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## AFRICAN STRATEGIES FOR HEALTH



# COMMUNITY HEALTH WORKER INCENTIVES: LESSONS LEARNED AND BEST PRACTICES FROM MALAWI

November 2015

This publication was produced for review by the United States Agency for International Development. It was prepared by the African Strategies for Health (ASH) Project.

**African Strategies for Health (ASH)** is a five-year project funded by the United States Agency for International Development's (USAID) Bureau for Africa and implemented by Management Sciences for Health (MSH). ASH improves the health status of populations across Africa by identifying and advocating for best practices, enhancing technical capacity, and engaging African regional institutions to address health issues in a sustainable manner. ASH provides information on trends and developments on the continent to USAID and other development partners to enhance decision-making regarding investments in health.

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Cover photo by Uzaib Saya (February 2015)

*Interpersonal Communication Agents outside a Tunza social franchise clinic in Mchinji District*

## **DISCLAIMER**

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This report is authored by Uzaib Saya. Cindy Shiner and Stephanie Rotolo assisted with copy-editing. A shorter technical brief based on this report is available on the ASH website at <http://www.africanstrategies4health.org>.

## ACRONYMS

|        |   |
|--------|---|
| ASH    | African Strategies for Health                           |
| BLM    | Banja la Mtsogolo                                       |
| CAG    | community action group                                  |
| CBDA   | community-based distribution agent                      |
| CHAI   | Clinton Health Access Initiative                        |
| CHBC   | Community Home-Based Care                               |
| CHAM   | Christian Health Association of Malawi                  |
| CHV    | community health volunteers                             |
| CHW    | community health workers                                |
| DHO    | district health office                                  |
| DRH    | Department of Reproductive Health                       |
| EHRP   | Emergency Human Resource Plan                           |
| HSA    | health surveillance assistant                           |
| iCCM   | integrated community case management                    |
| IEC    | information, education, and communication               |
| IMCI   | integrated management of childhood illness              |
| IPCA   | interpersonal communication agent                       |
| MOH    | Ministry of Health                                      |
| MSPA   | Malawi Service Provision Assessment                     |
| MSH    | Management Sciences for Health                          |
| NAMPAM | National Association of People Living with HIV and AIDS |
| NGO    | nongovernmental organization                            |
| PLHIV  | people living with HIV                                  |
| PSI    | Population Services International                       |
| REACH  | Research for Equity and Community Health                |
| STI    | sexually transmitted infection                          |
| TB     | tuberculosis  |
| TBA    | traditional birth attendant                             |
| IUD    | intra-uterine device                                    |
| VHC    | village health committee                                |
| WHO    | World Health Organization                               |
| USAID  | United States Agency for International Development      |

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# I. EXECUTIVE SUMMARY

## Background

Community health workers (CHWs) play a critical role in extending access to health services, especially in underserved and hard-to-reach areas. They are an important part of the frontline primary health care team and serve an essential role in integrated health systems. To maximize their impact, the design and implementation of CHW programs should be aligned with guiding principles that emphasize performance management. These include addressing CHW program leadership, health system integration, community engagement, financing, monitoring, health worker training, supervision, management, support, and the use of incentives.<sup>1</sup>

In order for governments and organizations to adopt, implement, and scale up community health programs, knowledge of the wide typology of CHW models and their associated incentive mechanisms is critical. It is equally important for policymakers and program implementers to understand the impact of program design factors, such as incentives, and how they may contribute to optimal CHW performance and the achievement of sustained health impact.<sup>2</sup>

In Malawi, primary care is delivered through community initiatives, health posts, village health clinics, dispensaries, health centers, and community hospitals, mostly in rural areas where 86% of the household population resides.<sup>3</sup> Despite Malawi's progress in recent years to improve community health, challenges remain; 70% of child deaths in Malawi are due to malaria, diarrhea, pneumonia, anemia, malnutrition, and neonatal complications, all of which can be effectively prevented and treated at the community level.<sup>4</sup> Through more than 3,000 village health clinics targeting hard-to-reach areas, CHWs such as government-funded health surveillance assistants (HSAs), nongovernment-funded community-based distribution agents (CBDAs), village health committee (VHC) members, and volunteers are providing promotive, preventive, and curative health services.

Today, as the Ministry of Health allocates resources within the Health Sector Strategic Plan 2011-2016, it is important to analyze opportunities for planning and implementing community health activities through existing human resources for health. The National Community Health Volunteers Policy of 2015 presents further opportunities for ensuring the appropriate design of CHW programs.<sup>5</sup> This policy identifies the need for community health volunteers in addition to HSAs, recognizing the opportunity cost as well as the duties, rights, and responsibilities of volunteers.

## Objectives and Methodology

The United State Agency for International Development (USAID) African Strategies for Health (ASH) Project sought to examine the effects of various types of incentives on CHW performance and retention in Africa. In-depth studies in two countries—Malawi and Madagascar—aimed to identify the

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<sup>1</sup> Strengthening Primary Health Care through Community Health Workers: Investment Case and Financing Recommendations. July 2015. Joint Release from Partners in Health, Last Mile Health, and the UN Secretary General's Special Envoy for Financing the Health MDGs and for Malaria.

<sup>2</sup> Naimoli J et al. "A community health worker 'logical model': towards a theory of enhanced performance in low- and middle-income countries." *Human Resources for Health* (2014), 12:56: 1-16.

<sup>3</sup> National Statistical Office. 2015. Malawi MDG Endline Survey 2014. Zomba, Malawi: National Statistical Office

<sup>4</sup> Malawi: Challenges for Children. Save the Children.

Accessed from: <http://www.savethechildren.org/site/c.8rKLIXMGlpI4E/b.6150451/>

<sup>5</sup> Ministry of Health (MOH) Malawi. National Community Health Volunteers Policy. January 2015. Lilongwe, Malawi.

types of CHW cadres and incentives being used, and analyze the impact of incentives on CHW performance and program implementation.

Using a semistructured questionnaire, 55 CHWs across five districts in Malawi were interviewed for this study. Data on incentives provided to CHW cadres were obtained through interviews with CHWs and program partners during field data collection in February and March 2015. The aim of collecting data was to determine the extent of the CHW programs, the types of services provided, service locations, coverage (actual and target), supervision and support, stock-outs of commodities, and expected CHW time spent on carrying out relevant duties. Implementing partner nongovernmental organizations also provided data, when available, on CHW supervision frequency; prices of equipment and medicines; and management, supervision, meeting, and training costs; as well as other financial and nonfinancial incentives.

## **CHW Programs Sampled**

Interviews were conducted with 55 CHWs across a range of programs. They include:

- HSAs and their supervising senior HSAs, the only government-supported, fixed-salaried cadre;
- interpersonal communication agents (IPCAs) supported by Population Services International (PSI), who receive performance-based financial incentives;
- informal volunteer groups, including CBDAs, who receive irregular financial incentives and nonfinancial incentives;
- growth monitoring volunteers and community action group volunteers supported by organizations such as Mai Khanda, World Vision Malawi, and the Red Cross Society, who receive irregular financial incentives and nonfinancial incentives; and
- VHC members, who receive only nonfinancial incentives.

Details on the programs and incentives, workload, and services provided by these CHWs are provided in this report.

## **Findings**

### Types of Incentives Being Used

The most common financial incentives reported by informants included fixed salaries, irregular monetary allowances in the form of per diems, performance-based payments, and income from the sale of medicines and commodities. The most commonly cited nonfinancial incentives included community recognition and respect, acquisition of valued skills, identification (t-shirt or badge), training opportunities, status within communities, and peer support.

### Impact of Incentives on CHW-Level Factors

CHW performance can be measured through individual factors such as motivation, attitudes, competencies, guideline adherence, and job satisfaction.

### Impact of Incentives on End-User/Community-Level Factors

CHW performance can also be measured through end-user or community-level factors. Analyses of interviews and program data determined that incentives influenced CHW performance and community health programming in the following ways:

*Population and Geographic Coverage:* As evidenced by HSAs, salaried CHWs may achieve greater population and geographic coverage compared to other CHW cadres that lack fixed salaries or regular allowances.

*Numbers of Services Provided:* HSAs and IPCAs, CHW cadres receiving regular support through financial and nonfinancial incentives, are regularly assessed and therefore able to maintain competency and provide extensive services.

*Estimated Demand Met:* HSAs in Malawi, supported with regular salaries and nonfinancial support, such as supervision and training, conduct curative and preventive health activities and are successful in meeting the demand for community health services in hard-to-reach areas.

*Quality of Services Provided by CHWs:* The use of formal guidelines and protocols, common among HSAs and IPCAs, can contribute to improved quality of services.

## **Recommendations**

The findings of this study demonstrate that CHW performance in Malawi is highly influenced by the provision of both financial and nonfinancial incentives. Variations in design of CHW programs and the use of incentives considerably influence CHW performance. Reported experiences of CHWs in Malawi suggest the following recommendations:

1. Financial incentives serve to motivate CHWs in Malawi. However, consistency in the timing and amount of compensation, whether for salary, allowances, or per diem payments, is critical to sustain motivation.
2. Nonfinancial incentives, such as training and opportunities for advancement and professional development, are important motivators for all types of CHWs. These incentives can serve to both motivate CHWs and increase capacity. They should be included in the design of both paid and volunteer CHW programs.
3. End-user or community-level measures for coverage and quality should be consistently defined and included in all reporting for community health programs. Evidence from Malawi has shown that evaluation of performance among CHW cadres is feasible when such program data are available (for example, through analysis of estimated demand met and use of services). This type of data management may provide opportunities to assess CHW performance and redesign intervention programs.
4. Implementing agencies, government partners, and donors supporting community health programs should collaborate to standardize incentives for CHWs. Program aspects such as trainings, reporting forms, reporting frequency, supervision, equipment, and available resources for support staff and supervisors should be complementary. Harmonizing and integrating programs will help to reduce duplicative costs and improve CHW performance by influencing CHW capacity, use of services, and CHW motivation.

This study aimed to identify and analyze the impact of incentives on CHW performance in Malawi. The findings and recommendations may be useful for countries that are considering introducing, modifying, or scaling up a community health program. As governments analyze efficiencies in the allocation of resources across health systems components, it is important to improve the planning of community health activities and optimize existing human resources for health. By understanding how design features of community-based programs affect CHW performance, interventions can be shaped and adjusted to achieve optimal health impact.

## 2. BACKGROUND

CHWs play a critical role in extending access to health services, particularly in underserved and hard-to-reach areas. In many developing countries, where there is a significant unmet need for basic health services, it is unlikely that universal health coverage can ever be attained without functional, high-quality, and extensive community health services. Recent estimates have suggested that investments in CHWs in sub-Saharan Africa can result in a tenfold increase in economic returns due to increased productivity from a healthier population and economic impacts of increased employment.<sup>6</sup> Various guiding principles support CHW program development and implementation. These include addressing program leadership, health system integration, community engagement, financing, monitoring, health worker training, supervision, management, support, and incentives. Programs seeking financing should ensure they are aligned with these principles. The effectiveness and impact of CHWs are therefore crucial and depend, in part, on the incentives that CHWs receive as a *reward* or *motivation* for the services they provide to their communities.

Documented evidence highlights the benefits of CHWs, including volunteers, as a link between the formal health system and the community, the contribution to improved population health, their cost-effectiveness and their roles as part of the solution to health worker shortages, increased access to health care, and community empowerment. However, evidence also shows that there are risks associated with the implementation of community health volunteering programs, such as placing unreasonable levels of health provision on volunteers, lack of management and resources, failure of community ownership, and unreal expectations.

Despite the variety of financial incentives and nonfinancial incentives that CHWs receive, available evidence on the effectiveness and efficiency of such incentives remains limited.<sup>7</sup> According to a recent report by the Global Health Workforce Alliance, “more information is needed about the effectiveness of paid versus voluntary CHWs and the underlying factors associated with this effectiveness.”<sup>8</sup>

Having a comprehensive understanding of the various CHW incentive mechanisms is important for governments and organizations currently implementing or considering adopting or scaling up community health programs. With finite human and financial resources, program implementers and policymakers should understand the advantages and disadvantages of such incentives and how they might be combined to ensure both optimal CHW performance and sustained health impact.<sup>9</sup>

### 2.1 Objectives

The ASH Project sought to examine the effects and impact of various types of incentives on CHW performance and retention in Africa. The key objectives of in-depth studies in two countries—Malawi and Madagascar—are to:

- map the various CHW cadres operating in selected countries;

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<sup>6</sup> Strengthening Primary Health Care through Community Health Workers: Investment Case and Financing Recommendations. July 2015. Joint Release from Partners in Health, Last Mile Health, and the UN Secretary General’s Special Envoy for Financing the Health MDGs and for Malaria.

