referral of cases of severe malaria at the community level

• Improved referral of cases of bloody and persistent diarrhoea and severe pneumonia

• Decreased proportion of severe malaria, diarrhoea and pneumonia occurring in communities

• Increased proportion of persons who are aware of the benefits of HBC

• Increased proportion of persons who seek care from CBAs

• Increased number of persons in households sleeping under ITNs

• Increased proportion of pregnant women taking at least two doses of SP

• Increased proportion of children receiving oral rehydration salts (ORS) and zinc for the management of diarrhoea

• Increased proportion of children receiving antibiotics for the management of pneumonia within their communities.

Note: Ultimately, the outcome of a home-based care would be a significant reduction in childhood morbidity and mortality.
Chapter Two

2.3 Target Groups and Beneficiaries of HBC Services

The primary target groups of HBC services are caregivers of children younger than five and CBAs. The secondary target groups are health extension workers (HEW), community health officers (CHO), sub-district health teams (SDHTs) and district health management teams (DHMTs).

The beneficiaries of the services are primarily children younger than five and secondarily, pregnant women and the general population.

2.4 How HBC Fits into the Health System

Implementation of HBC is proposed for communities with CHPS zones as well as those without CHPS zones. HBC would be the lowest level of health-care delivery in Ghana. It aims at improving access to effective management of malaria, ARI and diarrhoea among children. This section describes the linkages between HBC and the formal sector and also how HBC services will be provided in both CHPS and non-CHPS zones (see Figure 5).
Figure 5: Framework of the Linkage between HBC and the Formal Sector

The Health Centre or Hospital will report to the DHD for onward submission to the RHD and then to the National MOH/GHS.

(Caregivers may send their children directly to the health facilities.)

KEY

HC – Health Centre
CC – Community Clinics
HEW – Health Extension Officers
MH – Maternity Homes
PC – Private Clinics
CHC – CHPS Health Compound
2.4.1 HBC in CHPS Zones

The HBC initiative has been designed to make management for simple malaria, ARI, diarrhoea available at the doorstep of communities through a structured mechanism of linking CBAs to the primary health-care system. The Ghana Health Service (GHS) has established the Community-based Health Planning and Services (CHPS) programme as a mechanism for this important linkage. The CHPS programme provides DHMTs throughout Ghana with evidence-based strategies to adapt for improved community health care that the members of the communities can use.

CHPS provides close-to-client health services by placing CHO's in CHPS zones. Central to the CHPS programme are advocacy, community mobilisation and community participation using participatory needs-assessment tools to identify priority health needs for intervention.

CHO's are mainly community health nurses who have been selected and re-oriented to become residents of the community so that they can provide basic health services, including preventive, promotional and case-management services for common conditions such as malaria. The CHO is the primary health-care worker serving as communities' link to the health facilities and is responsible for implementing the HBC initiative with the support of HEWs and CBAs. The CHO is a supervisor of the CBAs and refers severe cases of malaria, among other conditions to the health centre at the sub-district or in some cases to the district hospital.

A typical scenario involving a child with fever and/or ARI and/or Diarrhoea, will be as follows:

- The caregiver sends the child to CBA.
- The CBA assesses the child comprehensively and classifies the patient using signs and symptoms as per IMNCI guidelines (see Chapter Three).
- The CBA treats the child or refers it to CHO, depending on classification (see Chapter Three).
- The CHO assesses referred cases.
- The CHO treats or refers the child (depending on classification) to the nearest health facility.

Note: In communities with functioning CHPS zones and health centres, the CHO or other health provider may be the first point of call. CBAs may not be trained in these communities because caregivers are likely to send their wards directly to the health facility.
2.4.2 HBC in Non-CHPS Zones

In areas where there is no CHPS, the flow may follow the same pattern as above except that caregiver may report directly to a health facility or a private health-care provider as the case may be.

In non-CHPS catchment areas, the following scenarios may be possible:

Health centres, private midwives and private health facilities would play the role of referral facilities.

Sub-district health teams would play the supervisory role.

The SDHTs instead of CHO's would introduce the CBAs to their assigned communities.

Where a private clinic is acting as the referral point, its staff shall be provided with requisite training and logistic support to ensure their effectiveness.

Note: Reports will be sent to the DHD for onward submission to the RHD and finally to national agencies.
Chapter Three

Community-Level Management of Childhood Illness

3.1 Assessment of the Sick Child

The management of every sick child begins with an assessment, and this should be conducted at the community level as well. The CBA should, therefore, assess the child in a systematic manner for general danger signs, fever, acute respiratory infection and diarrhoea. The assessment steps are outlined below.

3.1.1 Ask the Child’s Age

The child’s age should be determined.

The child who is younger than six months old should be referred immediately to the nearest CHO or health centre for care and specialised treatment.

Give pre-referral care as shown in Table 1:

<table>
<thead>
<tr>
<th>Presenting Symptoms</th>
<th>Pre-Referral Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fever</td>
<td>Sponging with tepid water, continue breastfeeding</td>
</tr>
<tr>
<td>Cough</td>
<td>Continue breastfeeding</td>
</tr>
<tr>
<td>Diarrhoea</td>
<td>ORS and continue breastfeeding</td>
</tr>
</tbody>
</table>

For children aged six months to five years, continue with the assessment steps listed below.

3.1.2 Assess for General Danger Signs

A general danger sign is a warning that the sick child may be suffering from a serious health problem. Such general danger signs should be looked for in all sick children, whatever their
complaints. Every child must be assessed for the following general danger signs:

- Inability to drink or breastfeed
- Vomiting everything he/she drinks or eats
- Suffering convulsions
- Lethargic or unconscious (very sleepy, hard to awaken)

The child with any of these general danger signs should be referred immediately to the nearest CHO or health centre for care and specialised treatment.

3.1.3 Assess for Fever

At the community level, suffering from fever or having a history of fever should be considered as malaria. Fever is diagnosed by touch or is based on the caregiverís assessment. The duration of the fever should be assessed. If fever is present for six days or less, the child needs to be treated for malaria, and the caregiver should be advised about the use of bednets.

If the child has had fever for seven days or more, he/she must be referred to the nearest CHO or trained health worker for further assessment.

3.1.4 Assess for ARI or Pneumonia

All children should be assessed for pneumonia by enquiring if they have a cough, a cold or fast or difficult breathing. If any of these is present, the assessment is continued to ascertain:

- The duration of the symptoms
- The breathing rate
- In-drawing of the chest
- Noisy breathing

If the cough has lasted 14 days or more, the child must be referred to the CHO or clinic for further assessment.

Fast breathing is a sign of pneumonia, and the illness should be managed using antibiotics.
Chapter Three

Chest in-drawing or noisy breathing are signs of severe pneumonia, and the child must be referred to the CHO or clinic after receiving a first dose of oral antibiotic (if the child is more than six months old and can drink).

Table 2 shows the cut-off points for fast breathing for children aged six months to five years.

Table 2: Cut-off Points for Fast Breathing among Children Aged Six Months to Five Years

<table>
<thead>
<tr>
<th>AGE OF THE CHILD</th>
<th>FAST BREATHING IS PRESENT IF BREATHING RATE IS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 months – 11 months</td>
<td>50 or more breaths per minute</td>
</tr>
<tr>
<td>12 months – 5 years</td>
<td>40 or more breaths per minute</td>
</tr>
</tbody>
</table>

*Note: Children younger than six months must be referred to the CHO or clinic.*

3.1.5 Assess for Diarrhoea

All children must be assessed for the presence of diarrhoea or passage of loose stools. A child has diarrhoea if he or she passes very loose or watery stools three or more times a day. Babies who are exclusively breastfed often have stools that are soft; this is not diarrhoea (The parent/caregiver of a breastfed baby can recognise diarrhoea because the consistency or frequency of the stools is different from usual). If diarrhoea is present, the CBA must further assess the condition for duration, the presence of blood in the stool and hydration status.

A child who is seen with:
- diarrhoea that has been present continuously for seven days or more or who has blood in his/her stools or
- who is dehydrated
must be referred immediately to the CHO or clinic. This child must receive ORS on the way to the clinic.

A child with diarrhoea of less than one week and who has no blood in his/her stools and is not dehydrated can be managed by the CBAs. This child should receive ORS and zinc supplement.
3.2 Treatment

In this section, the dosages and medicines to be used for malaria, ARI and diarrhoea are described. CBAs should select the treatment that is appropriate for the child’s condition.

3.2.1 Malaria

Artesunate-Amodiaquine (AS-AQ) is the combination drug of choice for treating uncomplicated malaria in the community or near-home setting.

A fixed-dose soluble combination of Artesunate-Amodiaquine is preferred. The dosage for the combination is Artesunate 4mg/kg body weight and Amodiaquine 10mg/kg body weight administered concurrently as single daily treatment for three (3) consecutive days. Medicines should be administered after meals.

