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Maternal and Child Survival Program

The Global Fund New Funding Model:

Lessons from Zambia on the Addition of Integrated Community Case Management (iCCM)

Final Report

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Abbreviations and Acronyms

ACT	Artemisinin-based combination therapy
ARI	Acute respiratory infection
CCM	Community case management
CHA	Community health assistants
CHAZ	Churches Health Association of Zambia
CHS	Community health services
CHW	Community health worker
CSO	Civil society organization
DCSR	Disease control, surveillance, and research
DHO	District health offices
ESARO	East and Southern Africa Region (UNICEF)
FTT	Financing task team
GFNFM	Global Fund New Funding Model
HRH	Human resources for health
iCCM	Integrated community case management
MCDMCH	Ministry of Community Development Mother and Child Health
MCHIP	Maternal and Child Health Integrated Program
MDG	Millennium Development Goal
MOH	Ministry of Health
MSP	Malaria Strategic Plan
MSL	Medical Stores Limited
NHSP	National Health Strategic Plan
NMCC	National Malaria Control Center
ORS	Oral rehydration salts
ORT	Oral rehydration therapy
PATH	Program for Appropriate Technology in Health
PHO	Provincial health offices
PMI	President's Malaria Initiative
PMU	Program management unit
RBM	Roll Back Malaria
RDT	Rapid diagnostic test
TWG	Technical working groups
USAID	United States Agency for International Development
WHO	World Health Organization
ZIMAPPS	Zambia Integrated Management of Malaria and Pneumonia Study

The Global Fund New Funding Model: Lessons from Zambia on iCCM Integration

This case study reviews Zambia's experience adding the integrated community case management (iCCM) strategy into the Global Fund New Funding Model (GFNFM) concept note for malaria. This case explores some of the challenges experienced by and lessons learned from the Zambia experience, and discusses broader issues related to the process of GFNFM concept note development leading to integration of iCCM. This case is part of a series exploring iCCM integration in four other countries: Ghana; Kenya; Nigeria; and Uganda. Their experiences are explored in individual case studies and synthesized in "Leveraging the Global Fund New Funding Model for iCCM Integrated Community Case Management: A Synthesis of Lessons from Five Countries."

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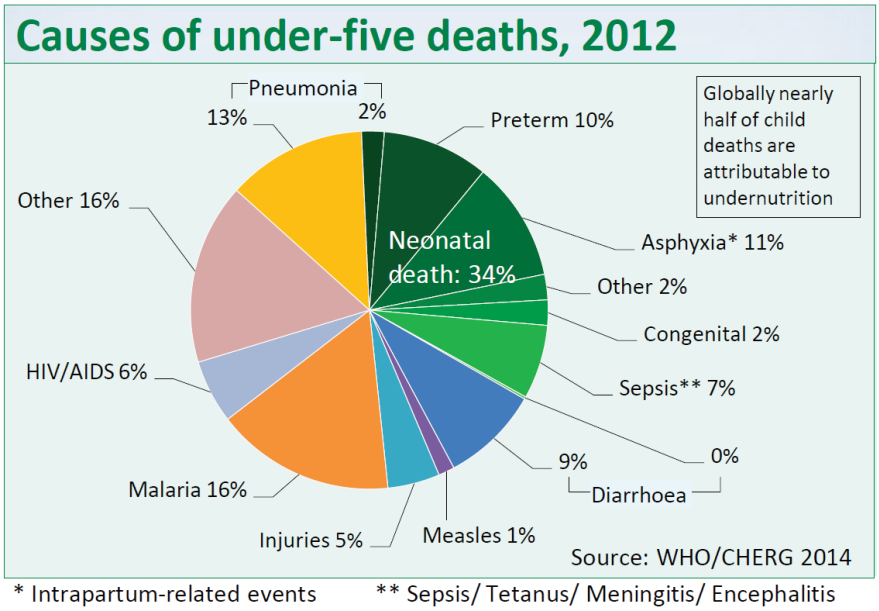
1. Introduction: Zambia Health Context

Progress on Child Health

Over the last decade, much progress has been made in improving the health of children in Zambia. According to Zambia's latest Demographic and Health Survey (DHS) (2013–2014), over nearly two decades, infant mortality and the mortality of children under five years of age (under-five) have declined by 58% and 61%, respectively. Despite this encouraging progress, the infant and under-five mortality rates in Zambia remain a concern. Scaling up and sustaining evidence-based interventions to improve child health remains critical. Zambia has not achieved the Millennium Development Goal (MDG) Four of reducing, by 2015, the under-five mortality from 192 to 64 deaths per 1,000 live births. In the past five years, infant and under-five mortality rates were 45 and 75 deaths per 1,000 live births, respectively. At these levels, one out of every 22 children dies before reaching the age of one, and one in every 13 does not survive to celebrate his or her fifth birthday (DHS 2013–2014).

Malaria, pneumonia, and diarrhea continue to be among the leading causes of morbidity and mortality for children under-five. These three diseases are responsible for 40% of under-five deaths (Figure 1). Although some progress has been made in improving the accessibility of treatment for the three diseases, greater progress has been made with regards to malaria treatment. In 2010, only 76% of children under-five receiving anti-malarial medications received the recommended first-line treatment of artemisinin-based combination therapy (ACT). In contrast, the 2013–2014 DHS shows that 91% percent of children with a fever in the two weeks preceding the survey, and who took antimalarial drugs, were treated with ACT. The 2007 DHS reported that only 47% of children under-five suspected of having pneumonia received antibiotics, while only slightly more than half (60%) of the children under-five with diarrhea received oral rehydration salts (ORS) (Figures 2 and 3).

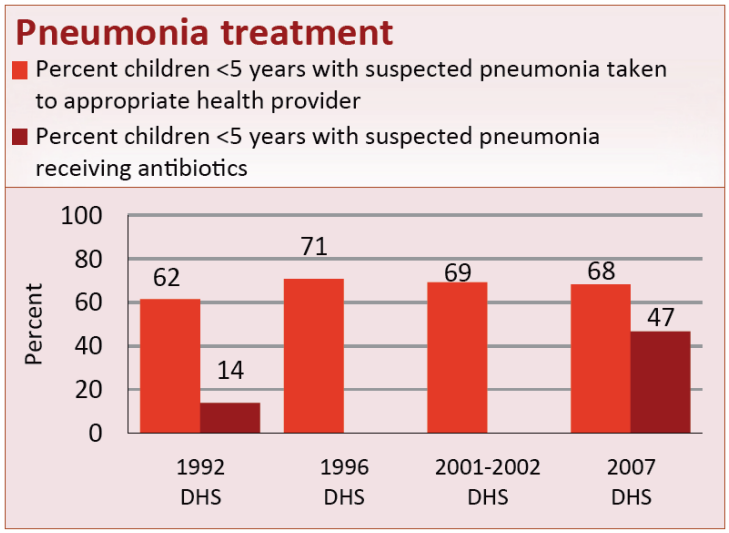
Figure 1. Causes of deaths in children under-five in Zambia