<sup>7</sup> Naimoli, J et al. “Community and formal health system support for enhanced community health worker performance: a U.S. Government Evidence Summit.” Paper prepared following the USG Evidence Summit on Community and Formal Health System Support for Enhanced Community Health Worker Performance in Washington, DC, May 31- June 1, 2012.

<sup>8</sup> Frymus et al. “Community Health Workers and Universal Health Coverage. Knowledge gaps and a need based global research agenda by 2015.” Global Health Workforce Alliance. 2013.

<sup>9</sup> Naimoli, J et al. “A community health worker ‘logical model’: towards a theory of enhanced performance in low- and middle-income countries.” *Human Resources for Health* (2014), 12:56: 1-16.

- identify lessons learned and best practices from CHW programs providing varying incentives for CHWs; and
- provide an understanding of how incentives can yield improved performance and motivation of CHWs using program data.

This study is unique in that it examines specific incentives within CHW cadres in two different countries using program data, and relates such incentives to CHW performance. If program implementers know how certain features of an intervention affect performance, such interventions can be shaped and adjusted to yield optimal CHW performance. The results of this study can be useful for countries considering introducing, modifying, or scaling up a community health program. This report outlines the detailed findings and analyses from the study conducted in Malawi.

## 2.2 Defining CHWs

All types of promotional, preventive, and curative community-based services were considered for the study – e.g. service provision for family planning, integrated community case management, malaria treatment, bed net provision, etc. In addition, the study aims to cover as many different types of CHW incentives as possible, recognizing that this may be limited by the degree that they exist in the literature and/or in the study countries.

For this study, most elements of this definition have been accepted – in particular, a CHW is a (resident) member of the community where he or she works. Therefore, health extension workers which are based in facilities and who only visit a community periodically have been excluded from this study. For the purpose of this study it is important to limit the selection for greater comparability. According to the World Health Organization (WHO):

*Community health workers should be members of the communities where they work, should be selected by the communities, should be answerable to the communities for their activities, should be supported by the health system but not necessarily a part of its organization, and have shorter training than professional workers.<sup>10</sup>*

## 2.3 Measuring CHW Performance

CHW performance can be measured at the individual CHW level as well as at the level of the community user receiving services. Various research conducted in this sphere has indicated that optimal CHW performance is a function of high-quality CHW programming, which is often reinforced and scaled up by robust, high-performing health and community systems.<sup>11</sup> While a definitive causal pathway to improved CHW performance does not yet exist, these health and community systems mobilize various inputs, such as technical support, social support, and the use of incentives to improve performance. End-user outcomes can help ascertain CHW performance through improved use of services, health-seeking behavior, and adoption of practices that promote health and community empowerment. At the CHW level, factors such as motivation, attitudes, guideline adherence, and job satisfaction can provide valuable insights into measuring CHW performance. CHW program design can influence CHW performance, particularly through intervention design factors such as CHW workload, human resource management, a mix of financial and nonfinancial incentives, quality assurance, resources

<sup>10</sup> World Health Organization. “Community health workers: what do we know about them? The state of the evidence on programmes, activities, costs, and impact on health outcomes of using community health workers.” Evidence and Information for Policy, Department of Human Resources for Health. Geneva, Switzerland. January 2007.

<sup>11</sup> Naimoli, J et al. “A community health worker ‘logical model’: towards a theory of enhanced performance in low- and middle-income countries.” Human Resources for Health (2014), 12:56: 1-16.

and logistics, and community and health system links. It is important to note that nonfinancial incentives undermine rather than sustain motivation if they are perceived as lacking, insufficient, or unfair.

If program implementers know how certain features of an intervention affect performance, interventions can be shaped and adjusted to yield optimal CHW performance. A review conducted by Kok et al in 2014 found that a mix of financial and nonfinancial incentives, predictable for the CHWs, was an effective strategy to enhance performance, especially of those CHWs with multiple tasks.<sup>12</sup> Eighty-one studies presented information on incentives given to CHWs, including fixed salaries for those CHWs who were government or nongovernmental organization (NGO) employees, regular and irregular allowances, performance-based financial incentives, income from selling services (fees), income from selling commodities, and nonfinancial incentives such as goods or rewards, access to training, supervision and supplies, and preferential treatment and community trust and respect. It was also determined that satisfaction

related to incentives could lead to lower or higher motivation and influence CHW performance. Some sample conceptual frameworks of factors influencing CHW performance are shown in Annex I.

The Evidence Summit on Community Health Worker Performance was hosted by USAID in 2012 and focused on community and formal health system support for enhanced community health worker performance. The summit demonstrated that the capacity of communities to contribute positively to CHW performance depends health system support and government policies recognizing community engagement and providing formal linkages to the health system. In defining the measures and determinants of CHW performance, this study borrowed from the framework for CHW performance developed by the USAID working group for the Evidence Summit.<sup>13</sup> In particular, CHW performance indicators were outlined by an evidence review team according to various factors; for the purposes of this study, CHWs, their supervisors, and various partners were queried on various dimensions of these factors (see box above).

A separate literature review conducted as part of a background activity for the in-country exercise of this study confirmed that a mix of both financial and nonfinancial incentives for CHWs has the greatest impact on performance.<sup>14</sup> The most common financial incentives include fixed salaries, irregular monetary allowances, performance-based payments, income from selling services, and income from mark-up of commodities. The most commonly cited nonfinancial incentives include community recognition and respect, acquisition of valued skills, identification (t-shirt, badge), training opportunities,

### Measuring CHW Performance

The design of CHW programs influences CHW performance. Important program design factors include CHW workload, human resource management, financial and nonfinancial incentives, quality assurance, resources and logistics, and community and health system links. This study examines the influence of incentives (financial and nonfinancial) on performance.

CHW performance can be measured at two levels: the individual CHW level and the end-user or community level.

- At the CHW level, measurable factors include CHW motivation, competency, guideline adherence, and job satisfaction.
- At the end-user/community level, CHW performance can be measured through coverage, number of services provided, use and quality of services, health-seeking behavior, and adoption of practices that promote health and community empowerment.

<sup>12</sup> Kok, MC, Dieleman, M, Taegtmeier, M, et al. Which intervention design factors influence performance of community health workers in low- and middle-income countries? A systematic review. Health Policy and Planning. 2014.

<sup>13</sup> Final Report of Evidence Review Team 1: Which Community Support Activities Improve the Performance of CHWs? A Review of the Evidence and of Expert Opinion with Recommendations for Policy, Practice and Research. Fall 2012. USAID.

<sup>14</sup> This review can be found in the Annex section of the combined report of this study.

status within communities, and peer support. A consistent theme emerging from the literature is the need to consider various contextual factors upon designing and planning an incentive scheme for a CHW program. Such factors include CHW workload and type of services provided, their status as employees versus volunteers, cultural norms, remuneration expectations, demand for services, and the level of community engagement.

### 3. COUNTRY CONTEXT: MALAWI

In Malawi's decentralized health service delivery system many programming decisions are made at the district level. In the country's public health system, services are delivered at primary, secondary, and tertiary levels. Primary care is delivered through community initiatives, health posts, and village health clinics, dispensaries, health centers, and community/rural hospitals. Through more than 3,000 village health clinics targeting hard-to-reach areas, community-based health care workers are providing care for the most common causes of childhood illness. Despite Malawi's progress in recent years to improve community health, challenges remain: in 2010, the infant mortality rate was 66 per 1,000 live births and the under-five mortality rate was 112 per 1,000 live births, compared to the MDG target of 81 per 1,000 live births.<sup>15</sup> Seventy percent of all child deaths in Malawi are due to preventable causes, such as malaria, diarrhea, pneumonia, anemia, malnutrition, and neonatal causes.<sup>16</sup>

The Malawi health system has long had a critical shortage of health personnel. From 2004 to 2010, development partners supported the implementation of a six-year Emergency Human Resource Plan (EHRP) under the Health Program of Works. With this support, the human resource situation within the health sector improved significantly. The total number of professional CHWs increased by 53%, from 5,453 in 2004 to 8,369 in 2010.<sup>17</sup> As a result, the capacity of health training institutions increased across a range of programs, and staff retention improved. Despite this effort, only four of the 11 priority cadres (namely clinical officers, environmental health officers, and radiology and laboratory technicians) met or exceeded their targets as set in the original EHRP design. Almost all health facilities fall short of staffing norms and program requirements for effective service delivery. Only 42% of health centers met the 2:2:1 required ratio of two clinicians, two nurse/midwives, and one environmental health officer.<sup>18</sup> Guidelines currently exist for a minimum number of health workers at all levels of health care to deliver maternal, newborn, and child health. The Integrated Management of Childhood Illness (IMCI) policy, for instance, states that 80% of health facilities in each district should meet the requirement of having a minimum of two health workers trained in IMCI. In 2013, coverage ranged from 46% to 54%.<sup>19</sup> This gap highlights the need for a rapid increase in the number of health workers through a well-supported human resource expansion plan, and the need to clarify roles and strengthen supervision and coordination mechanisms between extension workers, village health committees, and health centers. Recent efforts in January 2015, such as the development of a national community health volunteers' policy, have aimed to examine these challenges and propose a way forward in formalizing the importance of community health volunteers in particular.<sup>20</sup>

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<sup>15</sup> National Statistical Office (NSO) and ICF Macro. Malawi Demographic and Health Survey 2010. Zomba, Malawi, and Calverton, Maryland, USA: NSO and ICF Macro. September 2011.

<sup>16</sup> Malawi: Challenges for Children. Save the Children. Website last updated Oct 2011. Accessed from: <http://www.savethechildren.org/site/c.8rKLIXMGIpl4E/b.6150451/>.

<sup>17</sup> MOH Malawi. Malawi Child Health Strategy: For Survival and Health Development of under-five Children in Malawi. 2014-2020. Version from December 2013. Lilongwe, Malawi.

<sup>18</sup> MOH Malawi. Malawi Child Health Strategy: For Survival and Health Development of under-five Children in Malawi. 2014-2020. Version from December 2013. Lilongwe, Malawi.

<sup>19</sup> MOH Malawi. Malawi Child Health Strategy: For Survival and Health Development of under-five Children in Malawi. 2014-2020. Version from December 2013. Lilongwe, Malawi.

<sup>20</sup> MOH Malawi. National Community Health Volunteers Policy. January 2015. Lilongwe, Malawi.

Recent evidence from the 2014 Malawi Service Provision Assessment (MSPA) indicates that services are available at nearly all health facilities, including malaria diagnosis and/or treatment, sexually transmitted infection (STI) diagnosis and/or treatment, and curative care for sick children.<sup>21</sup> Family planning services and HIV-related services are less commonly available. Curative care for sick children and child growth monitoring are available in 100% of the health posts (or village clinics) across Malawi, whereas outpatient curative services are less commonly available.<sup>22</sup> Other types of services, such as vaccinations, are more widely available in hospitals, health centers, and dispensaries, especially antenatal care and STI services. Most Malawian health facilities provide diagnosis and treatment for infectious diseases like HIV and malaria, and half offer primary health care services such as child health, family planning, and antenatal care. The MSPA indicated that two-thirds of all health facilities offered all three basic child health services, with support from staff serving directly in the communities. Studies have shown that use of village health clinics as the first point of care for sick children is high compared to other sources of care.<sup>23</sup>

At all these service delivery points, health surveillance assistants (HSAs) and volunteers are extremely common sources of care provision. Recent estimates have indicated that while the government estimates that 74% of health centers are capable of delivering the essential health package of services, only 13% have the staffing to do so.<sup>24</sup> Studies in Malawi have shown that health workers employed by NGOs earned more than their counterparts in the public sector.<sup>25</sup> It is thus imperative that a framework be devised to better understand:

- what causes low performance and, subsequently, attrition in CHW cadres; and
- what factors improve use of services of those in the close-to-community cadre.

Data from recent costing exercises of gaps in health systems areas within Malawi's Health Sector Strategic Plan 2011-2016 showed that the human resources category faces the largest gaps between required versus planned spending.<sup>26</sup> A separate optimization analysis of Malawi's health workforce conducted by the Clinton Health Access Initiative (CHAI) showed that while the gap among HSAs was lower, the cadre with the highest vacancy was with generalists and primary care doctors, followed by pharmacists, clinical officers, and nurses and midwife technicians.<sup>27</sup> As the Ministry of Health (MOH) uses such results to analyze efficiencies in the allocation of resources within and across disease programs as well as health systems components, it becomes more important to analyze opportunities to improve planning and implementation of community health activities through existing human resources. The MOH has recognized the need for community health volunteers (CHVs) and their role in the delivery of health services, particularly in light of the recent National Community Health Volunteers Policy. This policy presents an opportunity to ensure that appropriate design of CHW programs acknowledges the opportunity cost of CHWs over the long term, and that unpaid work in the

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<sup>21</sup> MOH [Malawi] and ICF International. 2014. *Malawi Service Provision Assessment (MSPA) 2013-14*. Lilongwe, Malawi, and Rockville, Maryland, USA: MOH and ICF International.

