

Review of Systematic Challenges to the Scale-up of Integrated Community Case Management

Emerging Lessons & Recommendations from the Catalytic Initiative (CI/IHSS)



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Review of Systematic Challenges to the Scale-up of Integrated Community Case Management: Emerging Lessons & Recommendations from the Catalytic Initiative (CI/IHSS)

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COVER PHOTO: MOTHER WITH CHILD BEING ASSESSED BY A COMMUNITY HEALTH WORKER IN VILLAGE OF TIEGOUDECOURANI, MALI



MATERNAL, NEWBORN AND CHILD HEALTH WORKING PAPER

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Initiative (CI/IHSS)

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COMMUNITY HEALTH WORKER IN VILLAGE OF SAMATAN, MALI PREPARES A RAPID DIAGNOSTIC TEST (RDT) FOR MALARIA

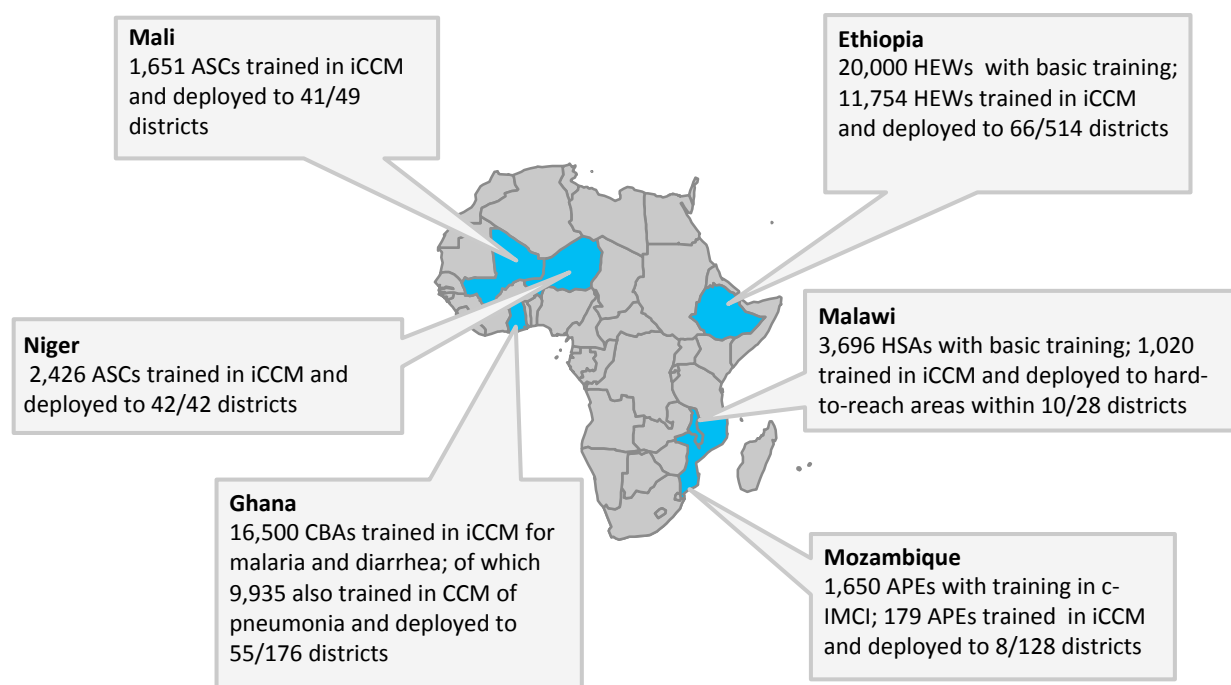
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EXECUTIVE SUMMARY

This paper presents an overview of challenges and lessons learned across the six sub-Saharan Africa countries which are part of the Catalytic Initiative (CI/IHSS) - Ethiopia, Ghana, Malawi, Mali, Mozambique, and Niger. Drawing from review and analysis of over 50 programme documents, as well as correspondence with a range of programme key informants, the paper highlights important multi-country experience on the common challenges to scale-up of intervention packages for child survival, in particular the delivery approach of integrated community case management (iCCM). Such challenges include: 1) the deployment, supervision, motivation and retention of community health workers as the backbone of iCCM; 2) maintaining reliable supply chains; 3) demand side barriers to utilisation; 4) weak monitoring and evaluation systems, and 5) the need for supportive government policies and engagement to achieve sustainable progress. Although some of these challenges have been previously documented in the public health literature, others are unique - and the paper highlights examples and case studies which collectively illustrate how the six countries have begun to respond to these bottlenecks using a range of innovative approaches. The paper concludes by consolidating emerging lessons, questions and recommendations that will be critical for informing iCCM progress moving forward, as well as contributing to the growing body of knowledge on implementation of iCCM programmes.

Through the Catalytic Initiative, iCCM has been scaled-up in six high burden countries of Africa to address limited access to appropriate treatment for pneumonia, diarrhea, and malaria



Source: UNICEF 2011 Annual Reports to CIDA on the Catalytic Initiative and key informant interviews (2011-2012)

| 1

INTRODUCTION

The Catalytic Initiative, Integrated Health Systems Strengthening Program (CI/IHSS) aims to intensify efforts to achieve the United Nations Millennium Development Goals (MDG) 4 & 5 by developing the capacity of country-led health systems to deliver a limited set of integrated, proven, high impact interventions, and strengthen health systems at the front-line level. It is jointly funded by CIDA and UNICEF, and is being implemented in Ethiopia, Ghana, Malawi, Mali, Mozambique, and Niger. The CI/IHSS programme (which began in late 2007 and will extend through 2012), supports government and/or civil society organizations to equip, train and supervise front-line workers to deliver the intervention package, as specified below. The CI/IHSS programme has been designed to align with the policies and planning of the government of each country. In this way it is helping to strengthen health systems and expand access to services in hard to reach areas as part of an “equity-focused” strategy. The initial package of interventions included:

- » treatment for diarrhoeal disease, pneumonia and malaria;
- » immunizations (Only in order to fill gaps not met by current or imminent efforts and where cost-effectiveness is high -specifically < \$500 per death averted);
- » long lasting insecticide treated bed nets (LLIN) (for both pregnant women and children under five (U5s);
- » vitamin A supplementation;
- » intermittent preventative therapy for malaria for pregnant women;
- » tetanus immunization for pregnant women;
- » breastfeeding promotion and counseling.

During Phase I of the programme (2008-2010), the Lives Saved Tool (LiST) was applied across all of the CI/IHSS countries. This analysis showed that that coverage of treatment services was low, and that scaling up integrated community case management (iCCM) for pneumonia, diarrhoea and malaria could result in large gains in child survival. Therefore, the final few years of the CI/IHSS are primarily focused on accelerated scale-up of iCCM and documentation of improved outcomes through increased coverage of treatment services.

A range of activities have been supported across the six CI/IHSS countries to accelerate scale-up of iCCM (see Annex 1). They include the following:

- » policy reforms to allow community workers to provide treatment at the community level (in particular to allow administration of antibiotics for pneumonia);
- » development of implementation plans for iCCM within the context of national child health plans and strategies;
- » training of community health workers (CHWs) in community case management and deployment to the community level;
- » provision of system supports for CHWs providing iCCM services, particularly supervision, monitoring and supply chain;

Three and half years of experience with implementation of the CI/IHSS programme (2008-2011) across six countries has generated much information regarding common challenges or system bottlenecks to scale-up of intervention packages for child survival, in particular the delivery approach of integrated community case management.

This paper aims to analyse and document multi-country experiences in iCCM implementation and scale-up in order to:

- 1) Synthesise existing documentation on the systemic bottlenecks emerging from country experience to date
- 2) Draw attention to on-going and potential solutions and innovations to address the bottlenecks
- 3) Consolidate emerging lessons and recommendations in order to inform next phases of the programme as well as contribute to the growing body of knowledge on implementation of iCCM programmes

METHODS

To date, a range of constraints have been documented by the CI/IHSS countries as part of annual programme reports, country technical support visits and during annual review meetings. In addition, UNICEF country offices undertook a quantitative and qualitative bottleneck analysis for iCCM in the preparation for the November 2010 annual review meeting in Addis Ababa. We reviewed and analyzed 18 annual reports, two midterm reports, 12 country visit reports, 6 power point presentations¹, and 13 additional programme related documents to identify the bottlenecks most frequently encountered by the countries. Subsequently we conducted key informant (KI) interviews (direct communication or via email) with UNICEF staff at Country, Regional and Headquarters offices to validate findings emerging from the desk review, and to provide more detail and context. Finally, based on the desk review and KI interviews, we compiled 7 case studies which highlight key findings arising from the analyses.²

FINDINGS

The results of the analysis identified bottlenecks which clustered into five key areas: 1) the deployment, motivation, supervision and retention of adequate numbers of community health workers as the backbone of iCCM; 2) maintaining reliable supply chains; 3) demand side barriers to utilisation; 4) weak monitoring and evaluation systems, and 5) the need for supportive government policies and engagement to achieve sustainable progress. These areas are presented in the following section, along with responses to these challenges that have arisen from the CI/IHSS countries.

¹ Bottleneck Analysis from 2010 CI Annual Review Meeting, Addis Ababa

² Relying solely on programme reports as the basis for analysis might limit the types of bottlenecks documented (e.g. some bottlenecks such as drug shortages may be more “visible” and easier to report, while others such as financial sustainability may not be as apparent). For this reason, the key informant interviews were used to probe for bottlenecks and responses that were not directly apparent in the report

1. THE DEPLOYMENT, SUPERVISION, MOTIVATION AND RETENTION OF COMMUNITY HEALTH WORKERS AS THE BACKBONE OF ICCM

1.1 DEPLOYMENT OF COMMUNITY HEALTH WORKERS

Bottleneck: During the planning and implementation stages of iCCM many CI/IHSS countries had to address the need for an expanded workforce to provide iCCM services. In particular, Malawi and Mozambique reported critical shortages of human resources (UNICEF 2008). Mozambique had previously developed a cadre of Agent Polivalente Elementar (APEs). However, due to attrition, few were still functioning in their roles (UNICEF 2010b).