Source: http://www.countdown2015mnch.org/country_profiles/zambia

Note: Child Health Epidemiology Reference Group (CHERG); World Health Organization (WHO)

Figure 2. Access to treatment for pneumonia among children under-five



Source: http://www.countdown2015mnch.org/country_profiles/zambia

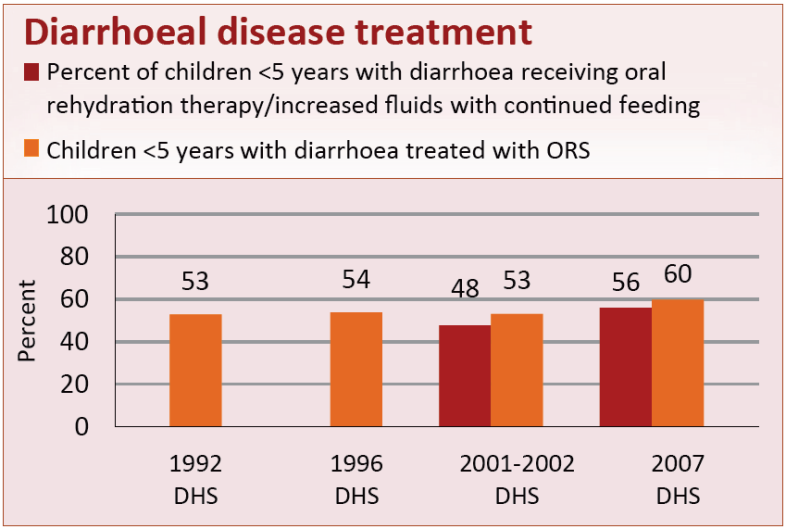
Note: Demographic and Health Survey (DHS)

The 2013–2014 DHS indicates that care-seeking for pneumonia didn't change markedly: 70% (from 68% in 2007) of children with symptoms of acute respiratory infection (ARI) were taken to a health facility or health care provider; and 51% (from 47% in 2007) of children with ARI symptoms received antibiotics. The proportion of children who received antibiotics was much higher in urban areas (70%) than in rural areas (43%).

In the 2013–2014 DHS, mothers of children who had diarrhea were asked about what was done to treat this illness. Sixty-six percent of children with diarrhea were taken to a health facility or health care provider for treatment. Seventy percent of children were treated with oral rehydration therapy (ORT), that is, either pre-packaged ORS or recommended home fluids; 20% were given increased fluids; and 75% were given either ORT or increased fluids. Thirty percent of children with diarrhea were given antibiotics, and 17% were treated with home remedies. However, about 16% of the children with diarrhea did not receive any treatment.

The government has a standard diarrhea case management strategy that includes ORT, counseling on continued feeding, and provision of zinc tablets at health institutions and at the community level. No data on zinc use are provided in the DHS reports of 2007 and 2013–2014.

Figure 3. Access to treatment for diarrheal disease among under-five children



Source: http://www.countdown2015mnch.org/country_profiles/zambia

Note: Demographic and health survey (DHS)

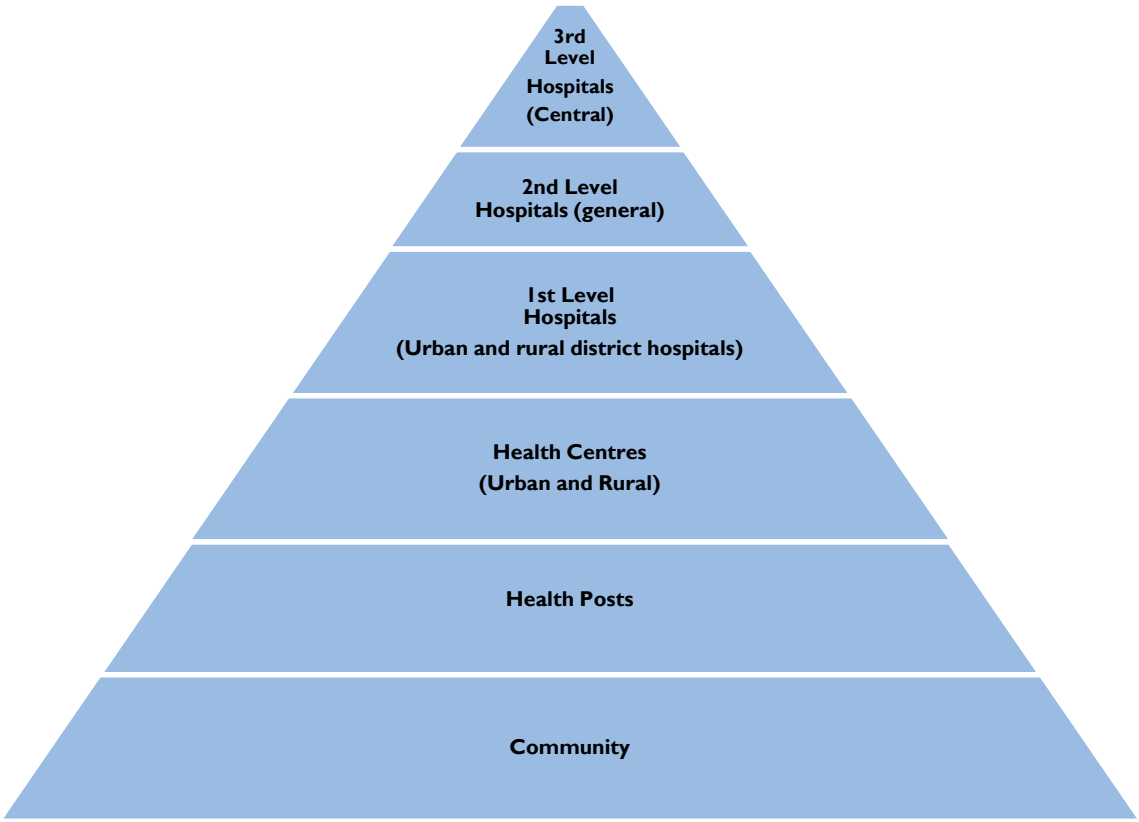
Zambia has wide geographical variations in under-five health indicators, with rural districts having the highest burden of under-five morbidity and mortality rates. The 20 districts with the highest under-five mortality rates are exclusively rural, including Luapula Province (six districts), Western Province (five districts), Eastern Province (five districts), and Northern Province (four districts).

Distance to health facilities and a shortage of health workers, especially in rural areas, continue to hinder accessibility to facility-based treatment for the three major killers of children (ARI, diarrhea, and pneumonia). According to the National Health Strategic Plan (NHSP) for 2011–2016, approximately 99% of households in urban areas are within five kilometers of a health facility, compared with only 50% of households in rural areas.