<sup>22</sup> *ibid*

<sup>23</sup> Malaria Alert Center. College of Medicine, University of Malawi and Save the Children. *Malaria Rapid Diagnostic Tests (mRDTs) and Rectal Artesunate (RA) Integration into Community Case Management (CCM) - A Pilot Study in Mchinji District. Baseline Survey Report*. November 2013.

<sup>24</sup> Department for International Development (October 2009). *Aid to Malawi*, Report by the Comptroller and Auditor General to the National Audit Office, HC 963 Session 2008-2009 in VSO Malawi and Malawi Health Equity Network. *Valuing health workers. Implementing sustainable interventions to improve health worker motivation*. 2010.

<sup>25</sup> VSO Malawi and Malawi Health Equity Network. *Valuing health workers. Implementing sustainable interventions to improve health worker motivation*. 2010.

<sup>26</sup> MOH Malawi. *Health Sector Strategic Plan Costing. Report for the Health Financing Summit. July 29-30, 2014*.

<sup>27</sup> Clinton Health Access Initiative. *Malawi's Health Workforce Optimization Analysis and Report. A working paper. Optimal Allocation of Health Workers across Malawi's public health facilities*. October 2014.



community is valued. Such decisions can guide policymakers on how to maximize CHW effectiveness in addressing the country's health priorities.

The formal health system, including the MOH, typically provides financial incentives to public sector HSAs, while the private social support networks and NGOs provide other CHW cadres with various nonfinancial incentives. A separate evaluation of the causes for the high attrition rate and poor motivation of staff within the health sector helped to identify certain key areas for improvement if Malawi wishes to retain more health workers in post; these include salaries and benefits, as well as opportunities for training, better management, and supervision.<sup>28</sup>

Country studies from Malawi have explored various factors that influence overall job satisfaction and reasons why mid-level providers at health facilities leave their jobs.<sup>29,30</sup> However, these studies did not investigate whether differences in expressed job satisfaction and intention to stay had real impacts on health care worker performance or retention, nor did they explore aspects influencing motivation of staff within the preventive health sector such as the CHWs. There are also only a handful of studies that have explored the various constraints restricting motivation and job performance among HSAs in Malawi. Previous research reported these constraints to be poor remuneration, lack of promotion and low status given to HSAs in the civil services, heavy workload, and the irregular supply of medicines and supplies.<sup>31,32</sup> Assessments of CHVs in Malawi have confirmed that the institutional frameworks within which volunteers work are not defined, and individual implementers of volunteer programs choose what works best for them – as a result, even the nonfinancial incentives are provided on an ad hoc basis and vary from one program to another.<sup>33</sup> As the tasks and roles of formalized CHWs such as HSAs expand, it is essential to ensure that greater workload does not make completing primary duties an insurmountable challenge. At the same time, a combination of national human resource management techniques (including salary, position, and training) and those at the district level (including supervision and coordination) can improve motivation and job performance among CHWs. Increased workload necessitates effective task-shifting, which requires less fragmentation of programs, training, and supervision, especially over volunteer programs.

## 4. STUDY METHODOLOGY

### 4.1 Data Collection/Study Setting

In collaboration with the USAID Africa Bureau, ASH developed and finalized a study protocol in December 2014. Madagascar and Malawi were selected for the country case studies given the important role CHWs play within the health system, as well as evidence of numerous incentives used by community health programs, including the government-salaried cadre of CHWs in Malawi. The data collection tools and a brief overview of the study were shared with respective USAID offices in each

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<sup>28</sup> VSO Malawi and Malawi Health Equity Network. Valuing health workers. Implementing sustainable interventions to improve health worker motivation. 2010.

<sup>29</sup> Chimwaza, W. et al. What makes staff consider leaving the health service in Malawi? *Human Resources for Health* 2014, 12:17.

<sup>30</sup> Fogarty, L et al. Job satisfaction and retention of health care providers in Afghanistan and Malawi. *Human Resources for Health* 2014, 12:11.

<sup>31</sup> Kadzandira, JM, Chilowa, WR. The role of Health Surveillance Assistants (HSAs) in the delivery of health services and immunization. Malawi. University of Malawi, Center for Social Research, 2001.

<sup>32</sup> Kok, MC, Muula, AS. Motivation and job satisfaction of Health Surveillance Assistants in Mwanza, Malawi: an explorative study. *Malawi Medical Journal*; 25(1): 5-11 March 2013.

<sup>33</sup> Community Health Volunteer Situational Assessment Report. Support for Service Delivery Integration Systems. Report prepared by Abt Associates for USAID. March 2014.

country and also with the relevant MOH partners to obtain their inputs prior to in-country data collection. The data collection visits took place in February and March 2015 at various levels of the health system. These included:

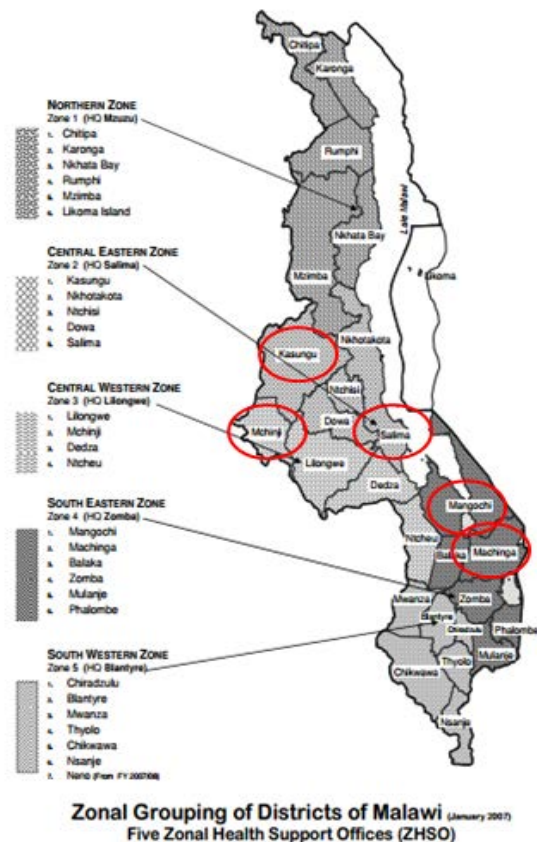
- Central level with staff from the Lilongwe-based MOH Department of Health Planning and Policy Development, IMCI Unit, Central M&E Division, Department of Human Resources Management and Development Services, Directorate of Health Technical Support Services, Preventive Health Services, and Primary Health Care
- District level, including district health offices (DHOs) at district hospitals in urban and rural areas of Salima, Mangochi, Machinga, Kasungu, and Mchinji (see Figure I)<sup>34</sup>
- Selected government and Christian Health Association of Malawi (CHAM) facilities, with CHWs and their supervisors

At the DHO, data were collected from the district IMCI coordinator, health management and information systems coordinator, accounts personnel, human resources personnel, and procurement personnel. At the health centers, staff provided catchment population figures, utilization data, and expenditure figures for these facilities and the communities they serve. At the community level, HSAs provided population and utilization figures for their specific hard-to-reach catchment areas, as well as information on their time usage, salaries, and supervision, reporting, and meeting requirements.

Districts were selected with consideration given to health zones, numbers of HSAs, under-five population, functioning village health committees (VHCs), hard-to-reach areas, presence of partner-supported CHW programs, and general proximity. DHOs were sent informational letters from the IMCI Unit at the MOH describing the study and soliciting input and assistance for facilitating interviews with HSAs and volunteers (Annex 4). Data were also collected from implementing partner NGOs and research partners, including Save the Children, REACH Trust, PSI, World Vision, CHAI, Mai Khanda Trust, and Evidence 4 Action. Data were collected to determine the extent of the CHW programs, the types of services provided, service locations, coverage (actual and target), supervision and support, stock-outs, and expected CHW time spent. NGOs also provided data, when available, on CHW supervision frequency, prices of equipment and medicines, and management, supervision, meeting, and training costs. Based on these meetings, sites were selected where interviews with the CHWs and their supervisors and members of village committees would take place.

Using a semistructured questionnaire (see Annexes 2-3), data were collected by three enumerators through interviews with CHWs, program staff, VHCs, and other stakeholders in the three regions. Interviewing sampling details are in Annex 5. One enumerator was an MSH staff member, while the other two were IMCI Unit (MOH) staff members. Interview responses were translated from Chichewa

**Figure I. Districts Sampled**



<sup>34</sup> For purposes of health administration, districts in Malawi are grouped into health zones. There are five zones, one in the Northern, two in the Central, and two in the Southern regions.

to English and were transcribed electronically using MS Excel. In total, interviews were conducted with 55 active CHWs, including HSAs and volunteers, such as VHCs, community-based distribution agents (CBDAs), and interpersonal communication agents (IPCAs) representing multiple community-based programs, supervisors, and multiple central- and district-level staff representing the MOH. Interviews lasted 45-60 minutes on average and typically took place at health facilities since meetings were pre-arranged through the DHO representative. Refreshments were occasionally provided if available; otherwise, the CHW received small monetary compensation not exceeding Malawi kwacha (MK) 1,500 (or USD \$3.45)<sup>35</sup> to compensate for lunch. Interviewers sought informed consent before each interview and told respondents that they could withdraw at any time during the discussion.

Interviews with CHWs were aimed at collecting data on the functioning of the program and to gain a better understanding of the number of services actually provided, the estimated time actually spent, as well as data and opinions on the incentives used. Instead of interviewing community members, largely because of timing, interviews with VHCs included some qualitative feedback on the community's opinion on CHW performance and perceived quality of services.

The field research team coupled specific causes of satisfiers and dissatisfiers of being a CHW by examining different work attributes, including respect and appreciation from the community, communication tools, opportunities for career development and further training, performance feedback, and consistent supply of drugs.<sup>36</sup> These self-identified factors allowed for a better understanding of the key attributes of a CHW program that are considered to be important to CHWs themselves.

## 4.2 Study Limitations

Due to time and geographical constraints, only five districts were chosen in the Central and Southern regions of the country, considerably reducing the sample size of interviewees. Further, interviews were limited by the availability of DHOs. The presence of hard-to-reach areas in these districts, coupled with flooding in December 2014 and January 2015, posed challenges to visiting certain sites.

The three-member data collection team intended on conducting only one-on-one interviews with CHWs, but ended up conducting several group interviews to limit the waiting time of CHWs. These focus group discussions may or may not have influenced the qualitative data that was reported by CHWs. In certain instances, group interviews were conducted with VHCs to account for their experiences in providing services to patients. This also facilitated the data collection process in certain sites where more people were available to be interviewed than the number of enumerators.

Several CHW supervisors translated the interviews from local dialects to Chichewa and then to English. In instances when interviews were conducted in Chichewa, answers were marked in English. A representative from the DHO accompanied the data collection team to the health facilities and village clinics and communities, which could have influenced the responses of CHWs, particularly for questions related to the frequency of supervision, amount of per diem received at meetings and trainings, etc. Furthermore, respondents may have suffered from recall bias. For example, respondents may have failed to correctly remember the exact amount of per diem they received for attending a specific training. In some cases, respondents may have decided against answering certain questions.

Data were also not always readily available for volunteer attrition rates and the costs faced by volunteers in providing services. Because of the occasional irregular nature of their work, partly because

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<sup>35</sup> Monetary exchange rate of MK 435 equal to USD \$1 as of February 2015

<sup>36</sup> These were adapted from Kok, MC, Muula, AS. Motivation and job satisfaction of health surveillance assistants in Mwanza, Malawi: an explorative study. *Malawi Medical Journal*; 25(1): 5-11 March 2013.

services are provided at different times of the year, implementing partners did not typically capture all the information pertaining to the impact of the services they provided. Furthermore, government-mandated HSAs had very informal relationships with most volunteers, except with VHCs and CBDAs, who in most cases provided valuable information on patients who may need HSA services in the community.

While this study seeks to better understand the relationship between CHW incentive mechanisms and health impact, the analysis largely depends on the availability and quality of the program data that is reported. Because detailed service delivery and population data was unavailable, it proved very difficult to assess the coverage and use of CHWs. Several implementing organizations do not track data related to CHW retention and attrition while other implementing organizations do not have reliable population coverage data, which is important in estimating program use and the demand of CHW services. Also, partial program data (i.e. data not provided for the entire year) may be missing seasonal trends in services provided. For example, malaria rates are expected to increase during the rainy season. Moreover, to better estimate the use of CHW programs, it would be important to use regional or district incidence rates of diseases (e.g. diarrhea, malaria, pneumonia, etc.) and district estimates of contraceptive prevalence.