Response: In Niger and Mali new cadres of salaried health workers were established (UNICEF 2010a). In Mozambique, this shortage was addressed with a new policy to revitalize the Agent Polivalente Elementar programme and to pay APEs to increase retention (UNICEF Mozambique 2010) as illustrated in **Case Study 1** below.

Case Study 1: Revitalization of the national CHW programme in Mozambique

Mozambique has been a pioneer in promoting community health, and a policy for CHWs was initially introduced in the 1970s, soon after the Alma Ata conference, to offer basic preventive and curative interventions to the most isolated communities through trained CHWs. However, beginning in the late 1980s, the CHW program began to receive diminishing support at district level, although existing CHWs continued to receive a monthly kit of medicines. As a result, the programme began to lose momentum, resulting in fragmentation, poor quality of care, lack of motivation and CHW attrition. However, following the release of a World Bank report on CHW effectiveness, in 2006 the Ministry of Health (MoH) of Mozambique took the initiative to develop a plan for the revitalization of CHWs in rural areas of the country. Beyond scale-up of iCCM in the most isolated areas of the country, this initiative also aimed to redefine the role of CHWs, based on previous experience. Under the technical leadership of the MoH and with the active participation of main stakeholders, bottlenecks were assessed and reviewed in order to shape the new CHW profile and role. This entailed major changes such as shifting from volunteerism to a subsidy base, broadening the role and responsibility of CHWs, and shifting the responsibility for supportive supervision to health facility supervisors. In the new approach the MoH also accepted a more structured partnership engagement which includes donors, NGOs and community councils. In March 2010, the MoH formally approved its 'Program for the Revitalization of Community Health Workers (CHWs)', with the challenging goal of training and deploying approximately 2,340 CHWs with the new curriculum in five years. The main objective of this national initiative is to increase the coverage of essential preventive and curative interventions in the country by 20%. The new cadre of CHWs will have a role in health promotion and prevention, linkages between communities and health services, and treatment of common, life threatening diseases such as malaria, pneumonia and diarrhoea. The target coverage ratio is 1 CHW per 500 to 2000 population.

Since approval of the plan, various departments of the MoH, UN agencies, donors, and NGOs have worked actively to define steps, methodologies, tools, manuals, and procedures to roll out the plan. In this process a new training curriculum, logistic and drug kit and monitoring tools have been created. The MoH, with technical and financial assistance from partners at both central and field level, continues in its effort to ensure maximum quality during all the phases of micro planning, testing, implementation and monitoring of this new programme. To date, the plan has been launched in 8 pilot districts for testing and CHWs are being trained in an additional 42 of the 144 districts of the country. It is hoped that by early 2012, more than 1,200 new CHWs will have been trained and deployed in all the provinces of Mozambique. This will represent a significant milestone over a relatively short timeframe, and be the result of a flexible and active partnership of donors, agencies, NGOs and communities, under the leadership of the MoH. *[Source: UNICEF Mozambique, Child Health and Nutrition Section]*

Bottleneck: In addition, problems of overextension and under-deployment of CHWs have been noted. In regards to the former, most CHWs across the CI/IHSS countries are performing iCCM in addition to numerous other health promotion and curative services, including providing vitamin A, de-worming, promoting breast feeding, distributing ITNs (See Table 5, page 19). A few countries have voiced concerns over the ability of CHWs to integrate their roles without becoming overstretched (UNICEF ESARO 2011; UNICEF 2010c). In regards to under-deployment, in some settings, providing uninterrupted service delivery has been a challenge. In Ethiopia, key informants noted that a significant number of health posts were closed while health extension workers (HEWs) were undertaking community visits in villages. Similarly, in Malawi, Health Surveillance Assistants (HSAs) officially work two days a week on service provision (with the remaining three days devoted to health promotion activities), resulting in a gap in service provision.³

Response: In some parts of Ethiopia, efforts are underway to strengthen continuity of service delivery at health posts using a rotation system of HEWs (in which one HEW remains at the health post while another provides support to households in communities).⁴ Moreover, the Ethiopian government has launched a new programme called the Health Development Army (HDA). Every five households are grouped together and led by a volunteer. The HDAs will focus on community mobilization and take on some of the promotive tasks of the HEW. This will reduce the burden on HEWs, allowing them to focus more on interventions that require skill levels.⁵

1.2 INADEQUATE SUPERVISION OF CHWS

Bottleneck: Once the cadres of CHWs were identified and trained, providing quality supervision became an important bottleneck. Countries reported challenges with identifying appropriate supervisors, ensuring transportation for supervisory visits, establishing the appropriate frequency and duration of visits, and securing documentation of visits. For example, the CCM Quality of Care Working Group found that in Malawi fewer than 40% of HSAs surveyed had received a supervision visit in the three months prior to the survey (UNICEF 2010b). Moreover, in most CI/IHSS countries the duration of the typical supervision visit is limited to approximately two hours during the course of one day due to the time required to travel to and from the supervision site. This short duration severely limits the breadth, depth and quality of supervisory visits. As a result, such visits generally do not include rapid qualitative or quantitative assessments by the supervisor/community health worker (nor do they include the views of beneficiaries served by the CHW), and this is a missed opportunity to improve monitoring of bottlenecks and their causes.⁶

Bottleneck: Another key challenge related to the quality of supervision was the profile of iCCM supervisors (e.g. in Malawi most of the supervisors are Environmental Health Officers with little or no training on iCCM). Moreover, it has been noted that in some settings, such as Malawi, intensified focus on iCCM may have had the unintended consequence of diverting attention and investments away from facility-based IMCI (integrated management of childhood illness) thus weakening the continuum of care between home and the first level health facility.⁷

Response: CI/IHSS countries are developing innovative solutions to improving supervision of CHWs. UNICEF is currently exploring the potential of integrating rapid assessment procedures (e.g. key informant interviews and transect walks) into the repertoire of methods and tools available for supervisors to apply

3 Key informant communication, UNICEF Regional Office, ESARO

4 Key informant communication, UNICEF Regional Office, ESARO

5 Key informant communication, Ethiopia Country Office

6 Key informant communication, UNICEF HQ

7 Key informant communication, Malawi Country Office

during their supervision visits with community health workers.⁸ In Malawi, a mentoring approach to supervision has been established, training senior HSAs as supervisors. In addition to increasing supervision, HSAs view this as an opportunity for career advancement (UNICEF Malawi 2010 and see **Case Study 2** below). In Ghana, drawing on well-functioning surveillance volunteers from the Guinea Worm program, some regions are using Zonal Coordinators to visit Community Based Agents (CBAs) monthly for supportive supervision and collection of reports (Ghana Trip report 2011 and see **Case Study 3** below). Both countries have noted the importance of motorbikes for transport to supervisory visits. In Niger, efforts are underway to integrate supervision across iCCM and the Expanded Programme on Immunization (EPI). In Ethiopia, the recently revitalized Primary Health Care Unit (PHCU) approach (in which one health center is responsible for five health posts), should improve overall support and supervision to the health posts.⁹ Finally, in Mozambique, supervisors are using the monthly visit of APEs to health centres (for routine reporting and collection of medicines) as an opportunity to conduct on the job training, with real or hypothetical cases.¹⁰

Case Study 2: Using Mentorship to improve Quality of Care in iCCM Services in Malawi

A Quality of Care Survey conducted in 2009 in Malawi revealed inadequate levels of overall supervision (40%) for iCCM. Supervision which included observation of a sick child being managed by Health Surveillance Assistants (HSAs) was even lower (14%) and this was seen to be one of the major gaps in assurance of quality of care among children being treated by CHWs. Reasons identified for this low level of supervision included: assignment of main iCCM supervisory responsibilities to district level staff; limited numbers of supervisors with multiple additional responsibilities in addition to iCCM; lack of transport and finances to support supervisor travel to remote service delivery points; lack of supervisors with clinical skills at community level; and poor communication leading to uncoordinated timing and overly brief supervisory visits. As a result, in Malawi, UNICEF, Ministry of Health and other development partners opted to decentralize supervision of CHWs to health workers based closer to the CHW, such as Environmental Health Assistants and Senior HSAs based in the catchment area. The new supervisor cadres were trained in iCCM to undertake regular supervision to HSAs offering iCCM services and to provide complementary supervision to that provided by health centre based supervisors.