Health System Organization

In 2011, the Zambian government relocated the Mother and Child Health Unit from the Ministry of Health (MOH) to the Ministry of Community Development and Social Services (MCDSS). MCDSS then became the Ministry of Community Development Mother and Child Health (MCDMCH), which has a mandate to implement health interventions from the community to the district levels. The Child Health Unit, which is part of the Maternal and Child Directorate of the MCDMCH, oversees all child health activities, focusing on strategy and coordination of child health programs and partners. According to the National Health Policy, Zambia has a six-tier health service delivery structure: community; health posts; health centers, first-level hospitals (district); second-level hospitals (general); and third-level hospitals (central) (Figure 4) (Zambia Ministry of Health).

Figure 4. Zambia's public sector health service delivery structure



The MOH is responsible for national health policy direction, research, and the management of national referral and provincial hospitals. The National Malaria Control Centre is a unit within the MOH, under the Directorate of Disease Control, Surveillance, and Research (DCSR). The DCSR coordinates malaria prevention and control activities throughout the country. To ensure coordination between MOH and MCDMCH, a malaria officer in the MCDMCH liaises between the MCDMCH and the Malaria Control Centre, and supports the implementation of malarial interventions.

The provincial health offices (PHOs) support both the MOH and MCDMCH in providing supportive supervision and technical support to public sector health facilities; they do so primarily by supporting district health offices (DHOs). DHOs are responsible for delivering primary health services, including child health care, in all district-level facilities (district hospitals, urban district hospitals, urban and rural health centers, and health posts) and communities. The DHOs are also responsible for planning and delivering continuing education for community health workers (CHW) who implement iCCM.[1] The National Health Policy also recognizes the role played by faith-based facilities, which are owned by various faith-based organizations and coordinated through the Churches Health Associations of Zambia (CHAZ). Reports indicate that CHAZ health service delivery accounts for over 30% of the formal hospital-bed count in the country, and 60% of the services in hard-to-reach, rural areas (Churches Health Association of Zambia).

Zambia, like many other sub-Saharan African countries, continues to experience critical challenges in having an adequate supply of human resources for health (HRH). According to the National Health Policy (June 2013), HRH challenges are reported to negatively affect health service delivery, particularly at the primary

[1]Draft Zambia Implementation Plan. Plan for developing and strengthening community health workers to deliver *iCCM* at scale by 2017.

level. Three main HRH-related problems include severe shortages of health workers, skills-mix challenges, and inequities in the distribution of health workers, which is skewed in favor of urban areas (Zambia Ministry of Health). This situation clearly points to the need for participation of CHWs in health service delivery to fill the HRH gap and improve the health of hard-to-reach populations. The CHW strategy for Zambia identifies the scope of work for CHWs as performing preventive, promotive, and curative activities, the last of which includes treatment of malaria, diarrhea, and ARI in children under-five (2010).

The Role of Integrated Community Case Management (iCCM)

iCCM is a strategy to extend case management of childhood illnesses beyond health facilities so that more children have access to lifesaving treatments for the most common causes of mortality and morbidity: diarrhea; malaria; and ARI. Newborn health and malnutrition are also commonly included as a part of iCCM, which is an important component of Integrated Management of Childhood Illness (IMCI), a program developed by the World Health Organization (WHO) in the 1990s. iCCM builds on the progress made and lessons learned in the implementation of IMCI in communities, and aims to augment health facility-based case management. In the iCCM model, CHWs are identified and trained in classifying and treating key childhood illnesses, and also in identifying children in need of immediate referral.[2] iCCM is an important tool in the toolkit for reducing mortality, especially among rural children who otherwise have limited or no access to lifesaving treatments provided through health facilities.

The community health platform exists to help reach children in their communities. The home management of malaria or community case management (CCM) of malaria, has used the community platform to increase access to effective management of fever. The case for tackling the main childhood killers together, as part of a common platform, is compelling for several reasons:

1. Co-infection (of malaria and pneumonia, for example) is common in children.
2. Symptoms of fever, cough/fast breathing, or loose stool, or all three, can be a manifestation of malaria, pneumonia, or diarrheal disease.
3. Caregivers sometimes resist referrals to a health facility when a CHW cannot manage a condition, which can lead to delayed treatment and worsening conditions.
4. Ability to manage non-malarial fever reduces the use of anti-malarial drugs. In the absence of this skill, a CHW will often give anti-malarial treatment, even when a malaria test is negative, for several reasons: caregiver demands these drugs; or a CHW feels the need to demonstrate competence in managing sick children.
5. Potentially fatal conditions, such as pneumonia, are often brought to the attention of CHWs first, as they are the first-line caregivers.

Thus, sick children benefit when CHWs are able to detect and treat conditions in addition to malaria.

[2] To learn more, see CCM Central and Gove 1997. iCCM is typically delivered by community health workers at the community level and encompasses treatment for: (i) childhood pneumonia with antibiotics; (ii) diarrhea with zinc and oral rehydration salts (ORS); and (iii) malaria with artemisinin combination therapy (ACT). The joint statement on iCCM also supports the identification (but not treatment) of severe acute malnutrition and home visits (but not treatment) for newborns (UNICEF 2012) (see: Bennett et al).

iCCM Integration Supported through The Global Fund New Funding Model

One mechanism for supporting integrated CCM is the GFNFM, which was approved in October 2013, allowing the use of Global Fund money to support activities in addition to the CCM of malaria. GFNFM supports the costs of: 1) training CHWs to manage diarrhea, pneumonia, refer newborns, and treat malnutrition—depending on the iCCM package of services offered by the country; 2) strengthening supply chain systems; and 3) monitoring and evaluating the CCM of other childhood illnesses if supported by national policies and epidemiological evidence.

To support countries to take advantage of the GFNFM opportunity, members of the iCCM Task Force, an association of multilateral and bilateral agencies and nongovernmental organizations that promote integrated community-level management of childhood illnesses, established the Financing Task Team (FTT). Members of the FTT include UNICEF, United States Agency for International Development (USAID), One Million Community Health Workers Campaign, Save the Children, American Red Cross, Maternal and Child Health Integrated Program (MCHIP), Clinton Health Access Initiative (CHAI), and the Office of the United Nations Special Envoy for Financing the Health MDGs. FTT ensures that countries receive technical assistance to complete iCCM gap analyses and concept notes for the GFNFM.

Zambia was one of five countries supported by the USAID to develop a GFNFM malaria concept note that incorporated iCCM. Zambia submitted its application in June 2014 for $7.51 million. Asked to revise its application, Zambia did so and resubmitted it in September 2014. Final approval of the concept note came in December 2014.[3] This report details Zambia's experience with this process, specifically:

- The degree to which the process between malaria stakeholders and proponents of iCCM, including stakeholders in the child health and community health units, was collaborative (and how);
- Factors that enabled and constrained a collaborative relationship;
- The outcome of the process, and how stakeholders can work together effectively once funds are awarded and programs begin scaling up;
- The areas that stakeholders in Zambia would like to see improved to support implementation of integrated programs i.e.malaria/iCCM); and
- Where additional assistance may be needed to strengthen applications for other countries interested in applying for GFNFM funding and other resource mobilization efforts, such as the Reproductive, Maternal, Neonatal and Child Health Trust Fund.