Recognizing the importance of context regarding a CHW's performance, a thorough analysis examining the effects of various contextual factors (e.g. community, economy, environment, and health system) could help further guide potential policy changes and modifications to community health programs to achieve ultimate performance.<sup>37</sup>

## 5. RESULTS: CHW PROGRAMS SAMPLED

For the purpose of this study, various CHW programs were sampled as long as they provided services at the community level. Programs were chosen based on location, required travel distances, and availability of data. These included the government-mandated HSA program, PSI-supported IPC agents, and various volunteer groups: Mai Khanda, Growth Monitoring Volunteers, CBDAs, community action group (CAG) members, and Red Cross volunteers. Most of the sampled volunteer programs operate in specific parts of the country; therefore, comparisons across programs as well as replication of successful community-based interventions should be made with caution. A total of 55 CHWs were interviewed for this study (Annex 5).

As described in Section 3, service delivery at the primary care level is done mostly by community-based cadres such as HSAs. They conduct a range of activities (Table 1). Many HSAs work alongside CHVs, both at the health center and community levels (see Table 3 under Section 5.3). CHVs are well-respected community members and are often nominated as volunteers by their peers or community leaders. CHVs assist HSAs in various activities, such as providing health education (either via home visits or through health talks/drama groups), identifying and reporting of tuberculosis (TB) suspects, assisting community case managers (CCMs)-HSAs with small tasks, and/or conducting water and sanitation inspections. One particular type of CHV is a CBDA. CBDAs are volunteers who focus on providing family planning education and counseling and are trained to provide oral contraceptives. In addition, some CHVs are part of committees (such as VHCs); community leaders often participate in these committees as well. As with HSAs, the types of CHVs present in a community depends on the community's needs, as well as the responsibilities of the HSA that the CHV is working with. Typically,

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<sup>37</sup> Kok, et al. "How does context influence performance of community health workers in low- and middle-income countries? Evidence from the literature." *Health Research Policy and Systems* (2015), 13:13.

CHVs receive a brief orientation by the HSA they are working with on the different health topics and activities they have been asked to support.

The table below highlights the main incentives provided across the programs and CHWs sampled. More details on these findings are presented in Sections 6 and 7.

**Table 1: Summary of incentives (financial and nonfinancial) across CHW cadres**

|  | HSA<br>(MOH) | Family planning<br>volunteers<br>(social<br>franchise/NGO) | Family<br>planning<br>volunteers<br>CBDAs | VHC<br>(volunteers) | Other<br>volunteers<br>(NGOs) |
|--|--------------|--|---|---------------------|-------------------------------|
| Financial incentive                              |              |  |   |                     |                               |
| Salary   | ✓            |  |   |                     |                               |
| Per diem allowance                               | ✓            | ✓  | ✓   |                     |                               |
| User fees  |              |  |   |                     |                               |
| Performance-based incentives                     |              | ✓  |   |                     |                               |
| Nonfinancial incentives                          |              |  |   |                     |                               |
| Education and improved capacity of community     | ✓            | ✓  | ✓   | ✓                   | ✓                             |
| Equipment and materials                          | ✓            | ✓  | ✓   |                     | ✓                             |
| Supervision                                      | ✓            | ✓  |   |                     | ✓                             |
| Individual recognition from community and family | ✓            | ✓  | ✓   | ✓                   | ✓                             |
| Job advancement                                  | ✓            | ✓  | ✓   | ✓                   | ✓                             |

## 5.1 Health Surveillance Assistants

Malawi’s HSA program coordinates the delivery of primary care services at the community level, including services for environmental health, family planning, maternal and child health, HIV and AIDS, IMCI, and sanitation. HSAs focus on hygiene and sanitation; immunizations; growth monitoring; antenatal care; family planning; disease surveillance; community assessments, including public facility inspection; and basic preventive and curative health services. Some HSAs deliver a full package of integrated community case management (iCCM), TB, HIV, and family planning services. HSAs operate from village clinics and also conduct Child Health Days and campaigns. Today, HSAs comprise 30% of the health workforce in Malawi and they are often the only health workers serving rural communities where they are expected to reside.<sup>38</sup> HSAs must have completed 12 years of education and a Malawi School Certificate of Education and be from the catchment area. Some HSAs have 10 years of education and a

<sup>38</sup> MOH: Human Resources for Health: Malawi Country Profile. Malawi Health Workforce Observatory. Lilongwe, Malawi: Ministry of Health; 2010.

Junior Certificate of Education (the educational requirement prior to 2011). Some HSAs have been placed in different districts than their own to increase recruitment.

Before iCCM was adopted as a policy and HSAs trained in curative care, they were employed as disease surveillance assistants, serving a preventive role conducting community outreach programs related to water, sanitation, and health promotion. With the advent of iCCM, the curative role was added to their responsibilities. HSAs have national coverage, thereby making their services relatively equitable and accessible, and are on government payroll, enabling their services to be sustainable. HSAs have performed a number of duties over the years. Presently, their tasks cover community health, family health, environmental health, prevention and control of communicable diseases, and management and administration (Table 2). While HSAs are a key community-based cadre in Malawi, there are other similar providers playing important roles. Such providers include traditional birth attendants (TBAs), expert patients, CBDAs, and community care providers. Selected HSAs are involved in the provision of services at village clinics. The village clinics were pioneered by UNICEF, under the child survival call to action campaign, which mobilized countries to end preventable child deaths. Under the initiative, HSAs were allowed to either operate from their homes or, in some instances, communities led by the chiefs would identify a shelter from which HSAs would provide health care services. The clinic ensures that treatment is only a few minutes' walk away, thereby bringing health care closer to the people. Services provided at the clinic include: treatment of pneumonia, uncomplicated malaria, and diarrhea.

In addition to conducting the standard HSA duties as described in Table 2, CCM-HSAs provide the following services:

- Assess, identify and treat common childhood illnesses (malaria, diarrhea, pneumonia, and red eye)
- Identify anemia and malnutrition
- Identify and refer complicated cases to nearby health facilities, and provide pre-referral treatment where needed
- Check children's vaccination status and encourage caregivers to complete the remaining vaccines
- Counsel caretakers on administering prescribed medications
- Deliver prevention-related messages to community members

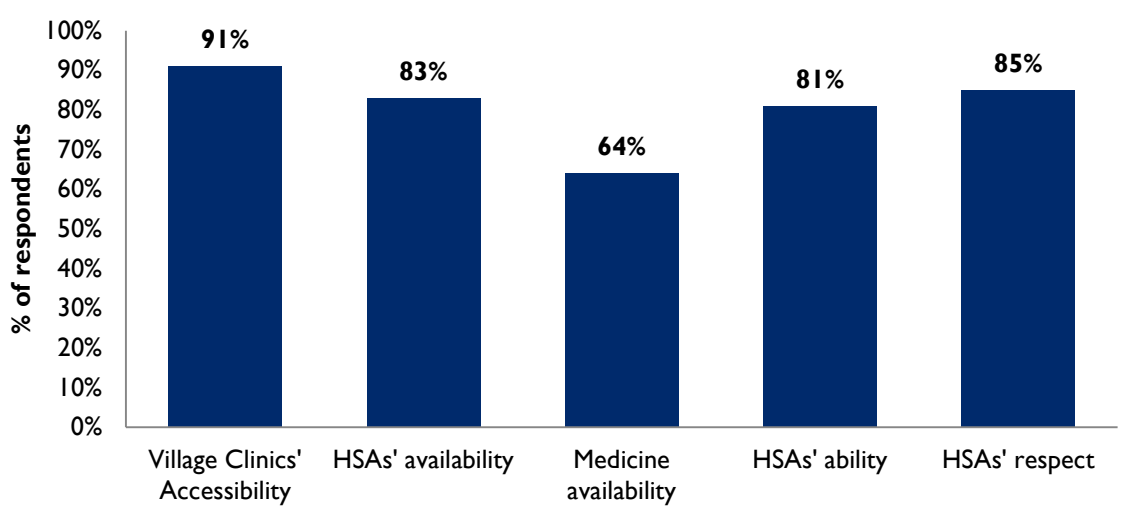
**Table 2: Activities conducted by HSAs**

| Activities conducted by all HSAs  | Examples of additional activities conducted by select HSAs  |
|---|---|
| <ul style="list-style-type: none"> <li>• Disease surveillance</li> <li>• Water and sanitation inspection (e.g., of schools, homes, churches)</li> <li>• Health education (e.g., malaria, TB, HIV and AIDS, nutrition, water and sanitation, family planning, vaccinations)</li> <li>• Referrals to nearby health facility</li> <li>• Outreach clinics, immunization, and growth monitoring</li> <li>• Vermin and vector control</li> <li>• Collection of vital statistics and maintenance of a village register</li> <li>• Immunizations</li> <li>• Management of community health committees and CHVs</li> </ul> | <ul style="list-style-type: none"> <li>• iCCM</li> <li>• Provide directly observed treatment short-course to TB patients and/or collect TB sputum smears from TB suspects</li> <li>• Maternal and neonatal health: identify, counsel, refer, and follow up pregnant and postnatal mothers</li> <li>• HIV and AIDS testing and counseling</li> <li>• Depo-Provera injections</li> <li>• Provide close-to-community care or ready-to-use therapeutic food to undernourished</li> <li>• Youth-friendly services: provide reproductive, health, and family planning education to youth</li> </ul> |

HSA trained in iCCM operate primarily in hard-to-reach areas, keeping in line with the national MOH strategy. A hard-to-reach area is defined as any geographical region in which a population has limited access to health care because the nearest health facility is more than eight kilometers away, or there are physical barriers to access, such as impassable rivers or mountains. Within each hard-to-reach area, the MOH goal is for each HSA to serve a total catchment population of around 1,000 people, which may encompass one or more villages. In 2014, the population of hard-to-reach areas in Malawi ranged from 500 to 3,500 people, with a mean of 1,530. During that time, there were an estimated 9,907 HSAs working in Malawi; of these, 4,572 HSAs were providing iCCM services in 4,592 hard-to-reach areas with 3,138 village clinics.

Most caregivers prefer to use the village health clinics where the HSAs typically operate as their first point of contact with the formal health system.<sup>39</sup> Based on findings from a recent study, Figure 2 below shows caregivers' reasons for preferring village clinics to other sources of health care for community case management for childhood illness. Ninety-one percent of caregivers said that the village clinic was nearby and 83% mentioned that it was easy to find the HSAs during clinic days for treatment of their children. When caregivers were asked to confirm some statements regarding community case management services in the community, most ascertained that medicines were available at village clinics (64%). Eighty-one percent said they trusted the ability of the HSAs to treat children, and 85% of caregivers said HSAs respect patients and guardians when discharging their duties.

**Figure 2: Caregivers' reasons for preferring village clinics as their first point of care**



## 5.2 Inter-personal Communication Agents

IPCAs operating through PSI and supported through the German Development Bank (KfW), mobilize men and women into groups and conduct reproductive health education sessions with groups as per training and guidelines provided by PSI Malawi. The IPCAs are also designated to mobilize community members to attend special events organized by IPC officers at Tunza clinics (or other designated venues such as public health facilities). The Tunza network began in 2012 and was formerly part of the Safeplan Family Network). IPCAs operate around a 5-10 km radius of a Tunza facility and refer women to the nearest Tunza clinic for more information, further counselling, and quality RH services, and also create demand for clinic services such as voluntary male medical circumcision, and STI management. IPCAs

<sup>39</sup> Malaria Alert Center. College of Medicine, University of Malawi and Save the Children. Malaria Rapid Diagnostic Tests (mRDTs) and Rectal Artesunate (RA) Integration into Community Case Management (CCM) - A Pilot Study in Mchinji District. Baseline Survey Report. November 2013.

carry and sell commodities such as male and female condoms. Currently, there are over 40 Tunza clinics, in 12 districts and in 2 regions of Malawi, with at least one IPCA assigned to each clinic (and in some cases, there is a pair of IPCAs at each site).

The IPCAs use the IPC technique, an interpersonal communication approach for “increasing a person’s inner motivation to change by exploring and helping them resolve any ambivalence they have about adopting a new positive behavior.”<sup>40</sup> This can be accomplished at an individual or group level in a community. In this technique, the IPC agent/health worker asks permission to engage in a dialogue, and through open-ended questions gains an understanding of the person’s readiness to adopt the desired behavior. According to the IPC strategy, IPC is any face-to-face interaction that takes place with a target audience with the objective of changing their behavior. IPC generally refers to face-to-face interactions with the community, but IPC techniques can also be used with health care providers. When IPC is conducted with providers it is often referred to as medical detailing or supportive supervision. In the PSI context, it is about involving members of a specific target group, who are at risk, to change their behavior by understanding and addressing the underlying causes of their risk behavior. This interaction usually takes place between a trained IPC agent and one target group member (“one-to-one session”) or few members of the target members (“group session”). The interaction is strengthened by the use of visual aids and supporting information, education, and communication (IEC) materials.