However, realizing that this new supervisor cadre did not have appropriate clinical skills, UNICEF, Ministry of Health and partners introduced a mentorship programme in 2010 to ensure standardized skills development for clinical supervision. In this programme, clinical and nursing staff in health facilities are requested to keep an inventory of HSAs offering iCCM services and reports to the health facility at least quarterly for direct observation of their clinical skills. A mentorship checklist with a set of indicators was developed and is used by the mentors to systematically check HSA performance and quality of care (e.g. whether the HSA is able to establish rapport with the care giver, correctly identify the problem and make clinical and referral decisions). Mentoring contacts occur four times a year, identifies critical competency gaps and establishes close rapport between front line workers and their first referral level. The Ministry of Health and its partners regard such mentorship as a cost effective way of ensuring quality of HSA iCCM care through demonstrating good practices, providing timely and constructive feedback, and increasing self- confidence, motivation, and job satisfaction among HSAs. *[Source: UNICEF Malawi, Health and Nutrition Section. Quality of Care Provided to Sick Children by Health Surveillance Assistants in Malawi Report, 2009]*

⁸ Key informant communication, UNICEF HQ

⁹ Key informant communication, Ethiopia Country Office

¹⁰ Key informant communication, Mozambique Country Office

Case Study 3: Using Zonal Coordinators to strengthen iCCM supervision in Ghana

In the Northern Region of Ghana, where illiteracy rates are relatively high, especially among the female community volunteers, the Region has begun to deploy Zonal Coordinators to ensure better supervision and support Community Based Agents (CBAs) with capturing and reporting data. The Zonal Coordinators are each responsible for a zone consisting of an average of 10 - 20 communities. They are selected from among the more educated and literate volunteers (usually teachers or other professionals), and are trained on the basic package of iCCM as well as training on data management and supervision, in order to effectively support the CBAs. The use of Zonal Coordinators appears to be working well for most of the activities of community volunteers in the Northern Region, including Community-Based Disease Surveillance, Guinea Worm surveillance, pregnancy and EPI registration, vital registration of births and deaths, and data capture and collation for iCCM. Zonal Coordinators are generally provided with a means of transport (e.g. bicycle or motorcycle and fuel) to facilitate their movement, as well as modest payments during meetings and field activities. *[Source: UNICEF Ghana, Health and Nutrition Section]*

1.3 MOTIVATION AND RETENTION OF CHWS

Bottleneck: CI/IHSS countries also face challenges retaining and motivating trained CHWs. Ghana experienced a shortfall of Community Based Agents (CBAs) due to migration (UNICEF Ghana 2010), and many of the CBAs complained of lack of any sort of badge or uniform to properly identify themselves to members of the community as having been trained to provide treatment to children. Retention is especially a problem in rural and hard to reach areas in Malawi. A field visit noted that HSAs were living outside the communities that they were designated to serve, and were not present at their assigned village clinics for a reasonable amount of time each week. One reason for HSAs living outside these communities is due to lack of appropriate accommodation (UNICEF 2010c). Another reason cited for poor motivation and retention of CHWs is the lack of a longer-term career incentive and perspective. For example, during an assessment mission in Malawi, HSAs complained about the lack of a career path for them (e.g. the opportunity for additional training to become assistant nurses with increased responsibilities and profile).¹¹

Response: Village Health Committees in Malawi are taking leading roles in assisting HSAs in securing accommodation (UNICEF Malawi 2010). A solution has also been proposed to construct standardized structures that combine village clinics with CHW accommodations and the medical council is investigating how HSA training can be improved to permit certification of HSAs as a doorway for career advancement.

In the Northern Region of Ghana, the Ghana Health Service has implemented a standardized Incentive Package for the volunteer CBAs - this includes a payment of 5 Ghana Cedis as well as lunch and transportation costs when the CBA attends quarterly meetings at the health centre, and 10-20 Ghana Cedis for Zonal Coordinators.

2. MAINTAINING RELIABLE SUPPLY CHAINS

A second critical area where bottlenecks were identified relates to the ability to maintain a reliable supply chain to support the work of CHWs.

Bottleneck: Drug shortages were one of the most frequently reported bottlenecks faced by all six CI/IHSS

¹¹ Key informant communication. UNICEF Regional Office. ESARO

countries, and were evident during implementation and scale-up stages of iCCM. This is illustrated in Table 1 which shows any drug shortages reported by iCCM countries in the documents reviewed or highlighted from KI interviews.

TABLE 1. CI/IHSS COUNTRIES AND REPORTED DRUG SHORTAGES (SHORTAGE AT ANY TIME THROUGHOUT THE PAST YEAR)

	Anti-malarials	Antibiotics For Pneumonia	ORS	Zinc
Ethiopia			◆	◆
Ghana	◆		◆	
Malawi	◆			◆
Mali	◆	◆		◆
Mozambique	◆	◆		◆
Niger	◆	◆	◆	◆

In some instances implementation of iCCM was delayed due to drug shortages. For example, in Mozambique, an initial set of Agente Polivalente Elementar (APEs) were fully trained in iCCM but lacked kits with the essential drugs needed to begin providing curative services (UNICEF 2011). Similarly, Health Surveillance Assistants (HSAs) in Malawi were trained in the use of zinc for management of diarrhoea but were awaiting distribution of zinc supplies (UNICEF 2010b). Drug shortages not only delayed implementation, but countries also reported that stock outs affected demand for iCCM services, as well as morale and retention of CHWs (UNICEF Ghana 2011; UNICEF 2010b). While some stockouts at the CHW level were the result of countrywide shortages, they were also the result of inadequate funding, weak distribution systems, poor data, and insufficient forecasting processes (UNICEF 2011). It has been noted that although there may be adequate supplies of drugs and commodities at national, regional and district levels, these may often fail to reach health centres and CHWs. One possible explanation might be that where products such as rapid diagnostic tests (RDTs) and artemisinin combination therapies (ACTs) are provided for free (compared to the mark up for other drugs) there is a lack of timely ordering and effective distribution to the districts, health centres and CHWs.¹²

Response: In many cases, UNICEF has stepped in to supply essential iCCM drugs, in order to temporarily fill identified gaps, as illustrated in Table 2 below.

TABLE 2. DRUGS PROCURED BY UNICEF, PARTNERS AND/OR CIDA AT ANY TIME DURING THE CI/IHSS

	Anti-malarials	Antibiotics	ORS	Zinc
Ethiopia	◆ *	◆	◆	◆ **
Ghana	◆	◆	◆	◆
Malawi	◆	◆	◆	◆
Mali	◆	◆	◆	◆
Mozambique[#]	◆	◆	◆	◆
Niger	◆	◆	◆	◆

*Provided by Global Fund; ** Provided by World Bank; # Starting in 2012 in Mozambique, UNICEF and partners will take responsibility for procurement of CCM drugs, while the MoH is mobilizing funds

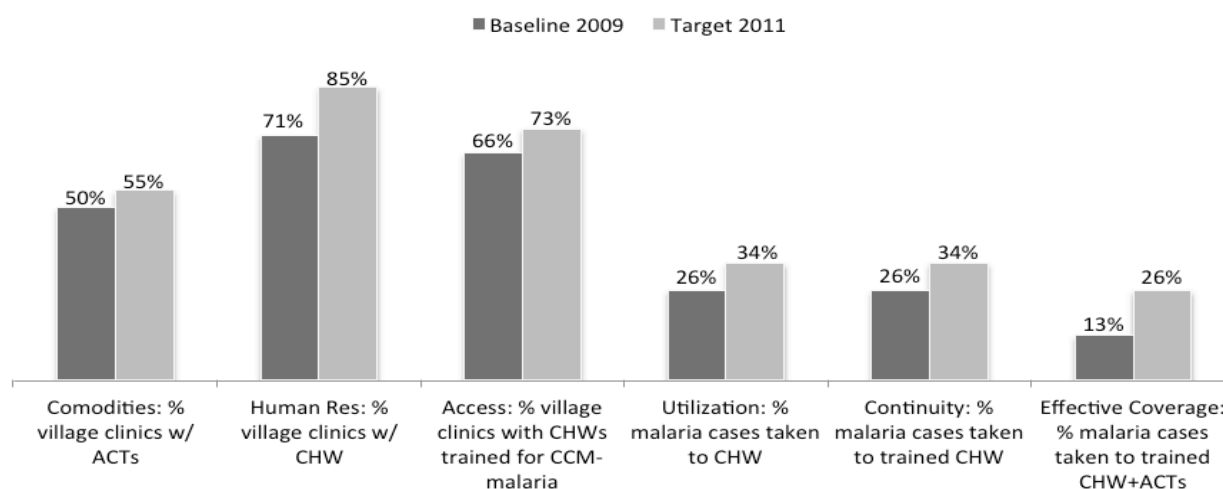
¹² Key informant communication. UNICEF WCARO Regional Office

Response: In addition to directly supplying drugs, UNICEF is supporting assessments of supply chain and procurement and distribution processes (UNICEF 2010b). John Snow International (JSI-SC4CCM) conducted a supply chain assessment in Ethiopia and Malawi and identified lack of product at re-supply stations, and lack of transportation for CHWs to and from re-supply stations as the two main bottlenecks. To address product availability at re-supply points they recommended developing a customer service oriented supply chain with a priority on availability of CHW supplies, improved commodity forecasting and planning, improved data visibility, and an incentive system to drive supply chain performance. To improve product availability at the CHW level, they recommended vouchers for bike maintenance, direct delivery with motorcycles to CHWs from supply stations using third parties, contingency plans for the rainy season, and decreasing resupplying frequency to every other month (JSI-SC4CCM ppt). In Ghana, the Regional Directorate for the Upper East Region has instituted a “Scheduled Delivery System” to provide a regular supply of essential medicines directly from the Regional level to sub-district facilities and Community Health Planning and Services (CHPS compounds). Even with these responses, however, it is important to recognize that the efficiency of iCCM supply chains will still be dependent on the overall strength and capacity of the government supply, logistic, information and management systems.¹³

3. DEMAND SIDE BARRIERS TO UTILISATION

Although the first two areas relate to the “supply” of iCCM services to communities, another critical bottleneck that was identified relates to “demand” side barriers to utilisation of services, including financial barriers, care seeking behavior and physical barriers. All six CI/IHSS countries reported low utilisation of iCCM services as a significant problem, ranging from about 10% for care-seeking through CBAs in Ghana to about 50% in Ethiopia. The graph below from a bottleneck analysis performed by the UNICEF Malawi country office demonstrates that, in 2009, despite the availability of CHWs trained in iCCM of malaria (66%) and clinics supplied with ACTs (50%) only 26% of malaria cases were actually taken to a trained CHW, and even fewer treated with ACTs (13%). A similar trend was found for pneumonia and diarrhoea in Malawi and for utilisation across other countries as well. For example in Ethiopia only 50% of acute respiratory infection (ARI) cases are seen by HEWs, and in Ghana only 10% were accessing CBAs for iCCM services. As described below, financial barriers, social barriers, and care seeking behaviour all contributed to this underutilisation.