This assessment focuses on country readiness (e.g., availability and status of malaria, maternal and child health, and iCCM strategic plans, and whether they are costed) and government and partner funding commitments. This assessment also identifies whether the country-based process and assumptions used to create the financial and program gap analysis will meet the country's iCCM need.

Methods

This report summarizes 16 key informant interviews conducted in Lusaka, Zambia on February 15–20, 2015. Additionally, it summarizes the review of the: national strategic and policy documents on child health, iCCM, and malaria; GFNFM application documents, including the concept note (August 2014); draft iCCM

[3] The amount of $7,510,000 was approved for iCCM as of April 2015, with additional amounts for iCCM expected from the $12million above allocation, which was also approved, but not broken down.

implementation plan for Zambia (2014); and gap analysis report (June 2014). Also summarized are assignment reports written during March to June 2014 by consultants who received support from MCHIP, Maternal and Child Survival Program (MCSP), and USAID. Key informants included representatives from the Ministry of Health Malaria Program Management Unit (PMU), National Malaria Control Centre (NMCC), MCDMCH, UNICEF, Program for Appropriate Technology in Health (PATH), Malaria Control and Elimination Partnership in Africa (MACEPA), President's Malaria Initiative (PMI), CHAZ, and UNDP Malaria PMU (previous Global Fund principal recipient).

Interview data were grouped and analyzed according to several themes: process of developing the GFNFM concept note, including what worked well and what did not work well, and the outcome; implementation arrangements, including procurement of non-malaria commodities; and recommendations to global and national stakeholders. Information from the review of the national policy and strategy documents on malaria and child health was used to develop the contextual analysis for child health in Zambia.

A debrief meeting, chaired by the NMCC Director, was held on the last day of the assessment visit.

2. iCCM in Zambia

Due to poor access to treatment for malaria, diarrhea, and pneumonia—resulting from the long distances needed to travel to reach health facilities—and a shortage of health workers, Zambia adopted the iCCM in May 2010 to target populations in rural communities and hard-to-reach areas.

The history leading to the adoption of iCCM dates back to 2003, when a change in drug policy made ACTs the first-line drug for the treatment of uncomplicated malaria, replacing chloroquine. Following the introduction of the malaria rapid diagnostic test (RDT), the National Malaria Control Program introduced malaria case management at the community level, a program referred to as Home Management of Malaria. As part of this program, many CHWs in selected districts were trained in diagnosing malaria using RDTs and treating it using ACTs.

Box 1. The Boston Study: Zambia Integrated Management of Malaria and Pneumonia Study (ZIMMAPs)

Research Question

How did the availability of integrated community case management (iCCM) influence care-seeking behavior?

Key Findings

- For children with fever, there was an increase in care sought from community health workers (CHW) and decrease in care sought from formal health workers.
- For children with fast and difficult breathing, there was an increase in care sought from CHWs who were trained and able to provide patients with amoxicillin to treat non-severe pneumonia.

Conclusion

iCCM access influences local care-seeking practices and reduces workload at primary health facilities.

During this period, pilot studies and operations research were undertaken to provide evidence for the effectiveness of the iCCM strategy. The Zambia Integrated Management of Malaria and Pneumonia Study (ZIMAPPS), which was conducted in 2008 by the MOH and Boston University, provided evidence that iCCM was effective in increasing treatment coverage and reducing workload in health facilities (Box 1). The study's findings suggested that CHWs can effectively treat malaria, pneumonia, and diarrhea at the community level (Seidenberg et al.). Based on these encouraging findings, the Malaria Consortium piloted iCCM in Luapula province, further confirming that iCCM was effective in ensuring access to treatment for these three diseases. This led to Zambia's adoption of the iCCM strategy in May 2010.

Box 2. Quick Facts: Integrated Community Case Management (iCCM) in Zambia

Year iCCM Pilot Program Introduced: May 2010

iCCM Package

Identification and treatment of diarrhea (with oral rehydration salts (ORS) and Zinc), pneumonia (with antibiotics), and malaria (diagnosis using rapid diagnostic test (RDT), and treatment using artemisinin-based combination therapy (ACT)); screening with mid-upper arm circumference (MUAC) for malnutrition and referral; and providing counseling on how to feed (infant and young child feeding) children under-five

Coverage

As of September 2014, in all 10 provinces and in 36 out of 105 districts

iCCM Elements in Global Fund New Funding Model Concept Note Include:

- Training community health workers (CHW) in case management of all conditions covered by the iCCM package;
- Supplying the CHWs with a package of the recommended iCCM medicines and RDTs;
- Communicating behavior change and creating demand for services; and
- Providing supportive supervision of all CHWs.

The national iCCM package includes diagnosis and treatment of malaria, pneumonia, diarrhea, and malnutrition (Box 2).

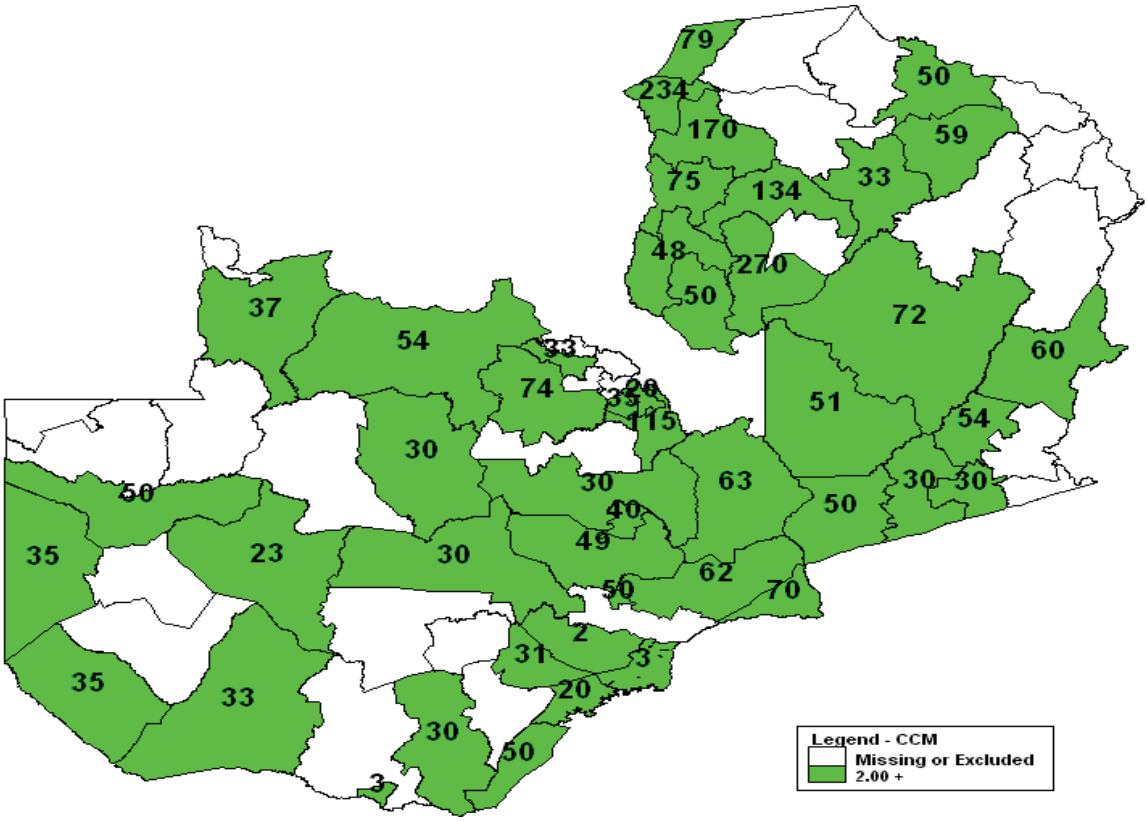
Although no policy statement or strategy exists specifically for iCCM, respondents noted that iCCM was adequately covered under the Child Health Policy, and specifically, in IMCI policies and strategies. Within the Child Health Technical Working Group (TWG), there is an iCCM subcommittee that is developing implementation and scale-up plans. The subcommittee has representatives from the MCDMCH, WHO, UNICEF, the Zambia Pediatric Association, CHAI, World Vision, Center for Infectious Disease Research in Zambia (CIDRZ), PATH, CHAZ, and the former Zambia Integrated Systems Strengthening Project. In Zambia, iCCM is seen as a component of IMCI and, specifically, a package within community IMCI. The draft implementation plan identifies three key packages of community health services: caring for sick children in the community (iCCM); caring for newborns at home; and caring for the healthy growth and development of children.