PSI/Malawi has drawn upon its existing Tunza network, currently composed of over 40 facilities with support from mobilizers who are creating demand for respective Tunza clinics. Their approach involves conducting one group session for a month and then following up with one-on-one IPC sessions to sensitize group participants on targeted family planning messages. On the basis of referrals, IPC agents get a certain number of payments, i.e. their payments are tied to performance. The agents refer to the social franchise clinic, such as the Tunza clinics, with strong oversight from district-level managers called IPC officers who audit the IPCAs regularly. As per PSI policy, social franchise clinics exist in urban and peri-urban areas, whereas in rural areas, their work complements that of the public sector. They also provide vouchers to poor women to enable them to access subsidized services at the Tunza clinics. They have basic information on HIV testing and counselling and STI management, and they are able to provide their clients with male or female condoms. They also follow up with potential clients. IPCAs meet clients at their point of need so they can ask questions. IPCAs are different from CBDAs, which receive the supply directly from the health facility; unlike CBDAs, IPCAs obtain their supplies from a pre-allocated PSI stock and abide by a recommended pricing. IPCAs only carry male and female condoms, not contraceptive pills.

Currently, there are some challenges for the IPCAs, as per the district IPC officer for Mchinji District. The IPCAs face challenges in operating group sessions during the rainy season, lack IEC materials because procurement typically takes longer, and receive late payments from the PSI head office. Previously, there was a high turnover rate since the criteria to become an IPCA was higher in all the districts (e.g. most candidates were Malawi School Certificate of Education, or MSCE, graduates), but these restrictions have since eased in all the districts and there is much less turnover.

Upon referral, the health worker at the clinic provides clients with various services, including STI screening, intra-uterine devices (IUDs), emergency contraceptives, tubal ligation or vasectomy if needed, implants, or injections. The Tunza clinics in which IPCAs work face some competition from another group of social franchise clinics operated by Banja la Mtsogolo (BLM).<sup>41</sup> However, the advantage over

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<sup>40</sup> IPC Strategy for Tunza. July 2014. Provided by Population Services International.

<sup>41</sup> Banja La Mtsogolo (BLM) has 31 clinics, 54 social franchisees, and 39 outreach teams delivering services to more than 480 sites across 27 of Malawi’s 28 districts. In 2012, BLM provided more than 130,000 long-term and permanent methods and more



these clinics is that “they offer quality services and follow-up to ensure people know about side effects of methods, and (they) help people in case their problem is more severe (e.g. [they] refer all complications to one of the leading gynaecologists in Malawi, who is contracted under PSI Malawi).”<sup>42</sup> The IPCAs also have an emergency contact “tree” for phone numbers so IPCAs can report directly if any clients have complications, whereas other clinics may not follow up in similar ways. The Tunza clinic also offers consultation free of charge, and they conduct open days when community members can be seen for particular ailments, or they conduct vaccination drives.

### 5.3 Community-based Distribution Agents

CBDAs are volunteer, community-level health workers whose major role is to provide information, education, counseling, and family planning services and commodities within the communities where they reside. Malawi’s Reproductive Health Strategy advocates offering contraceptives in closer proximity to communities through community-based distribution.<sup>43</sup> Such services are delivered through village-level volunteer health workers. CBDAs are part of the volunteer cadre of health workers in Malawi (Table 3).

**Table 3: Examples of activities conducted by CHVs**

| Type of community health volunteer | Examples of activities conducted by select volunteers   |
|------------------------------------|---|
| CHV (general)                      | <ul style="list-style-type: none"> <li>• Provide education to community members on various health topics</li> <li>• Assist with iCCM, such as providing health education or referring ill children to the CCM-HSA or village clinic</li> <li>• Identify TB suspects and collect sputum smears</li> <li>• Assist with outreach campaigns</li> <li>• Assist health centers with vaccinations, weighing children, etc.</li> <li>• Conduct patient follow-up/home visits</li> </ul> |
| CBDAs                              | <ul style="list-style-type: none"> <li>• Provide education and counseling on family planning methods. Provide oral contraceptives and condoms. In some cases, provide HIV testing and counseling in certain areas.</li> </ul>   |
| VHC volunteers                     | <ul style="list-style-type: none"> <li>• Participate in community committee(s) (e.g., village clinic committee, VHC, water and sanitation committee). Often, community/village leaders volunteer as well.</li> </ul>  |

CBDAs have existed in Malawi since the 1980s. However, the training curriculum developed at that time was inadequate to deal with new challenges of HIV and family planning. The CBDA program was re-introduced in 1992 at the CHAM facilities in Mzimba and Thyolo Districts. The MOH, with support from partners, continued to provide oversight of the CBDA program. In the past, CBDAs distributed oral contraceptives and both male and female condoms in selected Malawian districts under a project dubbed “Community-Based Family Planning and HIV and AIDS Services.” Targeting hard-to-reach and underserved areas, the USAID-funded project was implemented by MSH and the MOH with Futures Group International and PSI as collaborators until 2011. The project showed that non-health professionals can effectively provide certain family planning methods, integrated family planning-HIV services can reduce stigma, and that creating demand improves service uptake.

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than 271,000 short term methods. It has been estimated that almost half of the women using a modern family planning method in Malawi received it from BLM.

<sup>42</sup> In-person interview with IPC Officer Joan Phiri. Conducted by Uzaib Saya on March 2015

<sup>43</sup> Report on Community-Based Distribution Agents (CBDAs). Malawi CBDA Program. 2013-2014. USAID|DELIVER Project.

To train the CBDAs under the new curriculum, the Department of Reproductive Health of the MOH and MSH trained two individuals per district, who in turn trained the CBDAs in their respective districts. The two-week training covered the following major topics: population and reproduction; the history of family planning in Malawi; adolescent reproductive health; human reproductive system and conception; modern family planning methods; natural family planning methods; prevention of HIV transmission; and, referrals and record-keeping. Most CBDAs (85%) were recruited through voting by community members while around 6% were selected by the village headmen. The rest of CBDAs were recruited through interviews; by replacing deceased members; through clubs, friends, and HSAs or VHCs; and through NGOs such as MSH and Save the Children. To qualify as a CBDA, one had to be able to read and write, and be trustworthy so as to keep sensitive information related to HIV status confidential.

The CBDA cadres now receive support from partners and continue with limited oversight from the MOH. The CBDAs are still volunteers who live in the communities and are identified by the community and local health workers, and receive training to provide family planning commodities, including condoms and oral contraceptives, HIV information, and HIV counseling and testing. The need for CBDAs is pronounced, given that there are limited numbers of health facilities in districts and trained providers at the community level who can provide family planning services. There are also insufficient numbers of trained health care personnel authorized to provide comprehensive family planning services. Presently, there is no record of how many CBDAs are active in Malawi or the type of training that active CBDAs have completed.

A recent mapping exercise of CBDAs in 27 of the 28 districts in Malawi conducted with support from the Department of Reproductive Health (DRH) and the USAID|DELIVER Project concluded that most of the CBDAs under active operation received training in up to seven program areas: family planning (94%), HIV services (door-to-door counseling and testing) (47%), IMCI (3%), youth (20%), malaria (6%), TB (6%), and nutrition (16%).<sup>44</sup> Initial training was received as recently as 2011 and refresher training as recently as 2013. CBDAs receive trainings and materials on an ad-hoc basis. According to the mapping conducted by the DRH and USAID|DELIVER, over 300 CBDAs interviewed did not attend refresher trainings. During the interviews for this study in particular, CBDAs mentioned they met with HSAs to discuss the progress of family planning issues in the area, and as before, it was the HSAs who administered contraceptives, particularly the use of Depo-Provera.

## 5.4 Volunteer Programs

Further community health providers include volunteer community care providers or community health volunteers (Table 3). The Malawi Community Home-Based Care (CHBC) policy defines a community care provider as “a community member identified by the community and trained in CHBC to render direct patient care to chronically/terminally ill persons and other vulnerable people in their homes.” The CHV works in the context of CHBC identified by the MOH as a key strategy in responding to patients suffering from HIV, cancer, and TB. Some categories of these volunteers are described below.

There are support groups providing treatment literacy to patients/clients; providing basic nursing care, nutrition, peer, and psychosocial counselling and support to patients/clients and families; mobilizing communities to access HIV services; conducting advocacy to communities and service providers; following up expert clients and antiretroviral therapy defaulters; providing IEC on HIV testing and counselling; and referring patients/clients to health and other support services. One organization that epitomizes the role of support groups in Malawi is the National Association for People Living with HIV and AIDS (NAPHAM). A small group of people living with HIV/AIDS (PLHIV) established the association

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<sup>44</sup> Report on Community-based Distribution Agents (CBDAs). Malawi CBDA Program. 2013-2014. USAID|DELIVER Project.

in 1993 to fight stigma and discrimination and promote and advocate for an environment where PLHIV would live to their full potential and realize their goals. NAPHAM is a membership organization working in all 28 districts of Malawi, and all PLHIV interested in the association's activities can become members. It works through support groups formed at the community level. Support group members work as unpaid volunteers.

Patient support attendants carry out the following activities: conduct individual and group education prior to antiretroviral therapy initiation; conduct health promotion sessions for clients of all services; identify and promptly refer patients at risk and requiring medical attention; support patient-tracing activities; provide treatment literacy sessions; keep records, and clean facilities.

Individuals belonging to various volunteer programs were interviewed in this study. They included growth monitoring volunteers, those volunteering with the International Red Cross Society, Health Promoters and CAG members through World Vision Malawi, and volunteers operating through Mai Khanda. Each program comes up with its own procedures for working with volunteers, as there is no formal, ratified policy in place. At the time of writing this report, however, a draft CHV policy has been developed to reach the following objectives within community health:<sup>45</sup>

- i. A framework within which all community health care and services provided by community health volunteers are properly managed to promote good governance
- ii. A framework that will lead to the provision of quality and responsive services to communities within a defined scope of services
- iii. Guidance on the recruitment, selection, training, development, and disengagement of community health volunteers
- iv. Direction on all privacy and confidentiality issues as they relate to community health volunteerism in Malawi
- v. Guidance on incentives provided to community health volunteers in Malawi

The interviews conducted with the various volunteer cadres for this study suggest that volunteer programs were initiated to promote community empowerment, while also ensuring that certain long-term volunteers (such as growth monitoring volunteers and, in some cases, CBDAs) became more institutionalized. Interviews with HSAs suggested that the HSAs themselves relied on certain volunteer cadres to help in monitoring and reporting data.

## 5.5 Village Health Committees

The Public Health Department introduced VHCs to motivate and encourage communities to participate and get involved in public health activities, including prevention and control of cholera. In addition to those mentioned in Table 3, the functions of the VHCs include helping to raise the standard of sanitation in the community, reporting health-related problems to health workers, mobilizing communities for health promotion activities, assisting health workers in community work, and bridging the gap between communities and health workers. VHC members are unpaid volunteers selected by community members and are expected to participate during problem identification, planning, decision-making, implementation, monitoring, evaluation, re-planning, and supervision. HSAs form VHCs in consultation with village chiefs and provide them with training and supervision.

VHCs are typically not involved in formal trainings or meetings with the MOH unless specifically requested to do so. They play a crucial role in recruitment of volunteers from communities and villages.

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<sup>45</sup> MOH Malawi. National Community Health Volunteers Policy. January 2015. Lilongwe, Malawi.

## 6. SUMMARY OF FINDINGS: CHW INCENTIVES

The CHW programs sampled use a mixture of various financial and nonfinancial incentives to engage and retain CHWs.

- **Financial incentives** may be direct or indirect. Direct financial incentives include pay (salary), pension and allowances for accommodation, travel, childcare, clothing and medical needs, and mark up or performance payments based on medicines sold. Indirect financial benefits include subsidized meals, clothing, transport, childcare facilities, and support for further studies. These monetary factors can contribute as an incentive for CHWs if they are considered as satisfactory remuneration by the CHWs and if there is a possibility of future paid employment. On the other hand, they may be a disincentive for the CHW if they are considered to be inconsistent with expected remuneration or a change from tangible incentives, or if there is an inequitable distribution of incentives among different types of CHWs.<sup>46</sup>
- **Nonfinancial incentives**, such as badges, uniforms, special kits, community recognition, preferential access to health services, regular supervision and training, can give volunteer CHWs who work only a few hours a week a sense of appreciation needed to stay motivated to continue their work. In addition, the possibility of future paid employment, community respect, acquisition of valued skills, and opportunities for personal growth and development can all motivate CHWs. Peer support, opportunities to participate in CHW associations, flexible work hours, witnessing improvements in health as a result of their efforts, and contributing to community empowerment are also strong motivators. Lack of appropriate remuneration relative to the assigned workload leads to poor quality of services, loss of motivation, and attrition. Nonfinancial incentives can also be disincentives if the refresher trainings or supervision are inadequate or if health facility staff members do not respect volunteers.