FIGURE 1. BOTTLENECK ANALYSIS IN MALAWI



13 Key informant communication. Ethiopia Country Office

Bottleneck: Financial barriers to care were one driver of low utilisation experienced by CI/IHSS countries. The most common financial barrier found in our review was user fees for CHW-provided care as is the case in Ghana where the Ghana Health Service allows a small mark-up on drugs provided by community based agents (CBAs). For example, in districts in Ghana where the CBAs who provide iCCM charge user fees for their services, patients may travel to health centres for their care instead of using the CBAs (UNICEF Ghana 2010). Indirect costs such as travel and time have also been reported as major financial barriers to utilisation. Prior to and during scale-up of iCCM in Niger and Mali, for example, indirect costs as a result of lack of geographic access for people living in villages where a community health worker trained to provide iCCM did not reside, meant travelling several kilometers and opportunity costs in terms of time for caregivers.

Response: In some settings, the elimination of user fees has contributed significantly to increases in utilisation, particularly when effected in combination with increasing geographic access to staff trained in iCCM and supplied with essential commodities. For example, in Niger after user fees for curative child services were removed, utilisation of such services at health centres doubled or tripled in some areas (UNICEF 2008 and Ministère de la Santé Publique. Annuaire des Statistiques Sanitaires du Niger 2005-2008). Over time however, demand increasingly met the limit of supply within the catchment areas of health centers. Additional gains in utilisation became difficult to achieve and the rate of improvement returned to pre-“free” service levels. Further gains would have been difficult without addressing other bottlenecks such as geographic access and socio-cultural barriers. As iCCM was scaled up in Niger through community health workers at village health huts, geographic access was increased thus reducing indirect costs. The additional supply met penned up demand in rural areas on the margins of or on the outside of the catchment areas of health centers, and utilisation increased by over 30 percentage points between 2006 and 2010 (DHS, 2006 ; and Ministère de Santé Publique and INS, Enquête Survie des Enfants des enfants de 0 à 59 mois et Mortalité : Rapport provisoire du Volet Survie, 2010). Mali has enacted a similar policy of free curative care for malaria among children under five years of age. However, while the elimination of user fees may have contributed to increased utilisation, the issue of sustainability remains. In Mali and Niger, the “free services” have essentially been paid for by a combination of donor assistance (for drugs through CIDA and UNICEF and even salaries, the latter in Niger through the World Bank as part of the relief for Heavily Indebted Countries) and cost recovery from fees for other services. These systems have yet to be proven sustainable.¹⁴ The Ghana Health System is currently looking at ways to link CBA provided care to the Health Insurance Scheme as a way to address financial barriers and sustainability issues.¹⁵

Response: By design, community case management reduces indirect costs (e.g. travel and time) incurred by populations living beyond the reach of health center staff by training, deploying and equipping community health workers to villages without access to basic curative services for children under five. To address the issue of indirect costs incurred by populations living in villages where community health workers do not reside, several CI/IHSS countries currently use scheduled outreach visits by community health workers to reach these “satellite” villages. While not addressing the need for access to round-the-clock curative care, the outreach strategy has to some degree diminished indirect costs as a financial barrier to utilisation for these populations.¹⁶

Bottleneck: Another frequently encountered demand-side barrier was care seeking behaviour. Anthropologic research undertaken in Mali demonstrated that visiting a health centre is often seen as a last resort among competing healthcare options, due to prevailing social norms which reinforce the preference of seeking care from traditional health providers, and due to obstacles presented by cost and by distance

¹⁴ Key informant interviews during UNICEF Missions to Mali and Niger (November-December 2011).

¹⁵ Key informant communication, UNICEF HQ

¹⁶ Key informant communication, UNICEF HQ

(UNICEF 2010a) – see **Case Study 4** below. Even when services are utilized, delays in care seeking are common. A joint UNICEF/CIDA mission to Mali in November 2011 found that mothers often delayed seeking care for their sick child, waiting 2-3 days when their child had a fever before seeking care from a community health worker.¹⁷

Case Study 4: Using Local Research to Design Innovative Communication Strategies for ICCM in Mali

As part of the Catalytic Initiative, UNICEF Mali commissioned an anthropological study in order to understand belief systems in relation to health behavioural practices (key family practices), and then apply the lessons learned for planning and implementing activities. The behaviours explored were pregnancy, childbirth, nutrition and care of the sick child.

The 2009 study was carried out in 6 Regions covering 15 different ethnic groups. It targeted parents and grandparents of children under 5 years, key community players (leaders and civil society organisation members), and all health and health information providers, including trained health workers, relais, traditional healers and birth attendants and witch doctors. Findings showed that key family practices as seen by the communities differ significantly from those supported by scientific evidence and which are being implemented by the health system and partners. The study showed the importance of elders especially women, traditional practitioners and of the Relais Communautaires for providing sound health information. Health seeking behaviour outside the family often involved visiting a succession of traditional health providers depending on the classification and perceived cause and severity of the illness. Visiting the health centre was often a last resort, and was also influenced by cost and distance. Moreover, health workers rarely engaged with traditional health beliefs or practices, leading to little behaviour change.

In response to these findings, in March 2010, the Ministry of Health, Ministry of Communication and New Technologies (supported by UNICEF Mali) launched a multimedia campaign targeting 4 key lifesaving behaviours (including exclusive breast feeding for 6 months; sleeping under ITNs, hand washing with soap, and ORS/zinc for children with diarrhoea).

The messengers are grandparents (who bring legitimacy to the new messages through their status in communities), as well as testimony from community members who have put the messages into practice. The messages will be transmitted by a variety of channels, radio and television spots, stickers, posters, mobile phone messages and the production of postage stamps, and coverage is expected to reach 75,000 homes. The same messages are being included in relais training, to ensure consistency and reinforcement across a range of sources. *[Source: UNICEF Mali, Health Section]*

In relation to care seeking behavior, a review of iCCM utilisation in Ghana found that CBAs were treating significantly fewer cases of diarrhoea than was expected. This was attributed to low demand for ORS from the community (UNICEF Ghana, 2011). It has been noted that while many countries are implementing behavior change communication strategies, most still rely on conventional media channels (radio, television, newspapers) which are often not accessible to the target communities in hard to reach areas.¹⁸ Actual and perceived quality of care can also affect demand for iCCM services. This was highlighted in a trip report from Ghana where one respondent noted, “many patients would rather take a day to travel to a health facility

¹⁷ Key informant communication, UNICEF HQ

¹⁸ Key informant communication, Malawi CO

and receive free treatment by a uniformed health professional than pay a token amount to be treated by their neighbour” (UNICEF Ghana 2011).

Response. Many countries are implementing Communication for Development (C4D) activities. For example, Ethiopia, Malawi, and Niger have developed radio programs (Addis ppt), Mozambique and Malawi are pursuing efforts that “focus on bringing knowledge of CCM to community leaders” (UNICEF 2011). However, much of the messaging described does not focus on shifting care seeking behavior or iCCM but on health promotion behaviors and practices such as exclusive breastfeeding (UNICEF 2011). A radio programme being developed in Ethiopia is an exception to this trend and aims to serve as a link between programme managers and Health Extension Workers (HEWs) (UNICEF 2008).

Response. UNICEF is developing qualitative and quantitative methods and tools to help CI/IHSS countries to better understand, monitor and take corrective action on demand side barriers. For example, rapid quantitative methods such as lot quality assurance sampling (LQAS) surveys are being adapted to quantify demand side bottlenecks and qualitative methods (e.g. key informant interviews, transect walks, focus group discussions) are being adapted to explore the underlying causes for demand side bottlenecks. Additionally, UNICEF is exploring the possibility of integrating these methods within existing monitoring systems and management processes (e.g. integration of key informant interviews with mothers and community transect walks into the repertoire of methods and tools used by supervisors of community health workers during their regularly scheduled supervision visits).¹⁹

4. WEAK MONITORING AND EVALUATION SYSTEMS

Weak monitoring and evaluation systems, in the context of broader problems relating to health management information systems, were also identified as a key constraint in the CI/IHSS countries.

Bottleneck: All six countries reported challenges in conducting monitoring and evaluation of iCCM. Bottlenecks were present at health post, sub-district, regional, and national levels and involved both data collection systems and human resource capacity.

Response: Countries are addressing this issue by streamlining and simplifying data collection and reporting tools (UNICEF 2011). Reviews in Ghana and Niger found that organizing the data into reports that can be used by supervisors and managers to aid in programme implementation and improvement have improved data quality and utility (UNICEF 2010a, UNICEF Ghana 2011). In Ethiopia, all partners are using the same monitoring and evaluation (M&E) framework, tools and database. Ongoing and planned research will seek to better understand the determinants of low utilisation of these tools and approaches.²⁰ The experience from Ghana is highlighted in **Case Study 5** below.

¹⁹ Key informant communication, UNICEF HQ

²⁰ Key informant communication, UNICEF ESARO Regional Office

Case Study 5: Improving Monitoring and Evaluation of iCCM in Ghana

Recognizing the importance of robust data to guide iCCM strengthening efforts, UNICEF and the Ghana Health Service (GHS) undertook an assessment of iCCM data systems and service delivery bottlenecks in Ghana in 2010. They identified poor data capture at the community level as the weakest point in the iCCM data system. A large proportion of treatments were never recorded because semi-literate volunteers had difficulty using the complicated new registers developed for iCCM (previous registers were simpler and included pictorial aids). The review identified drug stock-outs at the district and community level as secondary to confusion over responsibility for drug procurement and distribution. Additionally they attributed poor demand for community based services to inconsistent service, confusing pricing, and mistrust of volunteers' abilities. Finally, they found that iCCM managers had been unable to identify these problems because the data being collected focused on overall coverage of services (number of children treated) rather than on factors that influence coverage (availability of supplies, supervision statistics, quality measures). To address these issues, a modified data system was designed with an emphasis on streamlining processes. Volunteers were encouraged to enlist the help of community members with higher literacy skills to assist with using the treatment registers. New indicators were added to better capture trends in logistics and volunteer supervision that could be used by managers to identify and address these bottlenecks. Multidisciplinary monitoring teams were assembled and trained in supply management. These teams engaged in community based problem solving using data from the review.