Artesunate-Amodiaquine tablets for use in home management of malaria by CBAs must be pre-packed appropriately and clearly coded to differentiate treatment packs for specific age categories. These should be produced in two colour-coded forms for infants (6 – 11 months) and preschool children (12 months – five years) as shown in Table 3.

Infants (6 months to 11 months): Artesunate – 25 mg / per tablet with three tablets in a pre-pack; Amodiaquine – 75 mg/ per tablet with three tablets in a pre-pack.

Preschool child (12 months to five years: Artesunate – 50 mg / per tablet with three tablets in a pre-pack; Amodiaquine – 150 mg / tablet with 3 tablets in a pre-pack. Note: Anti-malarial medication should be pre-packaged as single doses.

Table 3: Treatment Schedule for Malaria Using Artesunate-Amodiaquine Pre-Packs (Co-Blister)

<table>
<thead>
<tr>
<th>Age Group/ Drug</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug</td>
<td>AS</td>
<td>AQ</td>
<td>AS</td>
</tr>
<tr>
<td>6–11 months</td>
<td>25mg</td>
<td>75mg</td>
<td>25mg</td>
</tr>
<tr>
<td>12 months – 5 years</td>
<td>50mg</td>
<td>150 mg</td>
<td>50mg</td>
</tr>
</tbody>
</table>

To ensure adherence and ease of administration, fixed-dose and dispersible Artesunate-Amodiaquine should be used instead of co-packaged doses. The dosage for a fixed dose by age group is as shown in Table 4.
Table 4: Treatment Schedule for Malaria Using Artesunate-Amodiaquine Pre-Packs (Fixed Dose)

<table>
<thead>
<tr>
<th>Age Group/Drug</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug</td>
<td>AS/AQ</td>
<td>AS/AQ</td>
<td>AS/AQ</td>
</tr>
<tr>
<td>6–11 months</td>
<td>25mg/67.5mg</td>
<td>25mg/67.5mg</td>
<td>25mg/67.5mg</td>
</tr>
<tr>
<td>12 months – 5 years</td>
<td>50mg/135 mg</td>
<td>50mg/135 mg</td>
<td>50mg/135 mg</td>
</tr>
</tbody>
</table>

Note: Each tablet contains both drugs.

Recommended actions should include:

- Giving a Paracetamol tablet to reduce temperature (refer to Table 5)
- Sponging child with high fever (based on diagnosis by touch) with tepid water
- Advising mothers/caregivers to give the child extra fluids (breastmilk, drinking water, diluted fruit juice, coconut water, ORS)
- Advising mothers/caregivers to feed the child during the illness

Table 5: Paracetamol Dosage According to Age of Child

<table>
<thead>
<tr>
<th>Age</th>
<th>Dosage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Younger than 11 months</td>
<td>125mg</td>
</tr>
<tr>
<td>12 months – 5 years</td>
<td>250mg</td>
</tr>
</tbody>
</table>

3.2.2 Acute Respiratory Infection

Amoxycillin is the drug of choice for treating ARI in the community or near-home setting for children aged six months to five years.

For children older than six months who are being treated for fast breathing in the community, Amoxycillin should be given three times daily for five days in the dose described in Table 6.
Table 6: Treatment Schedule for Children with ARI Using Amoxycillin

<table>
<thead>
<tr>
<th>Weight or Age</th>
<th>Amoxycillin</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Capsule 250mg</td>
</tr>
<tr>
<td>4–&lt;10 kg 6 months to 11 months</td>
<td></td>
</tr>
<tr>
<td>10–19 kg 12 months to 5 years</td>
<td>1</td>
</tr>
</tbody>
</table>

The caregiver must be advised to continue feeding, to give extra fluid and to go to the nearest health facility if the child:

- Cannot drink or breastfeed
- Vomits everything
- Becomes sicker (is not improving)

Follow-up should take place three days after medication begins.

3.2.3 Diarrhoea

For children older than six months who are being treated in the community for diarrhoea that has lasted less than 14 days and who have no blood in their stools, ORS and zinc should be used.

The first ORS solution should be given immediately after the assessment, as shown in Table 7. CBAs should teach caregivers how to mix and give ORS and how much to give beyond the usual fluid intake. The caregiver should be given three packets of ORS to take home.

Table 7: Treatment Schedule for Children with Diarrhoea Using ORS

<table>
<thead>
<tr>
<th>Age</th>
<th>ORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 months to 2 years</td>
<td>50–100 ml after each loose stool</td>
</tr>
<tr>
<td>2 years or more</td>
<td>100–200 ml after each loose stool</td>
</tr>
</tbody>
</table>

Zinc supplements should be given daily for 14 days even after if the diarrhoea has stopped, as shown in Table 8. The caregiver should be shown how to give zinc.

- For infants, dissolve a tablet in a small amount of expressed breastmilk, ORS or clean water in a cup.
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- For older children, tablets can be chewed or dissolved in a small amount of clean water in a cup.

**Table 8: Treatment Schedule for Children with Diarrhoea Using Zinc**

<table>
<thead>
<tr>
<th>Age</th>
<th>Zinc 10 mg tablet</th>
<th>Zinc 20 mg tablet</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 months to 5 years</td>
<td>2 daily for 14 days</td>
<td>1 daily for 14 days</td>
</tr>
</tbody>
</table>

The caregiver must be advised to continue feeding, give extra fluid and to go to the nearest health facility if the child:

- Cannot drink or breastfeed
- Vomiting everything
- Becomes sicker (is not improving)
- Has blood in the stools

If the child does not develop any of these complications, follow-up should take place three days after treatment.

### 3.3 Referral

#### 3.3.1 Pre-Referral and Referral Management

Referral: When a client does not respond to treatment in 24 hours, the CBAs should be instructed to refer the client promptly to the nearest CHPS zone or health-care facility. The objective of referral is to identify severe cases of malaria and other childhood illnesses that are beyond the capabilities of the CBA to manage and to refer appropriately and promptly. Referrals should be accompanied by forms filled by the CBAs. Before referral, CBAs have a role in providing pre-referral management to reduce deaths from severe disease. The management strategy is to provide CBAs with the skills to recognise severe disease and to provide appropriate and prompt management to reduce the progression to death. CBAs should be trained to give correct counselling, fill the appropriate forms for referral to the next level (usually the CHPS compound or health centre). Caregivers’ proper counselling from CBAs to explain the reasons for referral is very important in reducing caregivers’ non-compliance to referrals. All cases that are beyond the ability of the CBA to manage must be referred promptly. The referral facility, in turn, should give feedback to the CBAs. CBAs must follow up on all cases to see if the child is improving. If not, the case should be referred.

A CBA may need to refer a young child to the CHO or nearest clinic for several reasons. Some of these reasons are as follows:
The child exhibits one or more general danger signs.
- The child has been coughing for seven days or more.
- The child has been coughing and has noisy or difficult breathing.
- The child has diarrhoea with bloody stools OR has had diarrhoea for more than 14 days.
- The child has had fever every day for seven (7) days.
- The child has been treated for illness but is not getting better

3.3.2 Referral and Pre-referral Treatment for Malaria

All children who do not respond to treatment with AS-AQ within 24 hours should be referred immediately to the nearest health facility.

Before referral to the nearest health facility, the CBA should do the following:
- Sponge the child with tepid water.
- Administer an Artesunate suppository (rectal), as shown in Table 9.

Table 9: Pre-Referral Treatment for Children with Malaria Using Artesunate Suppository

<table>
<thead>
<tr>
<th>Weight (kg)</th>
<th>Age (months)</th>
<th>Artesunate Dose (mg)</th>
<th>Regimen</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 – 8</td>
<td>6– 12</td>
<td>50</td>
<td>One 50mg suppository</td>
</tr>
<tr>
<td>9 – 19</td>
<td>13 – 42</td>
<td>100</td>
<td>Two 50mg suppositories</td>
</tr>
<tr>
<td>20 – 29</td>
<td>43 – 60</td>
<td>200</td>
<td>One 200mg suppository</td>
</tr>
</tbody>
</table>

Note: The age of the child will be used to determine the dosage.

3.3.3 Referral and Pre-Referral Treatment for ARI

For children older than six months who can drink and are being referred for:
- Chest in-drawing
- Noisy breathing
- Fast breathing
- A general danger sign

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The first dose of Amoxycillin should be given in the community as shown in Table 6 (Refer to 3.2.2).

The caregiver should be advised to:

- Continue feeding/breastfeeding
- Give extra fluid
- Keep the child warm if the child does not have a fever

Follow-up should take place when the child has returned from the clinic and at least once a week until the child is well.