These incentives function to not only improve CHW performance by influencing determinants of performance at the CHW level (e.g. with improved attitudes, motivation, and self-esteem) as discussed in Section 2.3, but they can also result in improved quality and access to key health services for community members, while ultimately influencing adoption of practices that promote health and improve health-seeking behavior.

### 6.1 Financial Incentives

The results below demonstrate the financial incentives provided at the level of the various CHW cadres interviewed in the five districts. The analyses provide an overview of each incentive mechanism. The potential impact on CHW retention and performance, and the advantages and disadvantages of using such incentives as they relate to the feasibility of scale-up and future sustainability are discussed in subsequent sections of this report (Section 7).

#### 6.1.1 Salaries

Of the CHWs interviewed, 18 HSAs reported receiving a regular monthly salary compensating them for their roles at the village clinic and at the health facility. HSAs with a completed secondary school education have the opportunity to complete training to a higher grade. HSAs are unable to receive any financial incentive beyond their salary due to limitations by the Health Service Commission Act within

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<sup>46</sup> Bhattacharyya, K, Winch, P, LeBan, K, Tien, M. Community Health Worker Incentives and Disincentives: How They Affect Motivation, Retention and Sustainability. Arlington, VA: Basic Support for Institutionalizing Child Survival Project (BASICS II) for the United States Agency for International Development; 2001.

the Public Service Act, tying health worker salaries to comparative grading of other public service employees. HSAs receive these salaries directly from the MOH and they vary based on the grade level of the staff member. Typically, most HSAs belong to Grade 12 and earn between MK 40,000-45,000 monthly which is equivalent to the salary of first-level clerical staff. HSAs do not charge user fees for any other services.

Some of the HSAs were in between “temporary” and “permanent” grade N and M levels respectively, indicating that they had been hired under the contracting arrangements through the MOH’s EHRP in partnership with development partners until 2010. They had recently interviewed to become “permanent” hires, so that they would then be eligible for government pension plans. Both categories of HSAs are paid by the MOH and Department of Environmental Health, but the temporary HSAs are “non-established,” i.e. they are on contracts through NGOs; they may get additional incentives, but they do not receive government pensions. The permanent HSAs hold posts in government (they can get scholarships and can get promoted to ward attendants within the Department of Environmental Health, etc.), and the government takes care of certain costs for their families, such as funerals. However, as per interviews with HSAs, the HSAs do not always join the departments of Environmental Health or Preventive Health because there are limited positions available, so they become clinical officers. In short, they abandon posts because of limited options for career development.

Other CHW cadres, such as the volunteers, did not receive a regular salary and, in fact, relied on other financial incentives (as those described below) to supplement their existing income from other sources. Interestingly, when asked how much they deserved to be compensated on a regular basis, the volunteer CHWs responded with an estimate of MK 20,000 per month.

The IPC agents receive a salary conditional on completing a number of door-to-door and group visits, and if they are able to obtain the number of referrals to the social franchise clinic as per their contract. For the purposes of this study, these incentives are described under the section under “performance-based incentives” since they are not conferred regular salaries.

### 6.1.2 Per Diems for Trainings and Meetings

In addition to the self-reported salaries, HSAs also report obtaining regular training and supervision from staff, including top-up per diem amounts or the Daily Subsistence Allowance (DSA), for the trainings attended. Trainings vary based on the program – for example, certain HSAs reported receiving refresher courses on iCCM, and the per diems varied depending on the number of days of training and the cities or towns within the districts. HSAs may receive up to three types of trainings: initial basic, specialized, and on-the-job training. Basic training is 12 weeks and covers preventive health, including primary health care; the Essential Health Package; community assessment and mobilization; the role of VHCs; CBHCs; water, sanitation, and hygiene; common diseases; patient follow-up; and health education. The second portion of the training covers family health, including safe motherhood, reproductive health, family planning, antenatal and postnatal care, immunization, nutrition, growth monitoring, and infection prevention and universal precautions. HSAs may receive specialized trainings when new health interventions are added to the service delivery package by intervention-specific programs of the MOH. These trainings range in length from a few days to five weeks. HSAs also receive an initial one-week orientation and on-the-job peer trainings led by HSAs who have attended specialized trainings. It is important to note that HSAs (and other environmental health staff, such as environmental health officers) are not recognized by professional regulatory bodies such as the Medical Council of Malawi, Nurses and Midwives Council of Malawi, and Pharmacy and Poison Board of Malawi, and therefore not monitored, assessed, or receive continuing professional development support.

As per government policy on daily subsistence allowances (DSA) starting January 2014, two per diem rates exist. Typically, the organizing institution, such as the NGO, is supposed to cover the actual costs related to the mission, such as the training or meeting. However, the policy states that if reasonable accommodation cannot be found, allowances can be paid for meals and/or accommodation with certain agreed-upon limits. Many HSAs claimed that they would rather obtain the funds directly rather than have the organizing NGO or MOH book hotels or meals for them. Many considered the additional funds to be a top-up, in some cases, almost a 50% top-up on their salaries. In Machinga and Mchinji, HSAs obtained, on a daily basis, MK 1,700 for lunch, MK 2,500 for dinner and MK 6,000 for accommodation, including breakfast. In the other districts visited for this study (namely Mangochi, Salima, and Kasungu), the daily rate was slightly higher: HSAs were given MK 2,300 for lunch, MK 3,500 for dinner, and MK 12,800 for accommodation that would include breakfast. Usually, the HSAs would also receive MK 2,000 as transport reimbursement or, in most cases they were reimbursed by the organizing NGO or MOH representative at the DHO on the basis of a ticket issued by the transportation carrier. They are not given a per diem for environmental health meetings at the DHO.

The volunteers, including CAG members, CBDAs, and VHC members, are not given any per diems for trainings. This is partly because trainings are irregularly held or they often are not invited to them. On occasions when CBDAs are invited to two-day trainings at the DHO, they are given between MK 700- MK 3,000 as allowances and MK 1,000-2,000 for transport costs.

The IPC agents are not provided with per diem since full cost of their stay in Lilongwe is covered by PSI. They are only provided with transportation costs of MK 4,000 to defray related costs.

### 6.1.3 Sale of Medicines and Health Commodities


Only six of the CHWs sampled sold medicines and supplies as part of their jobs. Specifically, two CBDAs in Machinga District operated under PSI's directive to provide patients with birth control pills and male condoms. These CBDAs earned a profit on both products as they purchase the pills for MK 80 per cycle and sold them for MK 100 per cycle, whereas they purchased male condoms for MK 15 per packet and sold them for MK 50 per packet. This profit allowed them to obtain more supplies from the PSI vendor. These CBDAs claimed that having a steady stream of supplies independent of the supply of the health center also brought in more business, especially when there are stock-outs at the health center.

Four IPC agents, also affiliated with PSI's social franchise Tunza clinic, reported selling condoms (at MK 50 per packet).

### 6.1.4 Income-generating Activities

All CHWs sampled described that they earned additional income through the use of village savings and loans associations or rotating mechanisms such as microcredit schemes in their villages, usually operated by NGOs such as CARE International or local NGOs. They did not provide details of how much money they were able to get from these activities.

**Figure 3: IPCA referral form for Tunza clinics**



**CLIENT REFERRAL FORM**

| CLIENT FORMS  |   |                               |
|---|---|-------------------------------|
| Name of Client  | Contact Details                                   |                               |
| Age   | Sex (circle on) <b>MALE</b> <b>FEMALE</b>         |                               |
| Does client consent to confidential follow-ups?<br>(circle one) | <b>YES</b> <b>NO</b><br>(Signature or thumbprint) |                               |
| If Marked YES above, (Address and Contact Number)               |   |                               |
| Referred to (Name of health facility)                           |   |                               |
| REASON(S) FOR REFERRA (Indicate)                                |   |                               |
|   |   |                               |
| REFERRED BY   |   |                               |
| IPCA Name   | Date of Referral                                  |                               |
| Signature   |   |                               |
| HEALTH PROVIDER FEEDBACK  |   |                               |
| Date of Visit   |   |                               |
| SERVICE PROVIDED (TICK WHERE APPLICABLE)                        |   |                               |
| Information   | HTC   | STI Screening                 |
| Injectollette   | Counselling                                       | Condoms (M/F)                 |
| Implanon  | Microllette                                       | Emergency Contraceptives (EC) |
| Vasectomy   | Jadelle   | IUCD                          |
|   | Tubal Ligation                                    | Other (Specify)               |
| Comments (e.g. service not available)                           |   |                               |
|   |   |                               |
| Name of Office  |   |                               |
| Signature   |   |                               |

### 6.1.5 Performance-based Incentives

On average, IPCAs are paid based on performance. They are contracted to do 10 group sessions (MK 750 for each session) and 75 one-on-one or door-to-door sessions (MK 150 for each session). They also make referrals to the clinic as per the form below. For every 50 referrals on average, they obtain MK 25,000 and an additional MK 6,000 every month for transportation and communication expenses. The maximum successful referral amount for referrals above 50 in number is MK 26,000. The IPCAs used to provide vouchers for subsidized services, but now they encourage clients to attend the open house days at the clinic.

## 6.2 Nonfinancial Incentives

The results below demonstrate the nonfinancial incentives provided at the level of the various CHW cadres interviewed in the five districts. The analyses provide an overview of each incentive mechanism. The potential impact on CHW retention and performance, and the advantages and disadvantages of using such incentives as they relate to the feasibility of scale-up and future sustainability are discussed in subsequent sections of this report (Sections 6 and 7).

### 6.2.1 Education and Improvement Capacity

As mentioned earlier, various cadres of the CHWs, namely the HSAs and IPCAs, receive training on topics relevant for their duties. Many of these CHWs also receive monetary incentives to attend these trainings. All the cadres, including the volunteers, reported that training opportunities presented important opportunities to obtain new health information and that there was value in sharing this knowledge with the community and improving their own capacity to help their communities. Many of the HSAs mentioned that they regularly met with volunteers such as CBDAs to get a better sense of how they are performing and provided an opportunity for the CBDAs to ask questions.

## 6.2.2 Equipment and Materials (“In-kind Incentives”)

The formalized CHW programs (HSAs, CBDAs in some cases, and the IPCAs) provided CHWs with equipment and materials to facilitate their work. These included t-shirts, bicycles, gumboots, kit-bags, first aid supplies, IEC materials, identification cards, mobile phones and credit, medicines, and in some cases sterile instruments. Unless received from the government, the volunteers claimed that these items, when provided, were obtained from NGOs such as the CHAI, Mai Khanda, PSI, World Vision International, or other international organizations.

Based on interviews with the CHWs, materials and equipment enabled CHWs to effectively provide health services within their communities; however, stock-outs of equipment, materials, and medicines can inhibit them from effectively doing their work. For example, if registration and reporting forms are out of stock, it can be difficult for CHWs to report on the services they have provided. Similarly, they often have to face the costs of providing care to patients in the community, such as related travel costs when their bicycle needs repair, and other travel costs.

## 6.2.3 Supervision and Training

*Supervision:* The structure and frequency of supervision varies across projects. All CHW cadres receive some form of monitoring and supervision. Aside from formal supervision by supervisors from the DHO, CHWs, including HSAs and CBDAs, also described regular instances and opportunities to conduct peer supervision at clinics and among village health committees, as well as among other volunteers, such as TBAs, to encourage facility referrals. Certain volunteers, such as some CBDAs and growth monitoring volunteers, worked directly under HSAs through informal means and provided them with their reports and feedback sheets.

**Table 4: Overview of CHW supervision frequency**

| HSAs  | IPCAs  | CBDAs   | Volunteer programs  | VHCs   |
|---|--|---|---|--|
| <ol style="list-style-type: none"> <li>1) Monthly data validation at the health center</li> <li>2) Frequent supervision trips with opportunity to re-stock on medicines and supplies</li> </ol> | <ol style="list-style-type: none"> <li>1) Supervised twice per month by IPC officers<sup>47</sup></li> <li>2) Peer meetings and supervision allow IPCAs to meet and discuss during monthly meetings in Lilongwe during the last week of the month</li> </ol> | <ol style="list-style-type: none"> <li>1) On-site supervision at times by HSAs to review CHW knowledge</li> </ol> | <ol style="list-style-type: none"> <li>1) No fixed schedule for supervision – mostly informal and irregular means through HSAs</li> </ol> | <ol style="list-style-type: none"> <li>1) No formal supervision conducted as they are informal means of ensuring CHWs conduct activities- they regularly conduct interviews with community members to gauge performance of CHWs</li> <li>2) HSAs provide them with training and supervision when needed</li> </ol> |

<sup>47</sup> This supervision focuses on examining rapport with other IPCAs, reflective listening, review of monthly reports on mobilization and referral activities i.e. total IPC events conducted, total number of participants and total number of referrals for more counseling on reproductive health and/or HIV services.