In the months following the assessment, there was improved access to iCCM services, better data reporting, and increased engagement of programme managers and GHS leaders. This case study highlights the importance of simplified data systems, and collecting and distributing data that can be used by managers to guide programme decisions. *[Source: UNICEF Ghana, Child Survival and Development Section. Lessons Learned Document. May 13, 2011.]*



NURSE WITH A PATIENT AT A CENTRE DE SANTÉ INTÉGRÉE IN SARKIN YAMMA, NIGER, A HEALTH CENTER AND REFERRAL RESOURCE FOR COMMUNITY HEALTH WORKERS

Bottleneck: Data on utilisation of iCCM interventions (numbers of children under five treated) is essential to inform programme management decisions, programme evaluation efforts and to fulfill UNICEF's reporting requirement to CIDA. Existing government health information systems typically do not collect and report data on outputs for iCCM such as utilisation. Where systems do include utilisation of iCCM, the iCCM data are usually aggregated with health facility data on IMCI and are not reported separately, making it impossible to distinguish performance of iCCM from IMCI at all levels. Additionally, utilisation is not typically disaggregated by gender, precluding gender-based analysis and action. In some cases health information systems do not report on utilisation (numbers treated) but rather numbers of consultations (children seen but not necessarily treated).²¹

Response: Where existing health information systems did not previously include data on utilisation of iCCM, UNICEF has supported governments to develop mechanisms and tools to collect and report these data disaggregated from health facility data, as part of the health information system (e.g. in Ethiopia, Ghana, and Malawi) for all levels of the health system (e.g. district, regional and national). In Mali and Niger, the health information systems include utilisation of iCCM however the data are aggregated with health facility data. UNICEF is supporting Mali and Niger to refine their mechanisms and tools in order to report these data separate from health facilities. In Mozambique the roll-out of the new APE programme has allowed the opportunity for UNICEF to support MoH in the design of a new monitoring framework for the national iCCM programme to ensure information on key indicators is captured. Further support is needed to encourage governments to collect and report data on utilisation of iCCM disaggregated by gender.

Bottleneck: As with data on utilisation of iCCM, data on processes and outputs of iCCM are essential to collect and report, however existing government health information systems typically do not do so.

Response: UNICEF and partners of the CCM Task Force have supported the development of a compendium of 50 standard iCCM indicators, cutting across inputs, process, outputs, outcomes and impact. The subset of these 50 indicators which deal with processes and outputs have potential usefulness for inclusion in Health Management Information System (HMIS). Additionally UNICEF and Johns Hopkins University have proposed a smaller set of process and output indicators, collectively called "implementation strength indicators", focusing on training and deployment of community health workers, supply chain management and supportive supervision which all UNICEF Country Offices implementing the CI/IHSS programme have agreed to collect and report. UNICEF supported development of methods and tools for collecting and reporting these data in Ethiopia, Ghana and Malawi and these countries are currently doing so quarterly. UNICEF is supporting Mali and Niger to develop mechanisms and tools to do this as well. In addition, to address limited human resource capacity, UNICEF has funded M&E positions in WCARO and ESARO and recruited technical assistance to country offices (UNICEF 2011).

Bottleneck: The quality of data on iCCM (e.g. utilisation and implementation strength indicators) collected through existing government health information systems (or parallel systems) is not well understood as it has not been evaluated in all CI/IHSS countries, nor are there mechanisms for data quality checks and/or triangulation built into or supporting these systems.²²

Response: UNICEF is supporting the development of data quality /audit systems to be integrated within government and/or parallel systems collecting iCCM data and is supporting governments to develop mechanisms for triangulation. For example, UNICEF is supporting Mali and Niger to develop mechanisms for data triangulation, comparing data from temporary parallel systems with data from rapid household

²¹ Key informant communication, UNICEF HQ

²² Key informant communication, UNICEF HQ

surveys using Lot Quality Assurance Sampling. Data from LQAS household surveys will also complement HMIS or parallel systems by collecting critical data on supply and demand bottlenecks for community-based interventions, which the supply/facility-centric HMIS and parallel systems do not typically collect.

Bottleneck: Monitoring the contribution of the private sector (formal and informal) to supply and demand of iCCM is essential to inform programme policy and management decisions and programme evaluation, particularly in contexts where the private sector plays a major role. Existing government and parallel systems in all CI/IHSS countries do not include mechanisms or tools to collect and report on information from the private sector related to iCCM.²³

Response: UNICEF is developing methods and tools (e.g. purposive sampling and snowball sampling in combination with light survey tools and/or checklists, key informant interviews and transect walks) for rapid assessment of the private sector in terms of supply and demand of services relevant to iCCM.

Bottleneck: Use of data on iCCM for triggering corrective management response is weak in all CI/IHSS countries because the monitoring systems are either new or not fully developed or integrated into the system for management response. Additionally, the mechanisms for management response are often weak.²⁴

Response: UNICEF is developing a process for decentralized health system strengthening which includes, as one component, the improved use of data for corrective management decisions. Guidelines and a toolkit have been developed for this purpose and are currently being field tested. In Niger, UNICEF has supported the development of monitoring mechanisms and tools which are linked to microplanning at district and sub-district levels. Monitoring at the lowest, most peripheral levels of the health system (e.g. Integrated Health Centers and Health Posts - the latter being the workspace of the community health worker) is currently being coupled with specific microplans at these levels. This effort is expected to improve management for results by linking localized situation analysis and continuous monitoring to decentralized management response. (See **Case Study 6** below)



COMMUNITY HEALTH WORKERS IN THE DISTRICT OF SELENGUE, MALI PROMOTE THE USE OF PRE-PACKAGED REDUCED OSMOLARITY ORAL REHYDRATION SALTS (ORS) TO MANAGE DIARRHOEA

²³ Key informant communication, UNICEF HQ

²⁴ Key informant communication, UNICEF HQ

Case Study 6: Improving Monitoring of iCCM in Niger

Since the launch of the Catalytic Initiative in 2008, the Government of Niger, with the support of UNICEF, has developed a suite of methodologies and tools to improve monitoring of its child survival programmes, including iCCM (PCIME communautaire). The suite of methodologies includes the following:

- 1) Annual rapid SMART surveys* to monitor coverage of child survival interventions, including care seeking behavior for fever, ARI symptoms and diarrhoea: Following the food and nutritional crises of 2005, the Ministry of Health (MoH) and the National Institute of Statistics (INS) began implementing annual rapid SMART surveys to monitor child nutritional status and child mortality. In 2008 the MoH and INS introduced questions to derive diarrhoea prevalence and care seeking and treatment indicators. In 2009 a full array of child survival subjects were covered, including care seeking for fever and ARI. In 2009 and 2010 the SMART questionnaires have included questions on the place of health care seeking for fever, ARI symptoms and diarrhoea. This allows for analyses by where the respondent sought care (e.g. at a public sector iCCM provider, public sector IMCI provider, private provider or traditional health provider among others). This is clearly an advantage for monitoring coverage separately for CCM and IMCI, and provides insight into the performance of the public health system vis-à-vis the private sector and traditional health providers.
- 2) Collection of iCCM utilisation data through administrative sources coupled with periodic analysis: With the national scale-up of iCCM in 2008, the MoH developed registers and monthly reporting forms for agents de santé communautaires to complete and report on their performance to their supervisor at the Centre de Santé Intégrée. Data from the agents de santé communautaires' monthly reports are aggregated with IMCI data at the Centre de Santé Intégrée and reported to district, regional and national levels. UNICEF is supporting the Ministry of Health to modify the monthly reports from the Centre de Santé Intégrée to allow for disaggregated reporting of data for iCCM, IMCI and CCM+IMCI. The supervisor at the Centre de Santé Intégrée convenes monthly meetings with all of the agents de santé communautaires in her catchment area in order to review performance, plan corrective action, and set goals for the following month.
- 3) Decentralized bottleneck analysis and microplanning using data from (2) above: In 2011 the MoH developed tools for bottleneck analysis based on the Tanahashi model to be used at sub-district levels in the Centres de Santé Intégrées. Separate bottleneck analysis for iCCM and IMCI will be possible based on data from the agents de santé communautaires and facility based IMCI data. The MOH has also developed microplanning tools currently being used at each Centre de Santé Intégrée. Supervisors at these health centers convene annual meetings with all agents de santé communautaires and relais communautaires to develop microplans for their catchment area. The microplanning process includes the data collected monthly by the agents de santé communautaires, relais communautaires (community health volunteers who promote key family practices and total community led sanitation) and facility IMCI data. In future these sub-district microplans will incorporate information from bottleneck analyses for iCCM and IMCI. [Source: UNICEF HQ/WCARO Mission to Niger, November 2011]

** The SMART rapid survey methodology was developed between 2004-2005 by a core expert panel from CDC, universities, NGOs, UN agencies (notably UNICEF) with support from donors (CIDA and USAID). The SMART methodology employed in Niger involves two stage cluster sampling (see http://www.smartindicators.org/SMART_Protocol_01-27-05.pdf, last accessed 01 December 2011).*

Bottleneck: All CI/IHSS countries have relied on large-scale and infrequent surveys (e.g. Demographic and Health Survey (DHS) and Multiple Indicator Cluster Survey (MICS)) for programme monitoring and evaluation purposes. While these large-scale national surveys every three to five years are very useful for periodic national health sector evaluation, high level planning and policy making, the time and resources needed to conduct these surveys limits the feasible frequency of data collection and restricts the level of representativeness to very high levels (e.g. regional/provincial, national). These factors limit the utility of large-scale surveys for more frequent, “real-time”, and decentralized (e.g. district and sub-district) programme monitoring.²⁵

Response: UNICEF is supporting CI/IHSS countries to explore complementary methods, including SMART household surveys (e.g. in Niger) household surveys using Lot Quality Assurance Sampling at district and sub-district levels (e.g. in Mali and Niger) in order to improve the feasibility of more frequent and/or more decentralized programme monitoring. In 2012 UNICEF plans to pilot platforms that allow real-time monitoring using short message service (SMS) and crowdsourcing data.