3.3.4 Referral and Pre-Referral Treatment for Diarrhoea

For children who are referred with:

- Diarrhoea for 14 days or more
- Bloody stools

and can drink, begin giving ORS solution immediately, as shown in Table 6 (Refer to 3.2.3)

The caregiver must be advised to:

- Continue feeding/breastfeeding
- Give extra fluid
- Keep the child warm if the child does not have a fever

Follow-up should take place when the child has returned from the clinic and at least once a week until the child is well.

3.4 Other Services to be Rendered by CBAs

3.4.1 ITN Promotion

CBAs should educate community members on the benefits of ITNs especially those in the most vulnerable populations (pregnant women, children younger than five, non-immune visitors, sickle-cell patients, HIV patients). Nets will be provided at subsidised rates through the district-supply system. CBAs will also be required to perform periodic re-treatment of nets when required.
3.4.2 IPTp Promotion

CBAs should educate community members on the benefits of IPTp. They will be required to refer pregnant women to the nearest ANC clinic. The CBAs should follow up with pregnant women put on IPT and refer those who have adverse effects.

3.4.3 IRS Promotion in Target Districts

CBAs should educate community members on the benefits of IRS in districts where IRS activities have been targeted so as to create demand and also educate members about the need to cooperate with the workers who will spray their structures.
Implementation Arrangements

This chapter outlines all the preparatory activities required to implement HBC successfully. It describes the processes for identification of key stakeholders at all levels of the health-care system, clarifying their roles and responsibilities, determining what resources are required for HBC and drawing up plans to mobilise and distribute these resources. It also includes plans for establishing and strengthening existing systems for advocacy and cost recovery. The steps to be followed for implementing HBC are summarised as follows:

1. DHMT planning meeting
2. Advocacy for consensus building/development of an action plan
3. Community entry and mobilisation
4. CBA selection
5. Capacity building/training
6. Procurement of essential commodities; supply and distribution
7. Communications for Behaviour change
8. Addressing sustainability and community ownership issues
9. Strategies to recover costs
10. Involvement of the private sector
11. Service delivery and data management

4.1 DHMT Planning Meeting

DHMTs must plan for successful district implementation of HBC. During these meetings, teams should:

- Establish the need for an implementation programme.
- Strategise for the implementation by deciding which communities and sub-districts should begin implementation. Deprived communities should be prioritised.
- Identify key stakeholders for advocacy.
4.2 Advocacy

HBC requires multi-sectoral collaboration to succeed, and various sectors must be included. One of the principal methods for achieving collaboration is advocacy, which is an essential initial step that should be continued throughout implementation. Advocacy is the act or process of supporting a cause or issue and directing decisionmakers towards a solution by:

- Building support for the cause or issue
- Speaking out and influencing others to support it
- Trying to influence or change legislation that affects it

4.2.1 Planning for Advocacy

Advocacy requires the development of a planned, systematic and coordinated strategy. The following points should be noted when planning the strategy:

- Reliable data are needed to guide advocacy planning.
- Advocacy requires commitment and patience.
- People’s positions on an issue can change if they are convinced of the benefits associated with the change.
- Public opinion plays a key role in advocacy.

4.2.2 Key Steps in the Advocacy Process

1. Define HBC and how its implementation will improve health.
2. Set goals and objectives.
3. Identify the target audience.
4. Develop messages.
5. Select channels of communication.
6. Build support from identified stakeholders who will help with the advocacy.
7. Secure funding.
8. Develop an implementation plan.
9. Develop a monitoring and evaluation plan.

During the implementation phase, include:
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10. Data collection

11. Monitoring and evaluation

4.3 Community Entry and Mobilisation for HBC

Community entry and mobilisation are important processes for the success of the HBC and are required for effective community preparation towards uptake of services and acceptance of the CBAs. Their effective implementation also serves to boost the position of the CHO, SDHMT and the DHMT and facilitates community relations.

4.3.1 Definitions

**Community entry** refers to the process, principles and techniques of community mobilisation and participation. It involves recognizing the community, its leadership and people and adopting the most appropriate processes in meeting, interacting and working with them.

**Community mobilisation for health** is a process by which the people of a community, families and individuals, health workers and policy makers are motivated to organise their own, the community’s own and other resources for the purpose of achieving and sustaining improved health.

The following steps outline the recommended processes to be used by DHMTs/SDHTs in community entry and mobilisation for HBC:

4.3.2 Community entry

DHMTs/SDHTs meet with the traditional and political leaders to brief them about the HBC initiative and the support that the DHMT/SDHT requires from them. Before the meeting, DHMTs/SDHTs should:

- Conduct a background check on the community targeted for entry to learn about its traditional beliefs, practices and values. A community profile, if it exists, will be a valuable resource for the DHMT. If there is no community profile, the DHMT should commission the compilation of community profiles covering the sub-districts to provide necessary and accessible information.

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4 JHU/CCP/PCS/GMOH Community Mobilisation and Participation Training Manual for Community-based Health Planning and Services. 2006. Funded by USAID.
for planning. The sub-districts should first compile the profiles before sending them to the district level.

- Determine when the community is available to discuss developmental issues (for example, non-farming days).
- Find out about the community leaders, their roles and positions and the community’s rule about approaching leadership.
- Identify a suitable contact person to initiate contact with the required community leader(s).
- Be aware of the advantages and disadvantages of using contact persons. Determine that they are respected, credible, and popular and have links with opinion leaders. Contact persons commonly used in community-entry processes include:
  - teachers
  - leaders of social groups and associations (for example, youth associations, women’s groups)
  - traditional healers/herbalists
  - spiritual/religious leaders
  - assembly members
  - unit committee/area council members
  - TBAs
  - CBAs

- Agree on a suitable date and time for meeting with the community leaders

On the day of the meeting, DHMT’s/SDHT’s should:

- Inform the community leaders about the HBC initiative, its benefit to pregnant women, children younger than five and, ultimately, the larger community.
- Obtain the leaders’ approval and consensus.
- Solicit their support for the various roles they will be expected to play (for example, selection and support of CBAs in HBC).
- Clarify the communication channels for HBC implementation.
- Clarify what the communities and leaders should expect from the DHMT and SDHT offices.
- Indicate specific timelines for key activities.
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- Thank community leaders.

After the first entry process, DHMTs/SDHTs should:

- Establish rapport with community leaders.
- Continually communicate and solicit support throughout the programme.

4.3.3 Community Mobilisation for Health

The spirit of cohesion, solidarity and neighbourhood feeling needed for a successful community mobilisation is usually high in rural communities. However, this spirit is gradually being eroded by community exposure to urbanisation and modernisation. The DHMT will need to be aware of the history of the community’s response to mobilisation in order to plan in advance how to approach and involve the members in the HBC initiative. In mobilisation, the DHMT/SDHMT should follow the process below:

- Building on the community-entry process, engage community leaders in dialogue about the purpose for which the community must be mobilised (for example, mobilizing communities to organise a durbar to introduce trained CBAs or for uptake of IRS where applicable).
- Check to determine if a functional community (village) health committee is in place for spearheading health-care-related activities.
- If the committee exists, work through it to mobilise communities for HBC.
- Where no committee exists, work with the community leadership to establish one.
- Liaise with stakeholders at the community and programme level to mobilise both material and human resources for action.
- Value, recognise and respect community contributions to the process.
- Continually work with communities through the committees in all mobilisation processes.
- Continually give feedback and keep in contact to monitor and sustain community interest in the mobilisation effort.

4.4 Selection of CBAs

The use of CBAs in the form of community drug distributors (CDD) is not new to Ghana. These CBAs are usually selected from a cadre of surveillance volunteers or other health-programme volunteers who are already in the communities. Where no such volunteers are functioning, the communities should select their own agents based on clear criteria. Several persons could be nominated and chosen by the community.
Licensed chemical sellers and others such as representatives of women’s support groups, youth groups, representatives of community-based organisations (CBOs), non-governmental organisations (NGOs), in these communities could also be selected as CBAs. Two CBAs might work in a community of about 2,000 people. In the HBC programme, the selection of CBAs should be made by the community in consultation with the DHMTs, SDHTs and CHOs. CBAs for HBC can be chosen in a variety of ways:

- Democratically or by and community consensus
- Through local government involvement
- By cooperation from existing drug vendors and non-formal health-care providers
- Through involvement of existing private clinics/FBOs/CBOs that have experience in working with a wide range of people in the community

4.4.1 Qualifications of CBAs

- Able to read and write (preferred)
- Hardworking
- Dedicated
- Trustworthy/honest
- Available in the community (the community should discuss their availability and service times with potential CBAs
- Likelihood of long stay (not likely to migrate)
- Involvement/previous experience in health-related activities
- Respectful and respectable
- Gainfully employed
- Acceptable to community

4.4.2 Types of People to be Chosen as CBAs

The caliber of people to be chosen as CBAs include CDDs, TBAs, CBSVs, representatives of CBOs (for example, mother-support groups, youth groups, fitness clubs, father-support groups, representatives of FBOs, teachers, day-care attendants, and farmers). Other categories of people to be considered are HEWs and chemical sellers.