iCCM is implemented by the MCDMCH by mostly volunteer CHWs who have been trained to treat the three diseases that cause the majority of under-five deaths: malaria, pneumonia, and diarrhea. In 2011, the country launched a nine-month training for a new cadre of paid CHWs, the Community Health Assistants (CHA). In addition to the provision of treatment services at the health post, including iCCM, CHAs supervise CHWs. According to the Zambia CHW strategy, CHAs are expected to work alongside the volunteer CHWs until a critical mass of CHAs has been trained. After achieving this critical mass, the volunteer CHWs will only participate in social mobilization and health promotion activities. At the time of this assessment, Zambia had trained around 600 CHAs (out of the 5,000 targeted for 2011–2015) to provide promotive, preventive, and curative services at the community level, including iCCM.[4] However, some respondents observed that so far, most CHAs are operating at health centers due to the shortage of professional health workers. In this report, CHWs refers to both volunteer CHWs and CHAs. About 2,030 CHWs (volunteers and CHAs) were providing iCCM by June 2014. The iCCM-trained CHWs were working in 46 districts in Zambia (Figure 5).

Other government partners involved in supporting iCCM implementation in the country include USAID/Zambia Integrated Health Systems Strengthening Project, UNICEF, World Vision, Malaria Consortium, Save the Children, CHAZ, and WHO.

[4] Zambia Malaria Global Fund concept note 2014 and reports from the respondents.

Figure 5. Map of the number of Zambian community health workers (CHW) trained to provide integrated community case management (iCCM) per district, as of March 2014



Source: Draft Zambia iCCM Implementation Plan

3. The Process of Developing the GFNFM Concept Note that included iCCM

Discussions about developing the integrated concept note for the Global Fund malaria application under the New Funding Model began as early as December 2013, when RBM and UNICEF held two meetings in Nairobi for countries in UNICEF's East and Southern Africa Regions (ESARO). At the first meeting, the RBM announced the GFNFM and resulting changes to the Global Fund application process, and the possibility for countries to develop and submit malaria applications that integrated iCCM. The second meeting brought together malaria and child health program officers to discuss the implications of the integrated concept notes and to explain the process of iCCM gap analyses. At the end of the second meeting, countries were asked to indicate if there was interest in submitting the integrated concept note, if there was a need for technical assistance to do the iCCM gap analysis, or if there was a need to advocate the inclusion of iCCM in the malaria concept note. Zambia sent representatives to these meetings from both malaria and child health program units, expressed an interest in iCCM, and requested support from the iCCM Task Force.

By the time of the ESARO meeting in December 2013, Zambia already had a draft of its iCCM gap analysis, which was developed at a 2012 ESARO-supported regional workshop on doing iCCM gap analyses. The national IMCI/iCCM program officer from MCDMCH attended the regional workshop.

By the time the process of writing the concept note officially began after the RBM meeting, which was held in Nairobi in March 2014 to launch the revised National Malaria Strategic Plan (NMSP), stakeholders in Zambia had already initiated consultations and even agreed on the major components of the concept note. Said one informant, "Before March, we had a focus on what we wanted as a country…when we went to Nairobi in March 2014, we had the elements of what we wanted…and iCCM was one of them."

The March 2014 RBM meeting provided an opportunity for the country to review its NMSP. The meeting was attended by the NMCC and representatives from the MOH Fund PMU. Two iCCM consultants also participated in this meeting after completing the consultants training, which was held in Nairobi two days prior. The consultants' participation is seen as having facilitated the development of the concept note for integrating iCCM. After the Nairobi RBM meeting, stakeholders met in Lusaka to agree on a roadmap for drafting the final strategic plan and concept note. Specifically, the revised NMSP expanded the case management package for CHWs from treating only malaria to including the treatment of diarrhea and pneumonia, as well as referring malnutrition and sick newborns to health centers.

The process of writing the concept note was led by the NMCC, and supported by several other partners. Those who consistently participated in the concept note meetings included the MOH Global Fund PMU, UNDP Global Fund PMU (a former principal recipient), WHO, UNICEF, CHAI, PMI, PATH/MACEPA, a consultant supporting the malaria unit and hired by the RBM harmonization, and two iCCM consultants hired by MCHIP and UNICEF to support the MOH. Most respondents reported that this team enabled the development of the concept note, as it facilitated swift decision making. The two iCCM consultants reported that the views of the broader stakeholder's community, including civil society organizations involved in iCCM implementation, were obtained through frequent meetings that occurred during the course of writing the concept note.

It was reported that the malaria consultant was initially a hindrance in the integration of iCCM. However, one of the respondents noted that the malaria consultant began to show an appreciation for iCCM following a visit by Zambia's Global Fund Portfolio Manager, who openly acknowledged that iCCM was well described in the malaria strategic plan and concept note. One informant noted, "We worked with a consultant who felt his role was to protect malaria. He would say, 'this is not an iCCM strategic plan, this is not an iCCM concept note.' He started changing when he noticed that the Global Fund was supporting iCCM."