Bottleneck: Existing monitoring systems and processes in all CI/IHSS countries do not formally include qualitative methods to explore causes of supply and demand side bottlenecks. As a result, analysis remains heavily fixated on identification of bottlenecks while analysis of the causes of bottlenecks is typically weak.²⁶

Response: UNICEF is developing a toolkit of qualitative methods, tools and rapid assessment procedures (e.g. key informant interviews, transect walks, focus group discussions etc.) which may be adapted and applied in CI/IHSS countries to improve analysis of the causes of supply and demand side bottlenecks.

5. THE NEED FOR SUPPORTIVE GOVERNMENT POLICIES AND ENGAGEMENT TO ACHIEVE SUSTAINABLE PROGRESS

Finally, the need for supportive government engagement - including supportive policies and advocacy for iCCM, and alignment of iCCM with other national priorities - was identified as a critical issue to support the scale-up and longer-term sustainability of iCCM. This echoes findings from the 2010 UNICEF CCM survey, in which country offices across Africa reported on the status of national CCM policy and implementation. Table 3 below lists the CI/IHSS countries and their policies for CCM as reported in the survey. The study found that supportive policies for CCM were an important factor for CCM implementation and scale up, though the existence of a policy alone was “necessary, but not sufficient” (George A et al, 2011).

TABLE 3. POLICIES AND CCM IMPLEMENTATION IN CI/IHSS COUNTRIES AS OF DECEMBER 2011 (UPDATED THROUGH KI INTERVIEWS WITH UNICEF COUNTRY OFFICES)

	Diarrhea				Malaria				Pneumonia			
	CCM and CHW Policy	Any CCM Implementation	MoH Implementation	MoH Implementation at Scale	CCM and CHW Policy	Any CCM Implementation	MoH Implementation	MoH Implementation at Scale	CCM and CHW Policy	Any CCM Implementation	MoH Implementation	MoH Implementation at Scale
Ethiopia	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ghana	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗
Malawi	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mali	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mozambique	✓	✓	✓	✗	✓	✓	✓	✗	✓	✓	✓	
Niger	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

²⁵ Key informant communication, UNICEF HQ

²⁶ Key informant communication, UNICEF HQ

Bottleneck: The support of government has been emphasized as a critical factor for successful implementation and scale up iCCM - and conversely, lack of supportive policies for iCCM can be a significant bottleneck. Mali is one of the CI/IHSS countries that experienced difficulty in establishing iCCM policy, and this significantly delayed implementation and scale-up (UNICEF Mali 2010). Mozambique also reported challenges in national policy development (UNICEF 2011). In addition to broad programme strategies, many countries also needed to develop specific new policies for drug availability and delivery. In Ethiopia, the Federal Ministry of Health approved a new policy that expanded HEWs role to include treating pneumonia in 2009. Previously, HEWs provided CCM of malaria, diarrhoea, and severe acute malnutrition (UNICEF 2011). In Malawi, government ministries deregulated Coartem for use by HSAs to treat malaria, and approved the use of zinc for the treatment of diarrhoea (UNICEF 2011). In 2011 the Mozambique MoH authorized the use of amoxicillin for the treatment of pneumonia, replacing penicillin (Mozambique Trip report 2011). In Ghana, a revised child health policy and strategy allowed for implementation of zinc in the management of diarrhoea and antibiotics for acute respiratory infections in 2009 (UNICEF Ghana 2010).

Response: One of the keys to overcoming drug and treatment policy bottlenecks highlighted by a number of countries was the availability of a strong scientific evidence base for policy development. Mali and Ethiopia emphasized the importance of research in expanding the role of CHWs to include treating pneumonia (Joint HQ-WCARO Mission to Mali 2011). In Mali, UNICEF and the Ministry of Health commissioned a study of the Agents de Sante Communautaire (ASC) in managing pneumonia at the community level. Results demonstrated that ASCs “with varying levels of education and mothers with low levels of literacy were able to recognize the signs of pneumonia, and select the correct treatment of the correct duration”. Based on these findings, the MoH agreed to implementation of iCCM treatment of pneumonia by the ASCs, which they had previously been reluctant to do (UNICEF 2010a). The experience of Ethiopia is highlighted in **Case Study 7** below.

Case Study 7: The Process of CCM Policy Change in Ethiopia

The decision by the Ethiopian MoH in 2009 to allow Health Extension Workers (HEW) to provide CCM pneumonia was the result of a complex policy development process. Despite international and local evidence demonstrating the feasibility and effectiveness of CCM of pneumonia, the MoH was hesitant to adopt the programme. A number of factors eventually led to approval of the policy. In October 2009 a group of 25 Ethiopian policy makers visited the Society of Education, Action and Research in Community Health (SEARCH) based in India to study their home based newborn care programme. During this visit they also observed and discussed CCM pneumonia. This trip has been regarded as the tipping point for policy breakthrough on CCM pneumonia. Previously, CCM pneumonia had the strong support of a multitude of stakeholders including the endorsement of the Ethiopia Pediatric Society, but these proponents were not engaged in the local decision making process. Following the visit to India with SEARCH, a critical mass of supporters among federal and regional policy makers and programme managers emerged. Additionally, the appointment of a new director of Health Promotion and Disease Prevention opened the door for policy change. The decision to introduce CCM pneumonia was also influenced by pressure to meet MDG 4. Use of the Lives Saved Tool (LiST) demonstrated that introduction of CCM pneumonia would help Ethiopia reach this goal.

One of the barriers to the policy approval was the government’s concern that HEWs would abandon their role in providing preventive health services once they began providing diagnosis and treatment. To address this concern the government decided to first scale-up the provision of preventive health interventions by HEWs and then introduce CCM pneumonia. Finally, implementation of CCM pneumonia was linked to the introduction of pneumococcal vaccination.

The process of approving CCM pneumonia in Ethiopia demonstrates the multifactorial nature of the policy process and the importance of understanding the local context in addition to using scientific evidence and other stakeholders to take advantage of windows of opportunity to make policy changes. [Source: The Federal Ministry of Health, UNICEF Ethiopia. May 2010. Case Study. CCM Pneumonia and MgSO₄ policy breakthrough in Ethiopia.]

Response: In addition, experience in Mali and Ghana has shown that, in line with the Paris Declaration, the Health Sector SWAp and the Compact (Mali), sustainable iCCM interventions depend on negotiation and advocacy with governments to promote their ownership of such strategies. Although this takes time, it has begun to yield results. For example, in Ghana, the CI/IHSS is entirely integrated into the High Impact Rapid Delivery (HIRD) strategy for the three Northern, poorest regions. In Mali, the government approved the national “Guide des Soins Essentiels dans la Communauté” and also created a new category of remunerated community health workers that will provide curative services closer to the communities as well as screening, referral and follow up of children with malnutrition.²⁷ Similarly, reports from Ethiopia indicate that strong scientific evidence alone is not always sufficient to drive policy change. Intense and sustained advocacy on the part of stakeholders (CI/IHSS, UNICEF, Ethiopian Pediatric Society) was required to gain approval for policies that allow HEWs to treat pneumonia with antibiotics (UNICEF Ethiopia 2010). And in Mozambique, sustained advocacy was undertaken, leading to the incorporation of amoxicillin, zinc, and ACTs in drug kits as well as the introduction of CCM monitoring into the HMIS. The advocacy for drug policy change targeted both MoH and the pharmaceutical regulatory body (CCTF), who was concerned about “indiscriminate” use of antibiotics and possible threats to treatment capacity at referral levels.²⁸

Recognizing the importance of such advocacy efforts, UNICEF has recently contracted a professional documentary film maker to undertake video and photographic documentation of iCCM in Mali and Niger for advocacy purposes.²⁹

Bottleneck: A few countries reported challenges aligning iCCM with other national priorities. For example, in Ghana National Immunization Days for polio eradication delayed training of CBAs (UNICEF Ghana 2010). Ethiopia noted that competing priorities at all levels of the health system limited the speed and volume of iCCM activities (UNICEF 2011). Mozambique described bottlenecks in the distribution of financial resources to iCCM through the MoH to the provinces (UNICEF Mozambique 2010).

Response: In Mozambique UNICEF is advocating for proper allocation of funds in priority areas, such as Maternal and Child Health, and iCCM through the Sector Wide Approach group, and using the Reaching Every District approach as a platform to address priority health problems for poor and hard to reach districts.³⁰



COMMUNITY HEALTH WORKER IN VILLAGE OF TIEGUECOURANI, MALI

27 Key informant communication, UNICEF WCARO Regional Office

28 Key informant communication, Mozambique Country Office

29 Key informant communication, UNICEF HQ

30 Key informant communication, Mozambique Country Office

DISCUSSION

There have been few systematic reviews of CHW programmes to date, and those that have been undertaken have been hampered by the limited number of published studies on the subject. However, such reviews have documented many similar bottlenecks to those identified in this paper, including inadequate CHW supervision, training, quality of care and retention. For example, a recent review of community health worker programmes noted that several trials of such programmes have shown substantial reductions in child mortality, particularly through case management of sick children (Haines A et al, 2007). However, echoing lessons from the CI/IHSS experience, the review also noted that community health workers are not a panacea for weak health systems - and to be effective, require well defined tasks, adequate remuneration, training, supervision, and the active involvement of the communities in which they work. The authors concluded that the introduction of large-scale programmes for community health workers requires evaluation to document the impact on child survival and cost effectiveness and to elucidate factors associated with success and sustainability.