Where possible, HEWs should be the first choice for selection because they have already been trained in
health-care activities and are on Government payroll. The district assemblies will be encouraged to train two HEWs per community of 2,000 people. HEWs will be contracted through the district assemblies.

4.4.3 CBAs’ Assignment to Communities

Selected CBAs shall be introduced through a community durbar involving DHMT staff, NGOs and CBOs in the catchment area. If the community chooses an already known CBA, he or she shall be re-introduced to the community with additional duties. For each community of 2,000 people (of which about 400 are children younger than five), at least two CBAs should be chosen.

At the durbar, the CBA’s role in HBC shall be clearly outlined by the CHO, SDHT or DHMT representative to ensure that communities identify with the CBAs for uptake of services. The roles of the other key actors in HBC (for example, HEWs and CHO) shall also be outlined. Logistics for effective functioning of the CBAs shall be explained to them at the durbar, and clear guidelines for household coverage shall also be explained. At the durbar, communities shall be made aware of the times and availability of CBAs’ services.

Each CBA shall operate from his or her home for dispensing HMM-related services. CBAs shall also:

- Identify children having the signs and symptoms of malaria, ARI and diarrhoea and manage or refer these cases.
- Follow up on sick children within 24 hours to determine progress and referral where required. Caregivers shall be encouraged to return to the CBAs with their children. Defaulters shall be followed up at their homes.
- Identify eligible pregnant women and refer appropriately for IPTp.
- Educate households about ITNs, prevention of malaria and uptake of IRS services in eligible communities.

4.4.4 Replacement of CBAs

The following situations shall require that a CBA be replaced after consultation with key stakeholders:

- The CBA has moved away from the community.
- The CBA does not get along with community members or health staff.
- The CBA is not performing his or her duties.
- The CBA is no longer interested in the work.
- The CBA is not available for services to the community.
• The CBA is consistently flouting established rules and procedures.

4.5 Capacity Building (Including Training)

Training of health personnel, HEWs, CBAS, mothers and the commercial private sector is the cornerstone of successful implementation of HBC. Implementation should be well-planned so that too many participants should not be put on one course. Cascade training should be employed in the training of facilitators, supervisors and providers at all levels of health-care delivery. Training methodology should be in a form suitable for adult learning using techniques such as facilitation, demonstration, brainstorming, and role-playing, among other methods.

Materials will be developed for training CBAs and facilitators expected to participate in the implementation of HBC. Training materials will provide basic information, simplified for easy understanding and use. Materials for the CBAs will equip them with the skills to recognise and treat malaria, ARI and diarrhoea and to advise caregiving about what to do when their children are sick.

4.5.1 Education of Caregivers

CBAs shall organise health-education sessions during festive occasions and on non-farming days when most people are at home. IEC materials designed for this use shall be added to existing learning materials from the MOH. The IEC focal person in the district is expected to expand materials and increase communication at regular intervals. Caregivers should also be encouraged to spread the news to their friends and colleagues. Other channels for promotion include religious meetings at churches, mosques, prayer camps, fetish shrines, and conventions, and gong beating.

4.5.2 Training and Equipping CBAs

All CBAs shall undergo five-day training sessions concerning home-based management of malaria, ARI and diarrhoea. The training shall focus on causes of malaria, early signs and symptoms of malaria, ARI and diarrhoea. The CBA shall also be trained to identify signs and symptoms of severe illness and to refer such cases promptly. Other areas shall include behaviour-change communication (BCC) relevant to medication and feeding during illness. CBAs should also be trained on how to administer drugs, pre-referral treatment and referrals, record keeping and maintenance of CBA registers, drug management, follow up with clients, and compliance monitoring.

Other topics shall include methods for ITN distribution, the role of the CBA in IPTp and in creating demand for IRS in target districts, community mobilisation and participation, procurement, supply management and logistics management information system (LMIS).
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During training of CBAs, CHO's and sub-district health staff must be present. After their training, CBAs shall be given toolkits as shown in Figure 6, similar to the toolkit designed by the Department of Community Health, Kwame Nkrumah University of Science and Technology (KNUST). The contents are listed in Tables 10 and 11. Items in CBA toolkits can be categorised as mandatory and optional. Mandatory items are necessary for the core functions of the CBAs. Optional items are those that may enhance the work of CBAs; without them, however, the core functions can still be undertaken.

Table 10: Mandatory Items in the CBA’s Toolkit

| Item                                                                 | Tool
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Torchlight and batteries</td>
<td>Notebook, pen, pencil</td>
</tr>
<tr>
<td>Tally cards and record sheets/ registers</td>
<td>Referral forms</td>
</tr>
<tr>
<td>Raincoat and boots</td>
<td>Scissors</td>
</tr>
<tr>
<td>Disposable and utility gloves</td>
<td>BCC materials (IMNCI cards, posters, flipchart)</td>
</tr>
<tr>
<td>Treatment charts</td>
<td>Measuring cup for ORS preparation</td>
</tr>
<tr>
<td>Rubber bucket with lid</td>
<td>ID cards for client recognition</td>
</tr>
<tr>
<td>Spoons</td>
<td>Soap</td>
</tr>
<tr>
<td>Cups</td>
<td>ORS</td>
</tr>
<tr>
<td>Beads for counting breath rates</td>
<td>Zinc tablets</td>
</tr>
<tr>
<td>Amoxycillin caps/ syrup</td>
<td>Pre-packed AS-AQ</td>
</tr>
<tr>
<td>Artesunate suppositories</td>
<td>ITNs</td>
</tr>
<tr>
<td>Bicycle</td>
<td></td>
</tr>
</tbody>
</table>

Table 11: Optional Items in the CBA’s Toolkit

| Item                                                                 | Tool
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Water-treatment tablets or kits*</td>
<td>Oral health products: toothpaste and toothbrush*</td>
</tr>
<tr>
<td>Wound-dressing products: cottonwool, plaster *</td>
<td>Disinfectant *</td>
</tr>
<tr>
<td>Contraceptives*</td>
<td>T-shirts</td>
</tr>
<tr>
<td>Umbrella</td>
<td>Other</td>
</tr>
</tbody>
</table>

*Items that could be added to the kit for sale by CBAs as an incentive.
4.5.3. Training/Orientation of CBOs and Local NGOs/Village Health Committees

Three-day orientation sessions shall be organised for the CBOs and the local NGOs concerning the HBC concept and their roles.

Also one-day orientation sessions for the Village Health Committees (VHCs) shall be organised to give them background information about HBC and solicit their cooperation and support.

4.5.4 Training of Supervisors

Training of supervision is an important component of all HBC-related trainings at all levels to ensure success of the programme. Training of supervisors shall be conducted as part of the CBAs’ training.
4.5.5 District, Regional and National Training

Orientation for stakeholders and training of trainers at all levels shall be held. All orientations shall be conducted in one day, and all trainings for health staff shall be held for three days.

4.5.6 Experience Sharing/Updates

CHOs and/or the sub-district health staff shall convene quarterly experience-sharing meetings with CBAs to ascertain progress, address challenges and update the CBAs on their work. The outputs from this meeting should be documented and reported to the district level as part of regular reporting.

4.6 Procurement, Supply and Management

CBAs shall be supplied with pre-packed AS-AQ, ITNs, zinc, ORS and Amoxycillin through the routine drug-supply system without creating parallel channels. Procurement of medicines should be through the existing central procurement and distribution system, with the public-sector drug-distribution systems extended to reach the CBA.

Capacity and resource gaps in adequate storage and distribution of medicines should be assessed prior to HBC implementation by the DHMTs/ implementing partners.

Forecasting and quantification should be conducted at the pre-implementation phase at all levels and because procurement procedures take a long time. They should be initiated early in the pre-implementation stage. Initial stocks of drugs (essential products) shall be distributed by the push system from the national level through regions and districts, down to communities. Subsequently, CBAs will be expected to collect their supplies by the pull system. The pull system is expected to function along the entire supply chain. Optional drugs are also expected to be distributed initially by the push system and subsequently by the pull system.

To obtain the required quantity of drugs that each CBA needs for any given length of time, known malaria morbidity levels in the districts should be used. The CBA reporting formats should capture information on the name of patient, address (that is, physical location), age, sex, and dosage provided. In addition, the usual tally-card information on the amount of drugs received and the stock balance should be provided. Relevant staff at the sub-district should be trained to study the records for effective stock management. Subsequently, at any given time, CBAs will be given two weeks’ supply of drugs, but to prevent stockouts, they may be given drugs according to their distance from the nearest facility and their clients’ consumption pattern.

During implementation, the logistics management information system (LMIS) in place should be constantly reviewed using service data collected at the end of every month at all levels; this system will help prevent stockouts, which can be a serious challenge to HBC implementation.
A focal person at the CHPS zone or SDHMT should be nominated either from the dispensary staff, a HEW or a CBA to distribute products and keep records at these levels so that the CBA’s workload does not increase significantly.