All CHW cadres (and their supervisors) reported that there were significant geographical challenges in reaching health facilities to deliver reports. On average, health centers were almost 4-6 km away, and in some remote locations often more than 12 km away. The journey can often take two hours each way in poor road conditions.



**A CBDA at Lungwena Health Center in Mangochi District displays a reporting form used to provide information to HSAs and health facilities.**

IPCAs are supervised by the IPC officers and are also given additional opportunities for which they may be offered additional allowances, e.g. they may conduct additional research for PSI or take part in advertisement for products. They are often given nonfinancial incentives, such as bags, and also have the opportunity to obtain other positions within PSI. As per the IPC officers, IPCAs are well-respected in the community and rarely abandon their position, especially since the benefits offered through PSI (i.e. regular income based on performance and contractual obligations) are often higher than what they could obtain elsewhere.

**HSA training:** HSAs receive a varying degree of training, including a 12-weeks of basic training as well as specialized and on-the-job training (as mentioned in Section 5.1.2), and their responsibilities include promotion of environmental health through home visits and inspection of sanitation facilities, collection of vital statistics and maintenance of a village register, disease outbreak response, and organization and implementation of outreach campaigns. HSAs are also involved in the routine community delivery of various health programs, including family planning, HIV care, directly observed treatment short-course for TB, nutritional rehabilitation, malaria prevention, etc.<sup>48</sup> The iCCM program in Malawi trains HSAs to treat children with uncomplicated malaria, pneumonia, diarrhea,

and eye infections with artemisinin combination therapies, antibiotics, oral rehydration salts (ORS), and antibiotic ointment, respectively, and to identify danger signs and refer these cases to the nearest health facility. HSAs also learn to counsel caretakers in administration of the prescribed medications, give the first dose of the medication, check the child's vaccination status, and deliver related prevention messages, such as use of insecticide treated nets. The assessment, classification, treatment, and counseling guidelines are simplified from the IMCI guidelines for workers at first-level health facilities. The iCCM algorithms/guidelines are specified in the HSA job-aid, the Sick Child Recording Form.

The HSAs are trained in iCCM for six days, which includes approximately 25% training time in seven clinical practice sessions at the inpatient and outpatient wards, as well as various other training methodologies, such as video demonstrations of rare danger signs. The curriculum was adapted from World Health Organization (WHO) guidelines for IMCI in the community during in-country workshops in 2008.<sup>49</sup> Reinforcement of skills learned in the training is supposed to take place through follow-up visits by an iCCM trainer/supervisor four to six weeks later to reinforce the skills in the community. During visits, supervisors should observe HSA consultations with sick children for effective supervision and provide feedback to HSAs as part of on-going, on-the-job training.<sup>50</sup> Skills are reinforced through

<sup>48</sup> Table 2, Section 5.1 of this report

<sup>49</sup> The iCCM training materials for HSAs are based on a package developed by WHO and UNICEF for CHWs entitled *Caring for newborns and children in the community*. The package includes components related to: 1) newborn care; 2) sick children; and 3) care for the well child.

<sup>50</sup> Pariyo GW, Gouws E, Bryce J, et al. Improving facility-based care for sick children in Uganda: training is not enough. *Health Policy Plan* 2005;20 Suppl 1:i58-i68.

clinical training and on-going supervision. The MOH is currently developing a supervision strategy that involves lower cadres of workers who routinely visit HSAs for other programs to also supervise iCCM. The supervision strategy also involves a “mentoring” approach in which clinical staff reinforce HSAs’ clinical skills at health facilities. Details on financial incentives received at these training visits are included in the financial incentives portion of this report (Section 6.1.2).

*IPCA training:* Training of IPCAs focuses on several aspects, including technical information on reproductive health and family planning, informed choice, identifying the target audience, behavior, messaging, and supervision with monitoring.<sup>51</sup> IPC officers receive four days of training and then continue to conduct training for the IPCAs. IPC officers mentor and coach IPCAs and provide continued support twice a month at the IPCA sites. Annual training plans are developed to outline frequency of trainings, and they cover topics on capacity gaps as outlined during supervision visits. Refresher trainings are conducted three months after the initial training. Details on financial incentives received at these training visits are included in the financial incentives portion of this report

The CBDAs and other volunteers, including VHCs, do not receive regular trainings. The last reported training that CBDAs received was in 2013, which focused on HIV testing and counseling (HTC) and not on family planning specifically. A handful of CBDAs reported to have received some per diems for the HIV testing and counseling training at the health centers – details on financial incentives received are included in the financial incentives portion of this report (Section 6.1.2).

#### 6.2.4 Involvement in Community and Community Respect

Twenty-five of the CHWs interviewed mentioned that the community in which they resided and worked respected their position as a CHW. The CHWs described their key motivation for their role as the ability to assist people and they felt honored to do so. One CBDA in Salima said, “...*the community has trust in me, and I have interest in the services, so that is one of the key motivating factors.*” During the course of interviews, many CHWs described how the perception of health has changed in the community where they work. Some volunteers described how their roles in the community had led to marked decrease in home deliveries and reduction in eye infections, and have improved health for mothers and babies.

## 7. DISCUSSION: IMPACT OF INCENTIVES ON CHW PERFORMANCE

CHW performance can be measured through end-user or community-level factors. To better understand the relationship between the incentives provided to CHWs and the corresponding performance, this study examined various program results and outcomes, including number of services provided, estimated demand met and use of services, estimated retention and attrition of CHWs, and relevant evidence related to the quality of services provided. Information on other factors related to CHW performance was also collected, as highlighted in the international literature, including tasks and time spent on delivery, human resource management, health system links and resources, and logistics. The following section provides a summary of these findings along with key lessons. Analyses of interviews and program data, which determined that incentives influenced CHW performance and community health programming, appear below. Differences in performance between CHW cadres are highlighted.

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<sup>51</sup> More details are available in the Reproductive Health IPCA Strategy for Tunza. July 2014.

## 7.1 Impact of Incentives on CHW-Level Factors

The most common financial incentives reported by informants in Malawi included fixed salaries, irregular monetary allowances in the form of per diems, performance-based payments, and income from the sale of medicines and commodities. The most commonly cited nonfinancial incentives included community recognition and respect, acquisition of valued skills, identification (t-shirt or badge), training opportunities, status within communities, and peer support.

The sections below discuss the various merits of these incentives, and their associated impact on performance and retention as measured through program data described in Section 6 of this report.

CHW performance can be measured through individual factors, such as motivation, attitudes, competencies, guideline adherence, and job satisfaction. The following effects of incentives (labeled “F” for financial and “NF” for nonfinancial) were identified through key informant interviews.

### 7.1.1 Motivation

- Salaries (F) were observed to motivate HSAs and encourage accountability in their roles.
- Income from the sale of medicines and performance-based incentives (F) increases motivation among HSAs, IPCAs, and other CHWs.
- Insufficient financial compensation (F) was cited as a demotivating factor and a key reason for attrition among CBDAs and volunteers.
- Per diem payments (F) for attendance at trainings and meetings reportedly serve as an attendance motivator among all cadres and help to offset the opportunity costs of time spent as a CHW.
- Inconsistent per diem rates (F) for trainings were considered demotivating and frustrating among CHWs involved in multiple programs, such as those who work as both CBDAs and as volunteers. The recent establishment of a common per diem rate through the MOH has helped to address this.
- The lack of a guaranteed pension plan (F) reportedly adversely impacted HSAs’ motivation and led to attrition.
- On-the-job training (NF) motivates HSAs and IPCAs to continue in their roles.
- Individual and group supervision (NF) reportedly improves motivation by increasing on-the-job capacity, the quality of services provided, and confidence among community members about the services that are being provided.
- Inconsistent supervision support (NF) left some CBDAs and volunteers feeling disenchanting with the health system, which led to increased attrition.
- Social prestige and community approval (NF) was a motivating factor for all cadres of CHWs.
- A heavy workload (NF) or high ratio of population to HSA can lower motivation among HSAs and lead loss to follow-up. The MOH recognizes this and aims to lower the population to HSA ratio from 1,530:1 to 1,000:1.
- Time spent on tasks unrelated to service delivery (NF) can adversely influence CHW motivation. HSAs and CBDAs reported that time spent traveling to the health center to pick up supplies or completing monthly reports affected their ability to provide health services and was demotivating.

### 7.1.2 Competency

- Per diem payments or the DSA (F), used to encourage both salaried and non-salaried CHW attendance at trainings and meetings, may help to improve CHW knowledge and capacity to provide quality health services, although they may have negative implications and perverse effects (e.g.

misuse as a salary supplement has resulted in excessive absences from duty stations and unproductive trainings, and can negatively impact motivation).

- Conversely, for non-salaried CHWs, insufficient per diem payments (F) may affect participation in trainings, and therefore influence competency.
- Both HSAs and IPCAs receive training and structured opportunities for advancement (NF) which enhances their knowledge and skills.
- Volunteers, including CBDAs and VHCs, also noted that career advancement opportunities (NF), such as peer supervision and further education, can strengthen their skills.

### 7.1.3 Guideline Adherence

- Supervision (NF), consistent among HSAs and variable among other cadres, reportedly helps to ensure that CHWs provide high-quality services.
- The provision of equipment and materials (NF), more regularly available for HSAs who can rely on the support of government officials to obtain a regular stock of medicines, led to better quality services.
- Some informants attributed the high quality of care provided by HSAs (over care provided by volunteers or traditional healers) to being paid a regular salary (F).
- The provision of tools such as mobile phones (NF) helped HSAs to improve data visibility and reduce stock-outs of health products at the village clinic levels (e.g. cStock).<sup>52</sup>

### 7.1.4 Job Satisfaction

- HSAs reported satisfaction with their roles because as salaried, government employees, they were recognized by their supervisors and community (NF).
- Previous studies of retention and job satisfaction among HSAs in Malawi have concluded that recognition, salary, training opportunities and safety were significantly associated with job satisfaction.<sup>53</sup> Similarly, the HSAs interviewed in this study reported that they were satisfied in their roles since they were recognized by their supervisors as well as their community, and also had more training opportunities than others who may be in a volunteer role.
- Both financial and nonfinancial factors that improved motivation also played a role in improving job satisfaction among CHW cadres.

While many assume that nonfinancial incentives are a relatively cheap way to improve CHW motivation and performance, the costs for programs can be considerable, particularly for those that have high rates of CHW attrition resulting in re-training and re-equipping CHWs.<sup>54</sup> The costs of equipment provided to different CHWs in Malawi was unavailable for this study, but should be explored in further research to ascertain the best use of funds, ways to motivate CHWs, and ultimately improve their performance.

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<sup>52</sup> CStock was designed in partnership between the Supply Chain for Community Case Management (SC4CCM) Project and Malawi's Ministry of Health, and was implemented by JSI Research and Training Institute, with funding from the Bill and Melinda Gates Foundation between 2009-2015.

<sup>53</sup> Fogarty, L et al. Job satisfaction and retention of health care providers in Afghanistan and Malawi. *Human Resources for Health* 2014, 12:11

<sup>54</sup> Collins, D et al. "The costs of integrated community case management (iCCM) programs: a multi-country analysis." *Journal of Global Health* (2014): 4(2). doi: 10.7189/jogh.04.020407.

## 7.2. Impact of Incentives on End-User/Community-Level Factors

### 7.2.1 Population and Geographic Coverage Targets

Among all the CHW cadres interviewed, HSAs, which have paid salaries and receive regular training and support, had the highest reported geographic coverage. An estimated 9,907 HSAs are covering all 28 districts in Malawi. IPCAs currently cover four districts, but there is a plan to scale up services. The population and geographic coverage targets of unpaid CHW cadres varied and were considerably lower since the volunteer programs operate on an ad-hoc basis for a limited period of time and had fewer links to the broader health system at the health facility level (which in turn influenced CHW access to equipment, supplies, and referral systems).

The total target populations were provided by the IMCI Unit at the MOH as well as the organizations in-charge of the family planning volunteers. The number of children under five years of age was estimated to make up 17% of the total population. Fertility is considerably higher in rural areas (five births per woman) than in urban areas (three births per woman).<sup>55</sup> Table 5 shows a detailed break-down of the population and geographic coverage as well as the number of CHWs supported by each program.