A recent Cochrane Review assessing lay health worker interventions for primary and community level provision of MCH care and management of infectious diseases found insufficient evidence to draw conclusions regarding their effectiveness, or to identify specific training or intervention strategies likely to be most effective for health workers (Lewin S et al, 2010). Similarly, a 2005 systematic review of effectiveness of interventions to improve healthcare worker performance in low and middle income countries identified weak health worker performance as a widespread problem. The review suggested that simple dissemination of written guidelines is often ineffective, that supervision and audit with feedback is generally effective, and that multifaceted interventions might be more effective than single interventions. In a recent update to the review it was found that, although interventions such as supervision, training and provision of job aids did improve performance of health care workers, the effect sizes of the individual interventions was quite small – suggesting that multiple interventions would be necessary to get significant impact. (Rowe A et al, 2005). Taken together, these findings highlight the urgent need for greater innovation and implementation research in these areas.

Emerging experience from the CI/IHSS programme has highlighted the importance of supportive policies, political and financial support, and government ownership in enabling the scale up of iCCM programmes. These findings have been echoed in other settings, with important implications for sustaining longer term impacts of CHW programmes. A 2011 systematic review of CHW programmes in sub-Saharan Africa found that national programmes were often associated with high rates of CHW attrition, and it was uncertain whether impacts (generally measured within two years of the initiation of the intervention), would be sustained over longer periods. One CHW programme from The Gambia, which had a considerably longer follow-up period of 14 years, showed that the 33% reduction in child mortality all occurred during the initial period of greatest investment in CHWs. After this period there was a decline in political and financial support for the programme, and no significant impact was measured subsequently (Christopher J et al, 2011). These findings reinforce the importance of ensuring that sustainable systems that are aligned with government systems are strengthened and supported as the CI/IHSS programme moves forward.

Hanson et. al have outlined a conceptual framework for identifying constraints to improving access to priority health interventions at five progressive levels (Hanson 2003): I) Community and household level (lack of demand, physical, financial and social barriers to use of effective interventions); II) Health services delivery level (shortage and distribution of appropriately qualified staff; weak programme management and supervision; inadequate drugs and medical supplies); III) Health sector policy and strategic management level (weak and overly centralized systems for planning and management; lack of inter-sectoral action and partnership; weak incentives; IV) Cross-sectoral public policies (centralized management systems,

civil service reforms, remuneration; poor availability of communication and transport infrastructure); and V) Environmental and contextual characteristics (governance and overall policy framework; physical environment). They have noted that because strengthening health systems is critical to increasing coverage of priority health interventions in poor countries, there are likely to be a concentration of bottlenecks operating at Levels I, II, and III in these settings – and that these lower level constraints are more likely to be amenable to improvement over the short to medium term through additional resources and programme inputs (Hanson 2003). It is interesting to note that applying the Hanson framework to analyse implementation experiences arising from the CI/IHSS programme, the common bottlenecks faced by countries in the design, implementation, and scale-up of iCCM fall predominantly in the first three constraint levels of Hanson’s framework (see table 4 below).

TABLE 4. MAIN BOTTLENECKS IDENTIFIED IN CI/IHSS COUNTRIES ACCORDING TO LEVEL

Level of Bottlenecks*	Main bottlenecks identified in CI/IHSS countries			
I. Community & household	Financial barriers	Care seeking behaviour and physical barriers		
II. Health services delivery	Supply chain	Deployment of CHWs	Supervision of CHWs	Motivation and retention of CHWs
III. Health sector policy & strategic management	Existence of supportive policies for iCCM	M&E including HMIS		
IV. Cross-sectoral public policies	Aligning iCCM with other national priorities			
V. Environmental & contextual	Government instability			

* From Hanson et al. framework: Constraints to improving access to priority health interventions by level (Hanson, 2003)

CONCLUSIONS AND RECOMMENDATIONS

We conclude by summarizing **key lessons and emerging recommendations**:

1. ADDRESSING SUPPLY-SIDE BARRIERS, INCLUDING STRENGTHENING DEPLOYMENT AND SUPPORT OF CHWS AND SUPPLY CHAIN MANAGEMENT

Supply chain challenges were identified by CI/IHSS countries, and in many instances UNICEF is procuring essential iCCM drugs. However, this response does not address the wider problems in national distribution systems and procurement processes among the CI/IHSS countries, and related issues regarding long term financial sustainability. Supervision, motivation, retention and sub-optimal deployment of CHWs were other salient supply-side bottlenecks and have been noted elsewhere across sub-Saharan Africa. In 2010, UNICEF conducted a cross-sectional survey of 40 UNICEF country offices in order to document the current state of CCM policies across a range of sub-Saharan African countries. The survey found wide variations in levels of CHW training, remuneration, and the range of activities they are expected to perform. (George A, et al, 2011) (For further details see Annex 2). Table 5 below describes the characteristics of CHWs across the six CI/IHSS countries included in this survey. Notably, Ghana is the only CI/IHSS country that has yet to establish salaried CHWs - although in Ghana, they have established the Community-based Health Planning and Services initiative (CHPS), which includes salaried Community Health Officers (CHOs) who provide prevention and treatment services, and supervise CBAs working in communities within their catchment area.

TABLE 5. COMMUNITY HEALTH WORKER CHARACTERISTICS ACROSS CI/IHSS COUNTRIES (DATA FROM UNICEF ICCM SURVEY UPDATED THROUGH KI INTERVIEWS WITH UNICEF COUNTRY OFFICES)

	Title	Length of General Health Training	Length of CCM Training	Remuneration	# Other Activities Performed by CHWs
Ethiopia	Health Extension Worker (HEW)	> 1 yr	<= 1 week	Salary	16
Ghana	Community Based Agent (CBA)		<= 1 week	Mark up on drugs/non-financial incentives	9
Malawi	Health Surveillance Assistant (HSA)	3 months	<= 1 week	Salary	20
Mali	Agents Santé Communautaire (ASC)	1 yr		Salary	13
Mozambique	Agente Polivalente Elementar (APE)	4 months	5 weeks	Salary*	23
Niger	Agents Santé Communautaire (ASC)	>1 yr	2-5 weeks	Salary	17

* subsidy representing 60% of national minimum wage

A range of innovative responses to these CHW challenges have arisen from the CI/IHSS experience and have been highlighted in this paper. Moving forward, the CI/IHSS countries are well positioned to document to what extent these interventions can impact on CHW motivation, retention, and quality of service delivery.

Recommendations:

- 1) Working with partners to support implementation research on effective models for providing supervision and remuneration of CHWs
- 2) Supporting strategies to strengthen national supply chain systems
- 3) Working with partners to support implementation of systems to monitor, in 'real time', supply chain bottlenecks in order to trigger appropriate, targeted and timely management response
- 4) Strengthening systemic links between iCCM and the broader health system, including first level health facilities, to ensure continuum of care and adequate facility-based support for CHWs

2. ADDRESSING DEMAND-SIDE BARRIERS TO UTILISATION OF SERVICES

Financial barriers and care seeking behaviour were the main bottlenecks identified through reports, but it is likely that other demand-side barriers remain to be understood and addressed. The elimination of user fees has increased utilisation in some countries, and many countries are exploring ways to encourage appropriate use of available iCCM services. Some innovative approaches to behaviour change communication (beyond conventional media approaches) are being explored, but there is a need to invest further in exploring communication strategies that would facilitate effective communication of iCCM messages to intended groups (e.g. through community based methodologies and peer education strategies).

Recommendations:

- 1) Removal of user fees for iCCM services
- 2) Scale-up of iCCM to underserved/remote populations in order to reduce indirect financial barriers (travel costs)
- 3) Supporting research to identify demand side barriers and successful strategies for addressing these (including increasing appropriate care seeking behaviour)
- 4) Supporting the development of rapid assessment procedures (qualitative and quantitative methods and tools) for monitoring demand side barriers and facilitating causal analysis. Supporting the integration of these methods and tools into existing monitoring systems and/or management processes where possible
 - » For example, integrating qualitative rapid assessment procedures (e.g. key informant interviews with mothers, transect walks through communities etc.) into regularly scheduled supervision visits as a mechanism for improving identification and monitoring of socio-cultural bottlenecks and their causes in order to improve management response

3. STRENGTHENING MONITORING AND EVALUATION SYSTEMS

Human resource capacity for building and maintaining robust M&E systems in the six CI/IHSS countries was limited and a range of bottlenecks were identified. UNICEF has responded to this challenge through a range of innovative responses, and experience indicates that early and continued support and capacity building for M&E is critical for strengthening the ability of countries to identify and strategically respond to local bottlenecks.

Recommendations:

- 1) Monitoring and Evaluation frameworks and Monitoring and Evaluation Plans should be developed at the outset of programme planning
- 2) Similar programmes in other countries should consider building in M&E support and capacity building from the beginning, to support development and execution of M&E Plans
- 3) Continued efforts should develop and strengthen existing M&E systems including, a) improving iCCM indicators and benchmarks and administrative mechanisms for collecting them; b) developing mechanisms to complement administrative data collection systems (e.g. LQAS, qualitative methods/rapid assessment methods, data on private sector); c) improving the monitoring and analysis of the causes bottlenecks, the monitoring of management responses and the removal of bottlenecks; and d) developing mechanisms to monitor results through an equity lens (e.g. by distance from health services, gender, ethnicity)
- 4) Improving alignment of programme funding to reflect the above M&E enhancement goal

In conclusion, implementation of the CI/IHSS programme (2008-2011) across six countries has generated a wealth of information regarding systems bottlenecks to scale-up of intervention packages for child survival, in particular, the delivery approach of integrated community case management. It has also shed light on a range of approaches and potential responses to these challenges, which will be critical for informing and strengthening the next phases of the programme as well as contributing to the growing body of knowledge on implementation of iCCM programmes globally.