After a draft of the concept note was developed, Zambia participated in a mock Technical Review Panel (TRP) meeting in Harare, Zimbabwe in April 2014. At this mock TRP meeting, peer reviewers provided feedback on improving the concept note. These comments were used to finalize the concept note, which was submitted to the Global Fund in June 2014. The Global Fund asked the country to resubmit its application with clarifications about the procurement and supply chain management plans, the budget for each province, and estimates of malaria cases in each province (epidemiological stratification). Zambia revised its application to address this feedback and resubmitted it in September 2014.

Throughout the process, most of those interviewed reported that the country engaged in several country-wide dialogues with partners implementing malaria and iCCM programs, which provided opportunities for multiple stakeholders to contribute.

Figure 6. Process of developing the malaria Global Fund New Funding Model concept note

Source: Roll Back Malaria (RBM)
Note: Technical Review Panel (TRP)

Although the iCCM coordinator at the MCDMCH attended some of the concept note meetings, respondents felt generally that MCDMCH's participation was weak. This weakness was mainly attributed to the shortage of staff within the MOH, a lack of prioritization by the Child Health Unit, and inadequate engagement by the NMCC. When asked about the participation of the Child Health Unit, one respondent from the MOH observed: "They [Child Health Unit representatives] were not there. But the problem was not them, but us. We had not engaged our sister ministry (MCDMCH) well." The consultants reported that they were able to address the lack of participation of the Child Health Unit by engaging them separately in briefings.

Some respondents further identified that there was weak participation from civil society organizations involved in either malaria or iCCM programs. Moreover, several informants indicated that it would have been helpful to have had the participation of district-level staff responsible for implementing the iCCM. It was reported that these stakeholders would be able to better articulate the challenges with health coverage and also the key interventions needed to strengthen community health systems. Respondents added that it would also have been useful to include the monitoring, evaluation, and planning units within the MOH. Although the

actual writing of the concept note could only be done by a small group of people, and the leadership managed the writing process well, it was generally felt that broader, more inclusive reviews could increase ownership and strengthen implementation of the iCCM and malaria programs. One respondent said: "Yes, the mistake was we isolated ourselves as malaria. iCCM has several other issues, not just malaria. We should have had people from health promotion, the districts, and people from the community…but again, you cannot invite everyone for dinner."

Respondents reported that although the participation of the Child Health Unit was weak, the overall process helped to strengthen the working relationship between the two Ministries, i.e., the MOH and the MCDMCH. One respondent noted: "The concept note writing process brought the two ministries to work together and forced them to start thinking about how they can work together…the process helped to see how they are related."

Additionally, majority of the respondents reported that the process helped the two ministries identify opportunities for collaboration, especially in working with CHWs to implement iCCM and develop community health information systems. One such comment was: "These meetings helped clarify the roles and responsibilities following the split of the two ministries and enabled understanding on how relationships can be visualized."

Zambia submitted the malaria concept note to the Global Fund in June 2014. The Global Fund provided comments and a revised concept note was submitted in September 2014, the same time the HIV/TB concept note was submitted.

Zambia successfully requested and accessed resources to implement iCCM through the GFNFM. In addition, Zambia mobilized a modest amount from local resources for non-malaria commodities that are not funded by GFNFM. While the iCCM gap analysis provided the budget identified in the concept note, respondents felt that the real cost of implementing iCCM across the target districts could only be known through a micro-planning exercise involving district level program managers. This micro-planning exercise has been proposed in the draft iCCM implementation and scale-up plans for 2015–2017, but lack of resources has delayed its implementation.

Table 1. Summary of Zambia resource estimates for iCCM scale-up (2015–2017)

Area	Total	Comment
Total financing needed for national scale-up of iCCM	$45,068,090	This money is based on the iCCM gap analysis, but government and partners recognized the limited implementation capacity and scaled down the targets and request to the GF.
Near-term funding needed to scale up to four priority provinces between 2015-2017	$23,110,000	This money targets iCCM scale-up in four provinces: North Western, Northern, Muchinga, and Eastern. Micro-planning has been proposed to get accurate costs for implementing iCCM in respective districts, which differ geographically in having basic amenities such as banks and fuel, as well as in the condition of their health infrastructure.
GF Malaria (indicative funding) requested	$7,510, 000	This money was requested and approved for scale-up of iCCM in the North Western province and national level program management.

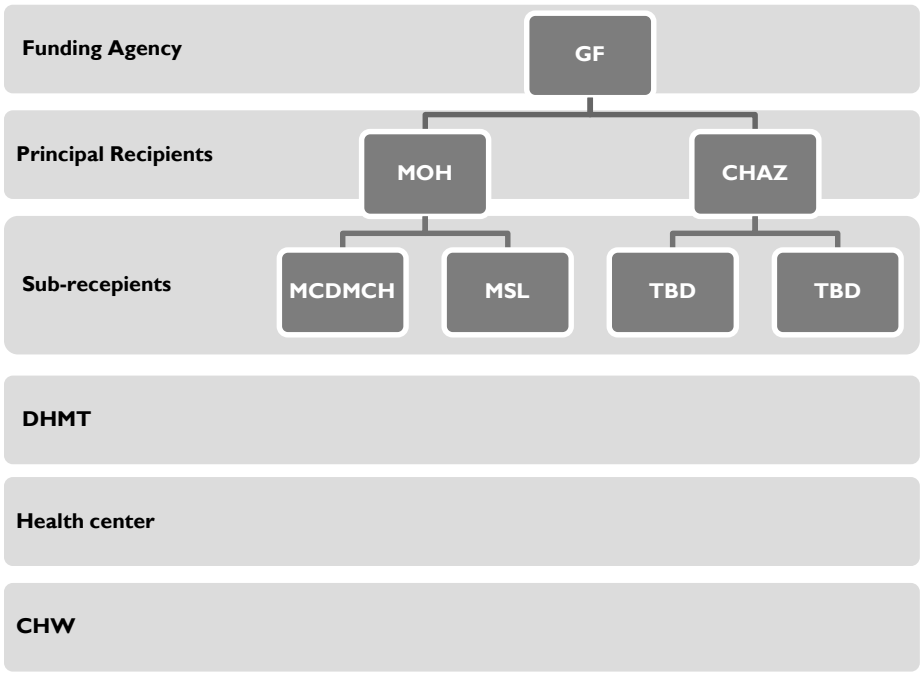
Area	Total	Comment
GF requested (incentive funding)	$12,100,000	Although the concept note was approved, Zambia submitted a budget to the GF in March 2015 against the incentive funding. If approved, this money will support the scale-up of iCCM in three additional provinces.
Co-financing met (GRZ, UNICEF etc.)	$450, 000	This money has been confirmed as available.
Co-financing gap	$3,050, 000	This money will mostly fund non-malarial commodities.