4.6.1 Distribution of HBC Products

HBC products to be distributed shall be divided into “mandatory” and “optional” categories. Separate distribution systems for each type of product shall be established.

The mandatory products include drugs for treating malaria (pre-packed AS-AQ and Artesunate suppositories), ARI (Amoxycillin) and diarrhoea, (ORS and zinc), and ITNs for malaria prevention. These drugs shall be distributed by means of the established distribution system of the Ministry of Health; from the Central Medical Stores (CMS) through to the Regional Medical Stores (RMS), to the CBAs (Figure 7). In cases where organisations outside the public health system wish to implement the HBC in targeted districts, they may use their own established distribution systems or use the public health system.

The optional products shall be distributed through private–public partnership in which the private wholesaler(s) with distribution structures or infrastructure should be selected by International Competitive Bidding (ICB)/ National Competitive Bidding (NCB) to distribute products to the health centre or CHPS zone (Figure 7).

The focal person in these facilities will distribute the products together with the mandatory products. In cases where organisations outside the public health system wish to implement the HBC in targeted districts, they may use their own established distribution systems or may contract the recognised private wholesaler(s) to supply them with the optional products.
4.6.2 Potential Issues

A manufacturer may be engaged through the public procurement system to manufacture and carry out certain activities in relation to providing drugs needed for continued smooth implementation of HBC activities. A suitable manufacturer, therefore, must prove its capability of carrying out the following activities to ensure smooth implementation of HBC:

- Labeling and branding (these have an effect on perceived efficacy of the drug)
- Identification of manufacturers involved in the prepackaging and branding of the product
- Formulation
- Packaging
4.7 Communication for Behaviour Change (BCC) for HBC

The success of HBC depends largely on effective information, education and communication. Pre-implementation plans require the development of a comprehensive communication strategy for HBC. The strategy should be informed by existing health practices, accessing and using resources within the health sector, households and communities whilst outlining innovative approaches. The development of national, regional and district-based communication strategies will be guided by the National Strategic Plan for Malaria Control and Child Health Strategy. The communication strategy will be launched at the national level.

Communication materials will be produced at the national level to ensure uniformity and will be distributed through the normal system to the community. All partners interested in implementing HBC activities are expected to use the national communication materials.

Meetings with community leaders and volunteers, politicians, the press, and health workers will be organised to disseminate the information about HBC and information for influencing behavioural change. In communities where CBOs exist, they will be used to promote patronage of CBA services and to support BCC activities.

The persons or groups of people involved in BCC activities will include health workers, NGOs, CBOs and CBAs.

4.8 Community Sustainability and Ownership

4.8.1 Community Involvement

Community ownership is crucial to all community intervention programmes. The community must be involved at all stages of the programme. This involvement goes beyond taking part in the implementation phase of any intervention programme. For successful community ownership, individuals and leaders alike should be involved at the initial stages through advocacy.

Community members should be involved in the identification of needs and help to guide the planning, organisation, selection of CBAs and launching of the HBC. Leaders should be made responsible for the dissemination of programme information.

Stakeholders and interest groups to be involved in the planning, implementation, monitoring and evaluation of HBC in their communities should be identified. Advocacy sessions should be held with such stakeholders as:

- Chiefs/Queen mothers
Chapter Four

- Religious bodies
- Policymakers (district assemblies, MPs)
- Teachers
- Local NGOs, community-based organisations (CBOs), faith-based organisations (FBOs)
- Associations of market women (vendors)
- Licensed chemical sellers (LCS)

Community sustainability and ownership can also be enhanced by developing capacity and communications programmes based on community dialogue. Establishing or strengthening community support structures such as village health committees is also important. Communities should be encouraged to establish referral mechanisms, means of transporting very sick patients to the nearest health facility, means for replenishing supplies, and mechanism for sending reports. Where such support structures exist they should be promoted; where they do not exist, the communities should be made aware of the need for them and encouraged to start them.

Community financing mechanisms can also be started to help to sustain community programmes.

Community members should be encouraged to show commitment and ownership of HBC. Communities can thereby be encouraged to contribute CBA toolkits towards the successful implementation of the intervention. These toolkits should be assembled according to the prescribed pattern (see 4.5.2).

Sub-district health teams should facilitate the formation and strengthening of VHCs in all communities before HBC is implemented. They should involve SDHTs, district assemblies (DAs), representatives of development partners within the communities, and local NGOs/FBOs/LCS.

The VHCs should organise periodic joint review meetings with community stakeholders, including assemblymen, chiefs and elders, CHO5s and CBAs. They should meet to discuss the strengths and challenges of HBC in their communities. VHCs should also monitor on-going programmes and offer the necessary support.

4.8.2 Mechanisms for Rewarding CBAs

One of the key challenges to the sustainability of HBC is volunteer fatigue. Community members and opinion leaders must be made to understand that no funds are available for remuneration.

However, a system of rewarding CBAs must be instituted. Such a system should motivate them to remain loyal and committed to the HBC initiative. It should also encourage best practices and outstanding performances by CBAs. Both financial and non-financial incentive schemes should be considered to reward and motivate deserving CBAs. Preferably, this system should be one of non-
financial incentives.

Such incentives might include, but not be limited to, the following:

- Recognition ribbon, pin, photo; elevation of status in the group
- CBAs branded items: bowls, umbrella, flashlights, buckets, clocks, pens
- Other Items: T-shirts, cell phones
- Topping up of phone cards, health screening; site visits, representation of CBAs at meetings
- District assemblies paying part or full registration for the NHIS
- Career progression (when opportunities exist for career development, CBAs who qualify should be given priority)

Financial incentives might include:

- Income from the sale of some of their commodities (mainly from the sale of optional products such as condoms; household water-treatment tablets or kits; wound-care products such as cotton wool, gauze, plaster, body and hand-washing soaps; oral hygiene products such as toothpaste and brushes.
- Earning discounts on the optional products, depending on the quality of HBC services rendered.

District health authorities, district assemblies and other relevant stakeholders need to establish systems that will motivate CBAs in their various communities. Districts should buy into the broad reward system outlined at the national level. (Currently, procurement of bicycles and Wellington boots is planned.). Regions and districts shall buy into these reward mechanisms and also plan their own. Each district and community’s reward system should be informed by the culture and values of the local people in addition to that which is made available at the national level. Suggested reward systems that districts may consider include:

- Convening health staff at regular scheduled meetings with CBAs. Lunch, snacks and T&T should be paid by the programme
- Holding end-of-year CBA award meetings with health staff, as feasible
- Budgeting for items to be given to CBAs as incentives, for example, ID cards, T-shirts, torchlights, Wellington boots
- Selecting CBAs as preferred volunteers for major health programmes, for example, health campaigns and community health-education programmes
- Planning with health facilities to ensure that CBAs and their families are attended to quickly
- Discussing and agreeing with key players about the possibility of CBAs retaining a percentage
of markup on condoms they sell

- Markups on ITNs (expected to be retained by the CBAs)
- Planning any other incentives according to local situation, for example accompanying CBAs to funerals and other social functions to show support

Health workers acting as supervisors should be made to understand that supervisory work is part of their jobs and their ability to perform it will be used as part of the assessment of their overall performance. However, because supervising the CBAs is challenging, when funds are available, health workers will be given some form of reward.

4.9 Cost Recovery

Cost recovery will determine the sustainability of the programme. Evidence suggests that affordability can be a major barrier to accessing prompt and effective treatment for malaria; high prices may prevent families from seeking treatment or cause them to purchase only part of the treatment, or to save any medication that remains once the patient feels better. Such practices lead to higher morbidity, possibly to an increased risk of mortality and to accelerated development of resistance to the drug.

To ensure that the cost of HBC will not be a barrier to accessing treatment, the mandatory products will be given to clients at no cost, or the cost may be covered by the National Health Insurance Scheme (NHIS), or be free, depending on the medication prescribed (ORS, zinc, Amoxycillin) or the cost may be subsidised (ITNs).

Some optional products may be sold at subsidised prices to clients (contraceptives) or sold at full cost (water-treatment tablets or kits, disinfectants, oral and wound-care products). These optional products will be income-generators to motivate CBAs. CBAs will be allowed to sell only these products and may continue their sales as long as they are seen to be rendering services with the mandatory products.

Health centres and CHPS zones are accredited under the NHIS. CBAs will be assigned to these facilities as “departments” and they will be reimbursed through these facilities. In the pre-implementation phase, NHIS forms will be developed for CBAs. During the implementation phase, these forms will be used to document NHIS services rendered by CBAs. To prevent claims fraud, periodic claims auditing will be carried out by NHIA as part of quality assurance.