Moreover, although integrated community case management programmes are in theory “equity-focused” by attempting to provide better access to treatment services for children, there is currently little evidence from programme experience that iCCM programmes actually result in more equitable service delivery. Few studies have addressed the possible impacts of iCCM programmes on equity, and an earlier systematic review of CHW interventions also found that impacts on equity were rarely considered. As we move forward it will be important to rigorously monitor and evaluate scale-up of iCCM through an equity lens. Priority questions that the CI/IHSS will be focusing more upon as we move towards the end of this phase of the work include the following:

- 1) Documenting and evaluating the impact of the approaches and innovations described in this report – including demand creation and C4D (all countries), removal of user fees (Niger); linking iCCM treatment to NHIS (Ghana); mentoring approach to supervision (Malawi and Ethiopia); harmonized incentive scheme for CBAs (Ghana); SC4CCM (Malawi); Scheduled Delivery System (Ghana)
- 2) How best to harmonize and align strengthened systems (e.g. for supply chain management, monitoring and evaluation, capturing indicators at the community level) in order to ensure that they are not parallel systems but are sustainability integrated into existing government systems
- 3) How to standardize CHW training tools and processes with other NGO partners
- 4) The degree to which iCCM can reduce inequities in coverage and reach the most deprived groups

UNICEF and partners looks forward to the next phase of this work, and to further expanding and enriching the implementation and learning that will arise from this collaboration.

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ANNEX 1. BRIEF DESCRIPTION OF THE EVOLUTION OF CCM PROGRAMMES IN THE CI/IHSS COUNTRIES:

ETHIOPIA:

The Health Extension Programme (HEP) began in Ethiopia in 2004 and included the deployment of Health Extension Workers (HEWs) for provision of high impact preventive interventions. The core of HEP is the construction of health posts in all of the estimated 15,000 kebeles (villages) in Ethiopia and the training and assignment of two Health Extension Workers (HEWs) in each health post. Provision of a set of health post kits (which contained equipment, supplies and consumables) to each of the health posts in 2009 and 2010 was critical for the initiation of services. Overall, the HEP is designed to deliver 16 packages of services including health promotion, immunization, family planning, hygiene and sanitation and other disease prevention measures, and a limited number of high-impact curative interventions, in order to address the main causes of maternal, neonatal and child morbidity and mortality. Two female HEWs in each kebele (the lowest administrative unit, covering about 5,000 people) provide these HEP services. HEWs are recruited locally, trained for one year, formally employed and salaried. As of 2010 more than 34,000 HEWs have been deployed, of which 20,000 have been trained through the Catalytic Initiative. In the beginning the provision of treatment by HEWs was limited to malaria, diarrhoea and severe acute malnutrition. The operational feasibility of including pneumonia in the treatment package for HEWs was tested between 2006 and 2008, and then was formally adopted as policy by FMOH in late 2009. From 2011 onward HEWs are being trained and deployed to treat pneumonia at the community level. As of October 2011, 11,754 HEWs have been trained in iCCM (including CCM for pneumonia).

GHANA:

Beginning in 2001 in the Upper East Region of Ghana under the Accelerated Child Survival and Development (ACSD) programme, Community-based Agents (CBAs) were trained and deployed as volunteers to provide community-based promotion of a package of family health, nutrition and hygiene practices. During the early years of the programme, the only treatment service that CBAs were able to provide was ORS for diarrhoea. During 2007 approval was given by Ghana Health Services to allow CBAs to treat malaria cases at the community level with ACTs, and this programme was rolled out to the three northern regions of Ghana during 2008 and 2009. In 2010 national policy was adopted to allow CBAs to treat pneumonia at the community level with antibiotics, and also to include treatment with zinc for diarrhoea. Two CBAs are now deployed to every community in the north of Ghana. 16,500 CBAs were trained and deployed between 2008 and 2009 - this training included basic training and CCM for malaria and diarrhoea. During 2010 a subset of 9,935 CBAs were trained and on CCM-pneumonia and provided with antibiotics. The remaining CBAs will be trained on CCM-pneumonia in late 2011 and early 2012.

MALAWI:

In 2006, Malawi adopted a national policy for child survival, with a goal to reduce child morbidity and mortality by two-thirds between 2000 and 2015. A central strategy of the child survival scale-up in Malawi is the provision of additional training and support to Health Surveillance Assistants (HSAs, a cadre of community-based workers) to provide high-quality integrated community case management (iCCM) services for children with pneumonia, malaria and/or diarrhoea at the community level. At the community level in Malawi, health services are provided by these Health Surveillance Assistants who are employed by the government to provide primary health care services through the village health clinics and outreach clinics. The HSAs have been identified as a cornerstone of the health system in the Malawi Essential Health Package (EHP) and an additional 12,000 HSAs were recruited to achieve the target of 1 HSA per 1000 population. HSAs receive a

10-week basic training in which integrated management of childhood illness (IMCI) is incorporated. The roll-out of iCCM services by HSAs nation-wide began in 2008, with an initial focus on hard to reach areas of the country where 3,969 HSAs received basic training, and by 2011 a total of 1,020 HSAs had been trained on iCCM and deployed to communities in hard to reach areas in the 10 CI/IHSS districts.

MALI:

The National Child Survival Strategy 2007-2012 in Mali provides a strategic plan for newborn and child survival, including the full community case management package (CCM of malaria, diarrhoea and pneumonia), and for the first time officially acknowledged the role of the community health volunteer/worker in the delivery of CCM. In 2009 the Mali Ministry of Health held a National Forum to examine the extension of essential services to the community level. The Forum validated the role played by community health volunteers and confirmed the need for a new, paid cadre of community health worker (CHW) to deliver community case management in Mali. Policy for integrated community case management by CHWs, including treatment of pneumonia/ARI at the community level, was formally adopted by government in late 2010, and the roll out of the new CHW cadre took place progressively throughout 2010 and 2011. The CHWs are responsible for a variety of tasks, most importantly including the CCM of malaria, diarrhoea and ARI as well as the screening, referral and follow up of children with malnutrition. CHWs were initially trained in malaria and diarrhoea case management, while the pneumonia CCM policy was being developed, and ARI case management followed during a second phase of training in mid to late 2011. As of April 2011, 1,651 ASCs have been trained in the full package of iCCM and deployed.

MOZAMBIQUE:

Given the limited access to health facilities in Mozambique, a key government priority is to support community-based preventive and curative health services. As a result the policy for community case management was approved in March 2010, and new cadre of paid community health worker in Mozambique, called polyvalent elementary health worker (Agentes polivalentes Elementares da Saúde-APE) was established. The role of the APE is: to improve the health status of the community through promotional and preventive activities; to carry out some first aid services and provide community case management for malaria, diarrhoea, and respiratory infections for children; and to serve as link between the community and the health personnel. In general, each APE is responsible for 500 to 2,000 inhabitants depending on the population density and access to health facilities. A four month training of a first cohort of APEs was initiated in eight pilot districts in 2010, with plans for further expansion to another 42 districts in 2011. As of April 2011, 1,650 APEs have been trained in c-IMCI and deployed. An additional 179 APEs have been trained in iCCM and deployed.

NIGER:

Access to skilled health workers and health centres in Niger has been very poor for decades, and this translated into very high mortality rates and poor treatment coverage indicators. Beginning in 2007 Cas de Santé (health posts) were established and equipped, and Community Health Workers deployed to provide basic prevention and treatment for maternal newborn and child health. 2125 Cas de santé were established country wide and have steadily been upgraded with the provision of fridges to enable Immunisation to take place regularly. During 2007-9 more than 2258 community health workers were trained for 6 months in basic preventative and curative services, focussing on high impact interventions. These Community Health Workers are a new cadre of health worker in Niger, they are paid a salary and are based in health posts or Case de santé. These CHWs were trained during 6 months in a newly established Government training school. They are an integral part of the health service, and provide lifesaving interventions throughout the lifecycle - the deployment of these CHWs increased access to health care for women and children. As of April 2011, 2426 ASCs have been trained in iCCM and deployed.

ANNEX 2. CCM SURVEY ON ACTIVITIES OF CHWS (UPDATED THROUGH KI INTERVIEWS WITH COUNTRY OFFICES)

NUTRITION ACTIVITIES

	Provide Vitamin A	De-worming	MUAC	Check for bilateral oedema	Provide RUTF	Provide complementary food	Promote complementary food	Promote exclusive breast feeding
Ethiopia	✓	✓	✓	✓	✓	✓	✓	✓
Ghana	✓	✓	✓					✓
Malawi	✓	✓	✓	✓	✓	✓	✓	✓
Mali	✓	✓	✓	✓	✓	✓	✓	✓
Mozambique	✗	✓	✓	✓	✗	✗	✓	✓
Niger	✓	✓	✓	✓	✓	✓	✓	✓

No mark indicates no data available

NEWBORN CARE ACTIVITIES

	Promote immediate breast feeding	Kangaroo care	Resuscitation	Oral Antibiotic
Ethiopia	✓	✓		✓*
Ghana				
Malawi	✓	✓		✓
Mali	✓			
Mozambique	✓	✗	✗	✗
Niger	✓	✓	✓	✓

* When referral not possible. No mark indicates no data available

OTHER HEALTH PROMOTION ACTIVITIES

	Promote Sanitation	Promote hand washing with soap	Provide soap	Provide household water treatment product	Promote ITN use	Distribute ITNs	Support IRS	Promote immunization	Promote increase fluids and continued feeding for sick child
Ethiopia	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ghana	✓	✓			✓	✓		✓	✓
Malawi	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mali	✓	✓	✓		✓	✓		✓	✓
Mozambique	✓	✓	✗	✓	✓	✗	✓	✓	✓
Niger	✓	✓	✓	✓	✓	✓		✓	✓

No mark indicates no data available

Learn how UNICEF is using iCCM to improve child health with equity in Niger and Mali from the perspective of mothers, village leaders, and community health workers at <http://uni.cf/JctHr7>, and watch two videos on the subject at <http://bit.ly/M1rnIj> (Niger) and <http://bit.ly/LevY0F> (Mali).



CASE DE SANTÉ, COMMUNITY HEALTH WORKER POST, IN VILLAGE OF SARKIN YAMMA SAFOUA, NIGER

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