Notes: Global Fund (GF); Government of the Republic of Zambia (GRZ); and Integrated community case management (iCCM)

4. Implementation Arrangements of iCCM Activities funded through the GFNFM

The GFNFM in Zambia will be implemented by two principal recipients: the MOH and CHAZ for the public health sector and CSO, respectively. The MOH will work at the national level with two sub-recipients: the MCDMCH and Medical Stores Limited (MSL). The MCDMCH will implement iCCM directly through the district health management teams (DHMT) and CHAZ; the other principal recipient will implement iCCM and malaria interventions through support to faith-based health institutions and civil society organizations. The faith-based and civil society organizations are also expected to link with the DHMTs responsible for the districts where their programs are located. At the time of this assessment, CHAZ had placed an advertisement for CSOs to apply as sub-recipients. In terms of technical leadership for iCCM implementation, although the MCDMCH has a full-time national iCCM coordinator, more people with technical experience in implementing iCCM are needed to coordinate country-wide iCCM scale-up activities. Respondents noted critical gaps in staffing at both the national and district levels for implementing iCCM. The funding request to the Global Fund did not include additional staff, thereby affecting implementation and absorption of the Global Fund grants unless capacity is significantly increased.

Figure 7. iCCM implementation arrangement in Zambia under the GFNFM



Notes: Churches Health Association of Zambia (CHAZ); Community health worker (CHW); District health management teams (DHMT); Global Fund (GF); Ministry of Health (MOH); Ministry of Community Development Mother and Child Health (MCDMCH); and Medical Stores Limited (MSL)

Implementation will be coordinated through the iCCM subcommittee of the Child Health TWG led by the MCDMCH, and with support from a full-time iCCM coordinator based in the MCDMCH. The iCCM subcommittee does not include a representative from the NMCC, which some malaria stakeholders identified as a gap: "Looking at iCCM scale-up, this will be done solely by the MCDMCH. As malaria, we think we have been left out." Within the NMCC, there is a case management TWG, which includes iCCM. The Malaria Officer within the MCDMCH participates in the TWG meetings, but has not been part of the iCCM subcommittee. Overall, to strengthen coordination, the MCDMCH and MOH need to ensure

appropriate representation of both malaria and child health program officers in the malaria case management TWG and iCCM subcommittees. Related to the issue of coordination, although the responsibilities for each of the ministries are clearly stipulated, implementing the guidelines has been a challenge. Implementing this integrated program is an opportunity to strengthen collaboration between the ministries.

Procurement, Supply Chain Management and Non-Malaria Commodities

Interviews with the various respondents identified the need for clarity on the procurement of non-malarial commodities. "It was not clear from the start who will purchase the non-malaria commodities, the question was asked so many times," said one respondent. Although it was reported that the Zambia government and UNICEF would procure the non-malarial commodities, no specific commitments in terms of quantities and timelines have been made: this was a concern among respondents. It was noted that in the past, the country had experienced challenges where CHWs were trained and commodities were not available for more than six months, which led to high CHW attrition rates, as well as CHWs forgetting what they had been taught due to lack of practice. "In the past, we have trained CHWs who never practiced and the resources were wasted," said one respondent.

Additionally, despite the country having developed a procurement and supplies management plan, some respondents voiced concerns not only about the availability of commodities, but also about ensuring that the commodities reached CHWs. "We are very concerned about the non-malaria commodities…in the Malaria Consortium project for example, CHWs were not getting dispersible amoxicillin…even now, [getting] zinc and amoxicillin is a challenge."

The issues affecting availability of commodities were attributed to three scenarios: lack of commodities at the central medical stores (no or insufficient procurement); commodities available at central medical stores but not available at the facility level (breakdown of the distribution system); and commodities available at the facility but in insufficient quantities to share with CHWs (health system management decision made by the administrator in charge of the health center). With MSL as one of the sub-recipients and with Global Fund support to strengthen the supply chain system, it is hoped that procurement and distribution of malarial commodities will be addressed. However, unless there are sufficient quantities of non-malarial commodities, and health managers at the health centers see iCCM as an important part of the package, CHWs will not have commodities when they need them.

Monitoring and Evaluation

The iCCM stakeholders have proposed indicators to monitor implementation of the package supported by the Global Fund. Many informants noted that the current data collection systems do not enable enumeration of the number of children under-five receiving services from CHWs. In the current data collection system, CHWs summarize data and present it to their supervisors at the health facility, who then compile that data with the facility data and transmit it to the next level. Where there are partners supporting CHW interventions, there is a parallel paper-based data management system for iCCM, which channels data to the national level. Zambia has adopted the District Health Information System version II platform as the national health management information system. The community module is not in use, except for a malaria case management pilot program that exists in a few districts led by one of the members of the Child Health TWG, in collaboration with MCDMCH. Ideally, the CHW data should be transmitted through an electronic system in such a way that it would be possible to capture the contribution of the CHWs in increasing treatment coverage. This activity is included in the draft iCCM implementation plan, in the monitoring and

evaluation section. The proposal in the implementation plan is to evaluate the pilot study and apply lessons learned to including the complete iCCM package in DHIS II.

Areas for Additional Support

This section highlights areas where the country reported the need for additional external support to ensure smooth implementation of iCCM.

Non-Malarial Commodities

As discussed above, many informants expressed concerns around the availability of non-malarial commodities. Zambia would benefit from advocacy at the global level to donors such as USAID, Canadian International Development Agency (CIDA), and H4+ (membership includes WHO, UNICEF, UNFPA, UNAIDS, UN Women, and the World Bank) to fund its domestic partners to procure non-malarial commodities. Additionally, the Zambian government pledged to support procurement of non-malarial commodities to ensure a successful iCCM implementation. The government will need to be held accountable to ensure that it delivers on its pledge.

Operations Research

Although a budget for operations research is included in the concept note, this is limited to exploring the use of mHealth applications to strengthen reporting and supportive supervision. Regarding mHealth, CHWs will be provided with mobile phones to transmit or report data. Zambia will assess the impact of this reporting method used by CHWs, and assess the impact of strengthened (definition, measures, and how it will be implemented has not yet been developed), supportive supervision provided to the CHWs about their reporting. Other possible research areas were identified, such as the impact of offering incentives to the CHWs to increase their performance. In addition to financial support, the country would require technical support to implement operations research.

Inclusion of iCCM Indicators in The Malaria Indicator Survey

Zambia was planning to conduct a malaria indicator survey. It was reported that there were discussions to ensure inclusion of questions and collection of data to provide a baseline for iCCM indicators that will be used to monitor future progress and outcomes. Those interviewed reported that the country could benefit from a technical review of the plan for the malaria indicator survey to ensure that the right and adequate iCCM indicators are included, and that the best approaches for collecting the data are presented.

Budget for Coordinating of iCCM Interventions

Interviews with various respondents identified that the recruitment of a Global Fund iCCM coordinator was not included in the concept note's program management budget. Zambia will require budgetary support to recruit a Global Fund coordinator to be based at the MCDMCH and to manage and coordinate implementation. The Global Fund coordinator will also need to facilitate more frequent meetings of the iCCM subcommittee to keep track of program implementation and ensure active problem solving. This coordinator will supplement the existing iCCM coordinator, a person respondents identified as being overburdened with too many responsibilities.