Private wholesalers will operate the full-cost-recovery programme for the optional products.
4.10 Private-Sector Involvement

The role of the private sector in HBC is key to ensuring sustainability. Private-sector players should be involved at all levels of implementation; national, regional and district.

Licensed chemical sellers (LCS) sell drugs but will be required to distribute AS-AQ free of charge under the HBC programme. This requirement creates a challenge for the LCS. However, they may be induced to join the programme because of the anticipated increase in the number of clients to their facilities that may result in increased sales of other products. The LCS in their roles as CBAs will also be required to follow up on cases they manage and to visit defaulters in their homes. During such visits, LCS may carry some optional items for sale, thereby earning extra income from these visits.

Private clinics and private midwives may, in some instances, be the nearest referral points for CBAs. They should, therefore, be given an orientation to enable them carry out that role.
Wholesalers will be responsible for supplying and distributing optional products to health centres and CHPS zones for onward distribution to CBAs at the community level. CBAs will be required to submit proof of service delivery to the health centres or CHOs before they are consigned the optional products. GHS will assess wholesaler(s) based on their ability to distribute optional commodities in line with HBC guidelines. These wholesalers will supply the optional commodities at an agreed-upon price.

Pharmaceutical companies may be co-opted to produce pre-packed drugs and supplies. These companies have an efficient distribution system, so they may be used to distribute supplies to places that public health distribution systems cannot reach.

4.11 Service Delivery and Data Management

Caregivers and mothers will seek care from trained CBAs who operate from their homes or shops. The CBA will assess the child and manage the case appropriately. If it is a case that she or he can treat, the CBA shall do so. The first dose should be given under the CBA’s supervision. The CBA will refer the child in severe cases to the next level of care after giving pre-referral treatment and record the patient’s information into a register and fill the tally card. CBAs are expected to compile their data daily and at the end of the month and submit the data to the next level of supervision.

CBAs should encourage caregivers to come for review after 24 hours. Caregivers, who default will be followed up by the CBAs. During follow-ups, CBAs should address the following issues:

1. Are the mothers following the treatment regimen?
2. Do the mothers know the CBA’s location?
3. Are the mothers aware of danger signs?
4. Are the mothers adhering to referrals?
5. Are the mothers generally satisfied with the initiative?

Also as part of CBA activities, children developing adverse effects following drug administration will be referred after the relevant forms are filled out. CBAs shall also be expected to carry out IEC activities to inform community members about the intervention.

4.12 Pharmacovigilance

Monitoring of adverse effects following drug administration has been found to be increasingly important. HBC roll-out involves the use of drugs used to treat malaria, ARI and diarrhoea. Caregivers will be trained to recognise adverse drug reactions and to report them to CBAs. CBAs will fill out the referral form provided when referring the child to the next level of care. The CHO
and health-centre staff will fill the adverse-events form for onward submission through the regional level to the national level. The child who develops adverse effects shall be treated at no cost; the health-care facility will bear the cost of treatment.

4.13 Quality Assurance

The key objective for QA in HBC is to ensure that the drugs reaching clients are safe, effective, of standard quality and are administered appropriately. A quality-assurance system already exists for the health facilities and CHPs zones, and QA teams are in place at most locations. The system shall be extended to the community level.

In the pre-implementation phase, the quality of drug supplies and use will be measured on regular basis. Existing guidelines will be adapted to meet community-level QA needs. Tools will be designed to measure client satisfaction.

Table 12: Activities to be Monitored under Quality Assurance

<table>
<thead>
<tr>
<th>Activity</th>
<th>Agency/Office</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procurement and supply of medicines and logistics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drug Supplies</td>
<td>Stores Supplies Management Division (SSDM)</td>
<td>Should ensure that all drugs are procured through the national procurement system, that is, from the MOH in conformity with FDB standards and guidelines.</td>
</tr>
<tr>
<td>Spot check for chemical analysis</td>
<td>The quality-control unit of the FDB</td>
<td>Should periodically sample and analyse drugs for chemical content from different batch numbers to ensure quality and efficacy</td>
</tr>
<tr>
<td>Storage, distribution and use</td>
<td>Stores Supplies Management Division (SSDM) and NMCP</td>
<td>At the central, regional and district medical stores: medicines received should conform to medical standards, labeling requirements, minimum shelf life, and packaging standards. A system of proper storage, handling and timely transportation of the medicines and supplies should be strengthened and enforced. Caregivers will be interviewed to measure client satisfaction with drugs.</td>
</tr>
</tbody>
</table>
Chapter Five

Monitoring and Evaluation

5.1 Supervision

Supervision is key to ensuring effective implementation in accordance with set guidelines. Regular and scheduled supervisory activities at all levels of implementation are important to the success of HBC.

Supervision of CBAs is the direct responsibility of CHO (where they are present) and where there is no CHO, the SDHT staff in charge of the catchment area will be responsible. During the supervisory visits, CHO and health workers will be required to collect the data for collation at the sub-district level. However, CBAs will be encouraged to submit their own data. In addition, VHCs and other stakeholders such as community-based organisations could be given responsibility in some aspects of supervision, as shown in Table 13.
### Table 13: Roles and Responsibilities for HBC Supervisors

<table>
<thead>
<tr>
<th>Level of Supervision</th>
<th>Person Responsible (Supervisor)</th>
<th>Roles/Scope</th>
<th>Issues to Consider</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBA</td>
<td>CHO/ SDHT DHMT</td>
<td>Directly supervise the routine work of CBAs and ensure compliance to the HBC guidelines and protocols. Re-stock with consumables (for example drugs, cards). Check on record keeping.</td>
<td>CBAs available and working. Constant supply of drugs for CBAs. Adequacy of drug-storage conditions. Availability of IEC materials and job aids. Availability of mandatory commodities for HBC. Availability of optional commodities for HBC. Evidence of health-education activities in the community. Review of treatment/management outcomes. Filling out and timely submission of ADR forms. General satisfaction of mothers with management/treatment. Mothers/caregivers seeking prompt treatment for sick children. Referrals made according to guidelines.</td>
<td>2 weeks</td>
</tr>
<tr>
<td>CBA</td>
<td>VHC/ Local NGO/CBOs</td>
<td>Ensure availability of the CBAs in the community and their effective functioning.</td>
<td>Service provision in the community. Feedback of mothers on level of satisfaction. Timely receipt of incentives by CBAs.</td>
<td></td>
</tr>
<tr>
<td>CHO</td>
<td>SDHT/DHMT</td>
<td>Directly supervise CHOs.</td>
<td>Availability of drugs: stock levels. Availability of IEC materials and job aids. Evidence of support visit to implementing level. Evidence that problems identified have been addressed. Availability of mandatory commodities for HBC. Availability of optional commodities for HBC.</td>
<td>Monthly</td>
</tr>
<tr>
<td>Level of Supervision</td>
<td>Person Responsible (Supervisor)</td>
<td>Roles/Scope</td>
<td>Issues to Consider</td>
<td>Frequency</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>SDHT</td>
<td>DHMT</td>
<td>Carry out facilitative supervision of all implementing sub-districts</td>
<td>Availability of drugs: stock levels, Availability of IEC materials and job aids, Availability of mandatory commodities for HBC, Availability of optional commodities for HBC, Evidence of monitoring of Optional commodities supplied to lower levels according to guidelines, Evidence of support visit to implementing level, Evidence that problems identified have been addressed, Periodic meetings with VHCs and other stakeholders</td>
<td>Monthly</td>
</tr>
<tr>
<td>DHMT</td>
<td>RHMT</td>
<td>Carry out facilitative supervision of all implementing districts</td>
<td>Evidence of capacity building, Availability of drugs: stock levels, Evidence of monitoring of mandatory and optional commodities supplied to lower levels according to guidelines, Availability of IEC materials and job aids, Timely supply of incentives to volunteers, Evidence of social mobilisation activities on home-based care, Evidence of support visit to implementing level, Evidence that problems identified have been addressed, Evidence of functioning QA systems for drugs, Functional distribution systems in place to ensure continuous supply of drugs and supplies</td>
<td>Quarterly</td>
</tr>
<tr>
<td>Level of Supervision</td>
<td>Person Responsible (Supervisor)</td>
<td>Roles/Scope</td>
<td>Issues to Consider</td>
<td>Frequency</td>
</tr>
<tr>
<td>----------------------</td>
<td>---------------------------------</td>
<td>-------------</td>
<td>-------------------</td>
<td>-----------</td>
</tr>
</tbody>
</table>
| Regions and Districts | National                        | In collaboration with the development partners will carry out joint supportive supervision at all levels | Evidence of capacity building  
Availability of drugs: stock levels  
Evidence of monitoring of mandatory and optional commodities supplied to lower levels according to guidelines  
Availability of IEC materials and job aids  
Evidence of support visit to implementing level  
Feedback on ADRs given to implementing levels  
Evidence that problems identified have been addressed  
Evidence of functioning QA systems for drugs | Biannual (at least) |
5.2 Monitoring

Monitoring is a management tool for tracking progress of the implementation of a programme. It is a continuous process of information gathering. Planning for monitoring is necessary to ensure follow-up of activities and provision of consistent and reliable information on progress through systematic collection and use of data.

In rolling out HBC, monitoring will be required for tracking on-going activities. Monitoring will enable remedial measures to be applied where necessary. Table 14 shows the indicators for monitoring HBC.

Table 14: HBC Monitoring Indicators to be Measured

<table>
<thead>
<tr>
<th>Levels of Indicators</th>
<th>Indicators</th>
<th>Source of Data</th>
<th>Data-Collection Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of CHOs/ health staff trained for supervision</td>
<td>Training report</td>
<td>Routine quarterly reports</td>
</tr>
<tr>
<td></td>
<td>Number of CBAs trained</td>
<td>Training report</td>
<td>Routine quarterly reports</td>
</tr>
<tr>
<td></td>
<td>Number of VHCs re/constituted</td>
<td>Quarterly report</td>
<td>Routine quarterly reports</td>
</tr>
<tr>
<td></td>
<td>Number of IEC activities carried out</td>
<td>Quarterly report</td>
<td>Routine quarterly reports</td>
</tr>
<tr>
<td></td>
<td>Number of advocacy meetings held</td>
<td>Quarterly report</td>
<td>Routine quarterly reports</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Levels of Indicators</th>
<th>Indicators</th>
<th>Source of Data</th>
<th>Data-Collection Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>Number of districts implementing HBC</td>
<td>Quarterly report</td>
<td>Routine quarterly reports</td>
</tr>
<tr>
<td></td>
<td>Number of communities implementing HBC</td>
<td>Quarterly report</td>
<td>Routine quarterly reports</td>
</tr>
<tr>
<td></td>
<td>Number of patients seen</td>
<td>Monthly/quarterly report</td>
<td>Routine quarterly reports</td>
</tr>
<tr>
<td></td>
<td>Number of patients serviced by NHIS</td>
<td>Monthly/quarterly report</td>
<td>Routine quarterly reports</td>
</tr>
<tr>
<td></td>
<td>Number of children 6 months – 5 years put on ACTs</td>
<td>Monthly/quarterly report</td>
<td>Routine quarterly reports</td>
</tr>
<tr>
<td></td>
<td>Number of children 6 months – 5 years put on Amoxycillin</td>
<td>Monthly/quarterly report</td>
<td>Routine quarterly reports</td>
</tr>
<tr>
<td></td>
<td>Number of children 6 months – 5 years put on zinc/ORS</td>
<td>Monthly/quarterly report</td>
<td>Routine quarterly reports</td>
</tr>
<tr>
<td></td>
<td>Number of reported ADRs</td>
<td>Monthly/quarterly report</td>
<td>Routine quarterly reports</td>
</tr>
<tr>
<td></td>
<td>Number of CBAs with stockouts of 7 days or more within the past month</td>
<td>Monthly</td>
<td>Monthly reports</td>
</tr>
<tr>
<td></td>
<td>Number of ITNs distributed by CBAs</td>
<td>Monthly/quarterly report</td>
<td>Routine quarterly reports</td>
</tr>
<tr>
<td></td>
<td>Number of functional CBAs</td>
<td>Monthly/quarterly report</td>
<td>Routine quarterly reports</td>
</tr>
</tbody>
</table>

Data Gathering, Analysis and Report Writing

CBAs will fill patient registers and tally cards for stock-keeping after seeing each patient. Information to be gathered will include:

- Name of patient
- Age
- Sex
- Address
- Condition observed
5.3 Evaluation and Re-Planning

After two years of implementation a mid-term evaluation will be carried out to ascertain if the programme is on course. National surveys will be conducted to measure outcome indicators such as care-seeking behaviour and ITN use. After four to five years of implementation, outcome and impact indicators will be assessed again with national surveys, as shown in Table 15. These shall include care-seeking Behaviour, child morbidity and mortality at the community level and ITN use by pregnant women and children younger than five.

Table 15: HBC Evaluation Indicators to be Measured

<table>
<thead>
<tr>
<th>Level of Indicators</th>
<th>Indicator</th>
<th>Source of Data</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact</td>
<td>Under-5 all-cause mortality</td>
<td>DHS/MIS/MICS</td>
<td>4–5 years</td>
</tr>
<tr>
<td>Impact</td>
<td>Proportion of severe cases seen at the referral centre</td>
<td>MIS/MICS</td>
<td>2–3 years</td>
</tr>
<tr>
<td>Outcome</td>
<td>Proportion of children younger than five with fever in the last 2 weeks who received ACT within 24 hours of onset of fever</td>
<td>MIS/MICS</td>
<td>2–3 years</td>
</tr>
<tr>
<td>Level of Indicators</td>
<td>Indicator</td>
<td>Source of Data</td>
<td>Frequency</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------------------------------------------------------------------</td>
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<td>------------</td>
</tr>
<tr>
<td>Outcome</td>
<td>Proportion of mothers/caretakers who respond appropriately to malaria/fever within 24 hours of onset</td>
<td>MIS/MICS</td>
<td>2–3 years</td>
</tr>
<tr>
<td>Outcome</td>
<td>Proportion of children with watery diarrhoea receiving ORS</td>
<td>MIS/MICS</td>
<td>2–3 years</td>
</tr>
<tr>
<td>Outcome</td>
<td>Proportion of children with pneumonia receiving appropriate antibiotics</td>
<td>MIS/MICS</td>
<td>2–3 years</td>
</tr>
<tr>
<td>Outcome</td>
<td>Proportion of CBAs correctly diagnosing and treating malaria, ARI and diarrhoea</td>
<td>MIS/MICS</td>
<td>2–3 years</td>
</tr>
</tbody>
</table>

### 5.4 Operations Research

Operations research is important in guiding implementation. Research will be used to improve and support HBC implementation. Potential questions to be addressed include:

- Cost-effectiveness of HBC
- Factors that affect compliance to treatment
- Factors that affect use of CBA services
- Factors that affect attrition of CBAs
- Effect of HBC on the operations of chemical sellers
- Effect of HBC on community health practices
## Annex

### Table 16: Roles and Responsibilities of Stakeholders

<table>
<thead>
<tr>
<th>Policy makers and Political Leaders</th>
<th>ROLES AND RESPONSIBILITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Minister of Health (MOH)</strong></td>
<td>Be a strong advocate for HBC and include it in all speeches and statements</td>
</tr>
<tr>
<td></td>
<td>Lobby for the release of 0.5% allocation of District Assembly Common Fund for malaria initiatives at the district level</td>
</tr>
<tr>
<td></td>
<td>Lobby for more partner support</td>
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<tr>
<td></td>
<td>Ensure the development of appropriate supportive policies of HBC</td>
</tr>
<tr>
<td></td>
<td>Lobby for waiver of taxes on all supplies to be used in HBC</td>
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<tr>
<td></td>
<td>Launch HBC initiative through a national public event</td>
</tr>
<tr>
<td></td>
<td>Carry out familiarisation visits to selected implementing sites to create further awareness</td>
</tr>
<tr>
<td></td>
<td>Ensure that FDB deregulates appropriate drugs for HBC</td>
</tr>
<tr>
<td></td>
<td>Liaise with NHIS to incorporate HBC</td>
</tr>
<tr>
<td><strong>Other Ministries: Ministry of Women and Children Affairs and others</strong></td>
<td>Lobby to ensure that vulnerable groups access HBC services</td>
</tr>
<tr>
<td><strong>Parliamentary Sub-committee on Health</strong></td>
<td>Lobby for timely government release of funds for HBC initiatives</td>
</tr>
<tr>
<td></td>
<td>Enact appropriate policies and relevant laws to support HBC</td>
</tr>
<tr>
<td></td>
<td>Participate in the launch of HBC initiative</td>
</tr>
<tr>
<td><strong>Director-General, GHS</strong></td>
<td>Be a strong advocate for HBC and include it in all speeches and statements</td>
</tr>
<tr>
<td></td>
<td>Lobby for the release of 0.5% allocation of District Assembly Common Fund for malaria initiatives at the district level</td>
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<td>Liaise with NHIS to incorporate HBC</td>
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<td>Launch HBC initiative through a national public event</td>
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<td></td>
<td>Ensure that private wholesaler distributes optional products in accordance with HBC guidelines</td>
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<td>Carry out familiarisation visits to selected implementing sites to create further awareness</td>
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<td>Ensure that FDB deregulates appropriate drugs for HBC</td>
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<td>Policy makers and Political Leaders</td>
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</tr>
<tr>
<td><strong>CATEGORIES</strong></td>
<td><strong>ROLES AND RESPONSIBILITIES</strong></td>
</tr>
</tbody>
</table>
| NMCP/Family Health Division       | Work with regions and districts to disseminate the HBC Implementation Guidelines  
|                                  | Organise training of trainers on HBC concepts and its roll-out at all levels using developed guidelines and manuals  
|                                  | Ensure the inclusion of HBC supplies and drugs in the health-sector procurement plan and budget in consultation with the regional health directorates  
|                                  | Liaise with Procurement Directorate of MOH/GHS to ensure timely procurement and distribution of medicines and supplies according to plans as well as monitoring  
|                                  | Collaborate with HPD and other identified partners to develop and implement HBC communication strategy  
|                                  | Liaise with CHIM, and National Surveillance directorate to streamline and strengthen data-collection systems at all levels  
|                                  | Monitor the implementation plan and progress of HBC including BCC  
|                                  | In collaboration with FDB, ensure availability of ADR reporting forms at the regional and district levels  
|                                  | Collaborate with SSDM to initiate early procurement  
|                                  | Collaborate with SSDM to allocate and distribute medicines and supplies to regional level according to agreed-upon plans and budgets  
|                                  | Organise review meetings with districts and regions to assess progress  
|                                  | Provide regular reports to the MOH,GHS and health-care-development partners  
|                                  | Link with HPU to launch HBC officially through a national public event  
| Pharmacovigilance centre, UGMS and FDB | Ensure existing pharmacovigilance system extends to the community level  
|                                  | Reclassify relevant drugs to be used in the community  
|                                  | Train regional teams on pharmacovigilance  
| NHIA                              | Develop and roll out a framework for accrediting, operationalising and monitoring community structures under NHIS  
| SSDM Division of MOH/GHS and other stakeholders including international NGOs such as DELIVER | Develop with NMCP and regions procurement plans to meet HBC logistical needs  
|                                  | In collaboration with NMCP, allocate medicines and supplies for HBC initiative through approved channels  
|                                  | Build staff capacity on LMIS  