5. Analysis—What Worked and What Didn't?

What Worked

The success of the Zambian integration of iCCM in the malaria Global Fund concept note can be attributed to a convergence of factors: well-targeted technical assistance; evidence supporting the efficacy of iCCM as a technical intervention, which led to buy-in from stakeholders; and a nimble, core team that was well prepared to develop the concept note.

Effective Technical Assistance

The choice of iCCM consultants—both of whom were conversant in iCCM and malaria, and respected—was seen as a key success factor to the process. Both consultants were members of the Child Health TWG and iCCM subcommittee, and one had previously worked with the NMCC and had experience both in writing Global Fund concept notes and managing Global Fund programs. Noted one informant: "One of the consultants had implemented iCCM through CHAZ…He was key because he knew the critical people to see, he had a good working relationship with the government."

The consultant recognized that past experience working on malaria programs was helpful to supporting iCCM: "I worked in malaria for over 12 years. In terms of malaria programming, I am very experienced; I have been working with the team…I had one leg in malaria and another one in iCCM. Those guys did not just want to work with someone just for iCCM, they needed someone who can support their components as well."

The approach taken by the consultants in providing technical assistance is also reported to have been helpful. Not only did the iCCM consultants support iCCM components of the concept note, one of the iCCM consultants was also in charge of reviewing the overall concept note. This worked well, as the consultants had an opportunity to adequately include iCCM objectives and strategies within the document. As one of the weekly consultant reports notes: "Our strategy was that if we assist with the overall work of the concept note writing, that iCCM will be dealt with more favourably. So far this has worked. Our continuous presence around the table has ensured that iCCM is catered for at every step."

Evidence for iCCM Implementation

Zambia invested in and implemented studies to show the effectiveness of the iCCM strategy. Based on initial findings from these studies, the Malaria Consortium implemented a pilot project that further provided evidence that iCCM was an effective strategy. Those interviewed observed that this evidence was critical in creating buy-in for the integration of the iCCM in the malaria concept note.

Preparing in Advance

Early preparations were noted as having been an enabling factor to successful integration of iCCM into the malaria concept note. As early as December 2013, at the first RBM and UNICEF ESARO meeting in Nairobi, the Zambia's child health and malaria representatives made a decision on the major elements of the concept note, including the inclusion of iCCM. By the time of the March 2014 RBM meeting to review national malaria strategic plans, Zambia was already equipped with a draft iCCM gap analysis. This draft was later refined and used as part of Zambia's Global Fund application. Starting the process early allowed time for

stakeholders to discuss differences about priorities and arrive at a common understanding of the iCCM activities to include in the concept note. These deliberations contributed to the successful integration of iCCM in the Global Fund malaria concept note.

Buy-in for iCCM from stakeholders

Another key enabler was having a strong buy-in from stakeholders for iCCM implementation. Major malaria and child health organizations (including UNICEF, WHO, USAID/PMI, MACEPA and CHAI) supported the including of iCCM into the Global Fund concept note. Interviews with PMI identified that iCCM was included in the call for malaria proposals from USAID Zambia that was distributed while this report was being written. When asked about their support for iCCM, the PMI respondent noted: "PMI supports iCCM at global level, at country level, we will support at limited scale."

Support from Global iCCM Task Force

Zambia received excellent support from its global partners in the review of documents before they were submitted to the Global Fund. The global iCCM Task Team reviewed the concept note before submission, which was said to have greatly improved the iCCM integration write-up in the Malaria Global Fund concept note.

Acknowledgement of The Need to Integrate iCCM by The Global Fund

The Global Fund was also supportive of the iCCM integration process. Respondents reported that the Global Fund team visited the country twice during the application process and provided much-needed advocacy for iCCM. A respondent noted: "Global Fund was very helpful. They said there is not much iCCM in this document and that helped us to advocate further…we had a lot of consultations with Global Fund and they sought our advice."

Broad Consensus, Implemented By a Small Core Team

Working with a small, core team facilitated smooth decision making. One respondent said: "You should have a big team for the initial consensus; once the team has agreed on the broader issues, then there should [be] a smaller team to ensure faster decision making."

What Did Not Work Well?

The two main challenges to drafting the concept note were: 1) weak participation from the community health unit; and 2) the late and delayed sharing of information about funding commitments from donors for malaria response, and especially iCCM. The iCCM consultants reported that many development partners were not able to deliver on their funding commitments, even after a written request by the MOH's Permanent Secretary. This delayed the development of the iCCM gap analysis. Also, there was a lack of information on the number of CHWs who had been trained, further complicating the process of assessing how many CHWs needed to be trained to implement iCCM.

Additionally, although having a small team for writing the concept note facilitated smooth decision-making, the very size of the team may have hindered the thorough mapping of implementation arrangements and coordination. The lack of clear commitments for procurement of non-malarial commodities is one example of this gap. In short, the iCCM consultants were successful at achieving buy-in for iCCM and developing a concept note that includes iCCM activities, but they were not successful at facilitating a discussion about implementation, an area which remained undecided at the time of this assessment.

6. Conclusion and Recommendations

Zambia was able to successfully integrate iCCM into the Malaria GFNFM concept note. A total of $7.51 million was approved. iCCM will also benefit from the $12.1 million allocated through the incentive funding.

Below is a list of recommendations to ensure successful implementation of iCCM, and to address general issues about supporting Zambia and other countries.

Recommendations to the Country

1. Clarify procurement and distribution of non-malarial commodities and link it to the malaria Procurement and Supply Management (PSM) so that CHWs have regular supply of commodities required to implement iCCM.
2. Increase the number of staff and technical expertise of the national team responsible for national coordination, management, and supporting districts to implement iCCM.
3. Finalize the iCCM scale-up plan, including microplanning to inform scale-up based on the money that has been approved.
4. Ensure that all stakeholders are well informed about the implementation plan including, targeted districts, technical leadership, and iCCM coordination.
5. Strengthen the iCCM subcommittee to provide oversight for implementation, monitoring, and coordinating partners, including linking the subcommittee with the Malaria Program Case Management subcommittee.
6. Ensure that selected sub-recipients, under CHAZ, have experience in iCCM implementation. If the sub-recipients have no experience, the PR should provide capacity-building to the recruited sub-recipients.
7. Sensitize consultants hired to support malaria teams on the importance of using iCCM as a key strategy for malaria response among children under-five. Ensure that the consultants support integrating iCCM into the concept note.

Recommendations to Global Partners

1. Include both child health and malaria program managers in global, regional, or national program specific meetings, symposia, or workshops to build linkages in program design, implementation, and monitoring.
2. Ensure that RBM and Harmonization Working Group consultants are well briefed on international policy discussions about integrating iCCM into the GFNFM. Ensure that consultants understand their role in the concept note writing process.
3. Review plans and communicate with countries about commitments to procure non-malarial commodities, including domestic resources to meet needs.
4. Consider long-term plans for technical assistance for capacity-building in countries to develop and implement iCCM plans.

Appendix A: List of Persons Interviewed

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