Annex
## Policy makers and Political Leaders

<table>
<thead>
<tr>
<th>CATEGORIES</th>
<th>ROLES AND RESPONSIBILITIES</th>
</tr>
</thead>
</table>
| Health-Promotion Unit | Develop HBC communication strategy  
Mobilise resources, design coordinate and oversee BCC pre-implementation and implementation activities at all levels  
Monitor BCC interventions closely and carry out spot checks |
| Media Practitioners | Collaborate with HPD, NMCP and other relevant stakeholders to develop and implement HBC communication strategy at all levels  
Mobilise resources and support key decision makers in the implementation of planned communication activities |
| Health Development Partners (USAID, WHO, DFID, International NGOs) etc) | Participate in the launch of HBC initiative  
Provide technical, financial and logistic support for HBC  
Advocate for stakeholder interest and support  
Collaborate with HPD, NMCP and other relevant stakeholders to develop and implement HBC communication strategy  
Support monitoring and evaluation activities to ensure satisfactory progress |
| Regional Health Directorates | Develop regional plans and budget for rolling out HBC as part of their regional health plan  
Forecast for procurement  
Liaise with procurement directorate to ensure timely release of logistics  
Ensure that private wholesaler distributes optional products in accordance with HBC guidelines  
Monitor all activities for HBC implementation in the districts  
Train district-level facilitators for HBC  
Ensure the availability of all logistics required for HBC  
Provide feedback on HBC activities to the districts  
Launch regional HBC  
Ensure availability of appropriate facilities at all levels for storage of drugs and supplies |
| Other regional bodies (RCC, Regional House of Chiefs) | Mobilise resources to support HBC activities  
RCCs to sensitise and mobilise support from District Assemblies for HBC |
<table>
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<tr>
<th>Policy makers and Political Leaders</th>
<th>ROLES AND RESPONSIBILITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CATEGORIES</strong></td>
<td><strong>District Health Management Teams (DHMTs)</strong></td>
</tr>
<tr>
<td></td>
<td>Participate in the introduction of selected CBAs to communities</td>
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<tr>
<td></td>
<td>Capture budgetary requirement for HBC in overall district budget to ensure timely and adequate release of funds</td>
</tr>
<tr>
<td></td>
<td>Support CHO and SDHT to train CBAs on HBC initiative</td>
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<tr>
<td></td>
<td>Submit timely district roll-out and procurement plan for HBC to NMCP through regional health directorates</td>
</tr>
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<td></td>
<td>Support SDHT and CHO to carry out community entry by consulting community leaders</td>
</tr>
<tr>
<td></td>
<td>Identify and mobilise local networks and resources for HBC</td>
</tr>
<tr>
<td></td>
<td>Put mechanisms in place to ensure that district-specific peculiarities are addressed so that implementation of HBC is smooth</td>
</tr>
<tr>
<td></td>
<td>Ensure equitable distribution of BCC activities for HBC</td>
</tr>
<tr>
<td></td>
<td>Advocate for HBC activities among district stakeholders</td>
</tr>
<tr>
<td></td>
<td>Ensure the availability of mandatory and optional products at the district level</td>
</tr>
<tr>
<td></td>
<td>Ensure that private wholesaler(s) distribute optional products in accordance with HBC guidelines</td>
</tr>
<tr>
<td></td>
<td>Identify, prepare and secure storage facilities for procurement and supply</td>
</tr>
<tr>
<td></td>
<td>Liaise with stakeholders in the development of incentive schemes for CBAs</td>
</tr>
<tr>
<td></td>
<td>Collate, analyse and provide feedback on data collected by CBAs to improve HBC services</td>
</tr>
<tr>
<td></td>
<td>Link with regional health-promotion unit to launch HBC officially at the district level</td>
</tr>
<tr>
<td></td>
<td>Ensure that people are encouraged to enroll with the NHIS</td>
</tr>
<tr>
<td></td>
<td><strong>District Assemblies (DCE and assemblymen), DMHIS</strong></td>
</tr>
<tr>
<td></td>
<td>Participate in regional and district launch of HBC initiative</td>
</tr>
<tr>
<td></td>
<td>Release of funds in support of HBC activities</td>
</tr>
<tr>
<td></td>
<td>DAs to ensure that people are encouraged to enroll with the NHIS</td>
</tr>
<tr>
<td></td>
<td>Put mechanisms in place to ensure that district-specific peculiarities are addressed so that implementation of HBC is smooth</td>
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</tr>
</thead>
</table>
| **SDHTs**  | Carry out community-entry and mobilisation activities  
Select and introduce CBAs in consultation with CHOIs and VHCs  
Ensure equitable distribution of BCC activities in communities  
Identify, prepare and secure storage facilities for HBC supplies  
Actively participate in training of CBAs and community stakeholders  
Regularly check stock levels to prevent stock-outs  
Collate data collected by CBAs  
Update district on field activities  
Provide feedback to CHOIs and communities  
Organise zonal and sub-district meetings for CBAs  
Submit monthly reports to DHMTs  
Provide referral services for CBAs  
Generate a summary of NHIS claim forms submitted by CBAs |
| **CHOIs**  | In collaboration with SDHT/DHMT, carry out community-entry and mobilisation activities  
Identify, prepare and secure storage facilities for procurement and supply  
Update SDHT on field activities  
Generate a summary of claims submitted by CBAs |
| Private sector (midwives, LCS, clinics, private wholesalers companies) | Collaborate with DHMTs and communities to carry out community-entry and mobilisation activities  
Participate in the introduction of selected CBAs to communities  
Ensure the availability of optional products for HBC services  
Assist in the distribution of HBC products  
Private midwives and clinics should serve as referral centres for HBC for CBAs who need to refer patients |
| Local NGOs | Collaborate with DHMTs and communities to carry out community-entry and mobilisation activities  
Participate in the introduction of selected CBAs to communities  
Assist in the provision of ITNs  
Provides services as per contract signed with NMCP/development partners and DHMTs  
 Carry out BCC activities on HBC, ITNs, IPT, IRS  
Submit monthly reports to DHMTs |
### Policy makers and Political Leaders

<table>
<thead>
<tr>
<th>CATEGORIES</th>
<th>ROLES AND RESPONSIBILITIES</th>
</tr>
</thead>
</table>
| Traditional rulers/opinion leaders (chiefs, queen mothers and elders) and community members, village health committees | Facilitate community-entry and mobilisation activities  
Participate in regional and district launch of the HBC initiative  
Facilitate community consultation for selection and introduction of CBAs  
Stimulate dialogue on HBC and advocate for community patronisation of CBA services  
Identify and mobilise local networks and resources for HBC  
Participate in zonal and sub-district meetings for CBAs  
Provide information to DHMTs and other relevant stakeholders on the community’s specific issues and characteristics |
Home Management of Malaria, Acute Respiratory Infection & Diarrhoea in Ghana

Implementation Guidelines

Ministry of Health/Ghana Health Service
MARCH, 2009