*Lesson: As evidenced by HSAs, salaried CHWs may achieve greater population and geographic coverage compared to other CHW cadres that do not receive fixed salaries or regular allowances.*

**Table 5: Population and geographic coverage of CHW cadres**

|   | HSAs       | FP volunteers (social franchise) | FP volunteers (CBDAs) | VHCs       | Other |
|---|------------|----------------------------------|-----------------------|------------|-------|
| <b>PROJECT OVERVIEW</b>                       |            |                                  |                       |            |       |
| Target population                             | 15,765,851 |                                  | NA                    | 15,765,851 | NA    |
| Children >5 years (17%)                       | 2,647,891  |                                  | NA                    | 2,647,891  | NA    |
| Regions with coverage                         | 3          |                                  | NA                    | 3          | NA    |
| Districts with coverage                       | 28         |                                  | NA                    | 28         | NA    |
| Total number of health facilities in CHW area | 616        |                                  | NA                    | 582        | NA    |
| Number of hard - to - reach areas             | 4,592      |                                  | NA                    | 4,592      | NA    |
| Total number of CHWs                          | 9,907      |                                  | NA                    | 3,138      | NA    |

\*NA marked columns indicate CHW categories for which data was not available from the partner

†Corresponding to 40% of the total population

Data source for HSAs and VHCs is CHW utilization data from IMCI Unit, MOH

<sup>55</sup> National Statistical Office. 2015. Malawi MDG Endline Survey 2014. Zomba, Malawi: National Statistical Office. Accessed 09/20/2015 from [http://www.nsomalawi.mw/images/stories/data\\_on\\_line/demography/MDG%20Endline/MES%202014%20Report.pdf](http://www.nsomalawi.mw/images/stories/data_on_line/demography/MDG%20Endline/MES%202014%20Report.pdf)

## 7.2.2 Numbers of Services Provided

Reliable caseload data were only available for HSAs. Based on the target population in need of iCCM services and the numbers of HSAs trained in iCCM, on average, each HSA provides 29 iCCM treatments per month. This frequency allows HSAs to maintain competency and be regularly assessed.<sup>56</sup> Often the numbers of services provided were influenced by nonfinancial incentives such as supportive supervision and training and the availability of medicines and equipment. Normative caseload data for IPCAs indicated the numbers of women counseled on reproductive health as almost 75 per month and 50 women referred monthly to the Tunza clinic.

Services provided by HSAs also had varying levels of uptake depending on how active the village clinics were and how much additional support they had in terms of stocking medicines, etc. from various implementing partners. Data on services provided by CBDAs were unavailable—these data were typically kept at the district level, and most data on the family planning services and commodities these CHWs provided may be subsumed within data under HSAs. Data from volunteer programs such as World Vision or Mai Khanda were also not available, and cases referred to HSAs or monitored under supervision of VHCs are not regularly recorded.

Variations in the availability of program data are a result of the package of services provided by CHWs and differences in program indicators. Programs vary in terms of their geographic coverage, regional variations of disease burden, and access to health services. For example, certain regions of the country have a higher incidence of malaria and diarrhea, and care-seeking at community levels also varies. Also, some districts and regions have better access to primary health care. The uptake of services could depend on a number of supply- and demand-side factors as well as the maturity of the community health program.

*Lesson: HSAs and IPCAs, CHW cadres receiving regular support through financial and nonfinancial incentives, are regularly assessed and therefore able to maintain competency and provide high numbers of services.*

**Table 6: CHW services provided, nationally**

|   | HSAs                  | IPCAs                   | CBDAs                 | Volunteer programs | VHCs |
|---|-----------------------|-------------------------|-----------------------|--------------------|------|
| Reporting period  | January-December 2014 | July 2014-December 2014 | January-December 2014 | NA                 | NA   |
| <b>Family Planning Services</b>   |                       |                         |                       |                    |      |
| Number of persons receiving 3 months' supply of condoms   | 212,320               | NA                      | NA                    | -                  | -    |
| Number of persons receiving 3 months of oral pills  | 145,067               | -                       | NA                    | -                  | -    |
| Number of persons receiving Depo-Provera  | 1,522,510             | -                       | -                     | -                  | -    |
| Number of men and women counseled on reproductive health issues via <b>group</b> education sessions | -                     | 26880                   | -                     | -                  | -    |

<sup>56</sup> Literature has suggested that for CHWs to maintain their skills they should see at least 10 cases monthly. Adapted from Collins, D et al. "The costs of integrated community case management (iCCM) programs: a multi-country analysis." *Journal of Global Health* (2014): 4(2). doi: 10.7189/jogh.04.020407.

|   |           |       |   |   |   |
|---|-----------|-------|---|---|---|
| Number of men and women counseled on reproductive health issues via one-on-one or couples counseling sessions | -         | 13440 | - | - | - |
| Number of women referred to private social franchise clinics  | -         | NA    | - | - | - |
| <b>iCCM Services</b>  |           |       |   |   |   |
| Total number of iCCM services provided  | 1,594,613 | -     | - | - | - |
| Estimated total number of iCCM services per capita per year   | 1.66      | -     | - | - | - |
| Total number of iCCM cases provided per CHW per month (average)*  | 29.1      | -     | - | - | - |
| Total fever cases per year**  | 874,124   | -     | - | - | - |
| Total acute respiratory infection cases treated per year  | 511,839   | -     | - | - | - |
| Total diarrhea cases treated per year   | 208,650   | -     | - | - | - |

\*Based on the 4,572 HSAs trained in iCCM so far, not the total number of HSAs in Malawi, i.e. 9,907

\*\*HSAs do not currently use rapid diagnostic tests for malaria

NA indicates that the data on indicated services were not available from the CHWs

- indicates that these services were not provided by the CHW cadre (and therefore no data were available)

In terms of other services, the Malawi Service Provision Assessment (2014) reported that only 1% of women with a live birth in the past five years in need of antenatal care used an HSA or community provider. Most women in need of such services sought out nurses/midwives or skilled attendants such as clinical officers.<sup>57</sup>

### 7.2.3 Estimated Demand and Use of Services

To calculate the estimated demand met and use of services provided by CHWs, this study considered the estimated catchment population and the expected number of services for each condition, based on disease-specific incidence rates. Due to data availability, an estimate of the use of services was only feasible for services provided by HSAs. The estimated demand met was calculated using an assumption that 40% of the population is living in hard-to-reach areas. Within these areas, the MOH goal is for each HSA to serve a total catchment population of around 1,000 people, which may encompass one or more villages. In 2014, the population of hard-to-reach areas ranged from 965 to almost 2,000 people, with a mean of 1,530.<sup>58</sup> While these estimates would be worth examining using subnational incidence rates (especially for hard-to-reach areas), HSAs covered more than 100% of expected cases of diarrhea, pneumonia, and malaria among children (estimated to be 17% of the population).

Incidence rates, when available, were considered for each of the interventions provided by CHWs. Incidence rates are referred to as the number of episodes per child per year. Incidence rates for pneumonia, diarrhea, and malaria were not available for Malawi at the time of this study. Instead, internationally recognized incidence figures in sub-Saharan Africa were used: 0.56 episodes per child per year for malaria; 0.33 episodes per child per year for pneumonia, and 2.73 episodes of diarrhea.<sup>59-60-61</sup>

<sup>57</sup> MOH [Malawi] and ICF International. 2014. *Malawi Service Provision Assessment (MSPA) 2013-14*. Lilongwe, Malawi, and Rockville, Maryland, USA: MOH and ICF International.

<sup>58</sup> Estimates obtained from IMCI Unit, Ministry of Health, Malawi

<sup>59</sup> Korenromp E., Roca-Feltre A., Carneiro I. Malaria incidence estimates at country level for the year 2004. World Health Organization, Roll Back Malaria; Geneva, Switzerland. March 2005.

<sup>60</sup> Rudan, Igor, Cynthia Boschi-Pinto, Zrinka Biloglav, Kim Mulholland, Harry Campbell. "Epidemiology and etiology of childhood pneumonia," *Bulletin of the World Health Organization* (2008):86(5):408-416.

A WHO Africa regional estimate for pneumonia incidence was used because a country-specific rate was unavailable.

Recent data from the Malawi Millennium Development Goal (MDG) Endline Survey conducted in 2014 by the National Statistical Office in Malawi has indicated the community health providers are often the source of advice and treatment for a variety of ailments, albeit to a lesser degree than health care providers at facilities. Of the children with diarrhea, 12% were treated by a community health provider (including public and private providers); and of those with symptoms of acute respiratory infection, 9.2% sought advice or treatment from community health workers. The treatment was received mostly from public health facilities (70%). It was received in 8% of cases from community health workers and 15% of cases from other sources. Services for children with fever were provided mainly by the public sector (56%), compared with community health provider (9%), private (4%) CHAM/mission hospitals (3%), and other sources (14%). However, no advice or treatment was sought in 24% of the cases.<sup>62</sup>

The table below shows the summary of incidence rates considered for this analysis. Given that disease incidence rates vary considerably by region, specific regional incidence rates, if available, could be used in this analysis to gain a better understanding of the use of services for each of the various community health programs. However, for the purpose of this analysis, only national incidence rates were used. Incidence rates for hard-to-reach areas that are targeted by CHWs were not available, but could be higher than the national averages.

**Table 7: Incidence rates for main childhood illnesses treated by CHWs**

| Service   | Incidence Rate                         | Source                        |
|-----------|--|-------------------------------|
| Pneumonia | .33 episodes/child/year <sup>63</sup>  | Rudan et al., 2008            |
| Diarrhea  | 2.73 episodes/child/year <sup>64</sup> | Walker et al., 2012           |
| Malaria   | .56 episodes/child/year <sup>65</sup>  | WHO World Malaria Report 2008 |

The substantial difference between the expected number of cases and actual number of cases treated indicates that better data on subnational or hard-to-reach area-specific incidence of the disease are needed in order to ascertain the coverage of services provided by HSAs.

<sup>61</sup> Fischer, Walker et al. Diarrhea incidence in low- and middle-income countries in 1990 and 2010: a systematic review. *BMC Public Health* 2012, 12:220.

<sup>62</sup> National Statistical Office. 2015. Malawi MDG Endline Survey 2014. Zomba, Malawi: National Statistical Office. Accessed 09/20/2015 from

[http://www.nsomalawi.mw/images/stories/data\\_on\\_line/demography/MDG%20Endline/MES%202014%20Report.pdf](http://www.nsomalawi.mw/images/stories/data_on_line/demography/MDG%20Endline/MES%202014%20Report.pdf)

<sup>63</sup> Latest estimates from the Multiple Indicator Cluster Surveys (MICS) 2014 indicate that 7.8% of the children under age 5 had ARI symptoms in the last two weeks. More information available here:

[http://www.nsomalawi.mw/images/stories/data\\_on\\_line/demography/MDG%20Endline/MES%202014%20Report.pdf](http://www.nsomalawi.mw/images/stories/data_on_line/demography/MDG%20Endline/MES%202014%20Report.pdf)

<sup>64</sup> Latest estimates from the MICS 2014 indicate that 24% of the children under age 5 had diarrhea in the last two weeks. More information available here:

[http://www.nsomalawi.mw/images/stories/data\\_on\\_line/demography/MDG%20Endline/MES%202014%20Report.pdf](http://www.nsomalawi.mw/images/stories/data_on_line/demography/MDG%20Endline/MES%202014%20Report.pdf)

<sup>65</sup> Latest estimates from the MICS 2014 indicate that 37.2% of the children under age 5 had fever in the last two weeks. Of these, almost 88% received an ACT. More information available here:

[http://www.nsomalawi.mw/images/stories/data\\_on\\_line/demography/MDG%20Endline/MES%202014%20Report.pdf](http://www.nsomalawi.mw/images/stories/data_on_line/demography/MDG%20Endline/MES%202014%20Report.pdf)



**Table 8: Estimated demand and use of services for selected indicators**

| Services                | Cases treated among target population (per year) | National incidence rate (case per child per year) | Cases expected among target population (per year) |
|-------------------------|--|---|---|
| Pneumonia cases treated | 511,839  | 0.33  | 349,522   |
| Diarrhea cases treated  | 208,650  | 2.73  | 2,891,497   |
| Fever cases (treated)   | 874,124  | 0.56  | 593,128   |

Low and high estimated use of CHW services could be attributed to a number of supply- and demand-side factors, including the availability of CHWs, availability of medicines, and preference to seek services at the village clinic or from another health provider. Moreover, these figures could be a result of the estimated population figures and/or incidence rates which may vary considerably by region.

*Lesson: The uptake of community health services depends on a number of supply- and demand-side factors. HSAs in Malawi, supported with regular salaries and nonfinancial support such as supervision and training, conduct curative and preventive health activities and are successful in meeting the demand for community health services in hard-to-reach areas.*

#### 7.2.4 Attrition of CHWs

None of the CHW cadre program staff interviewed reported data on attrition pertaining to CHWs. Common reasons for attrition cited by volunteers such as CBDAs and those from World Vision, Mai Khanda, etc. included migration to rural areas due to marriage, food insecurity, better economic opportunities, or death. Based on interviews with program staff, CHWs frequently abandon their role due to lack of motivation or the opportunity costs of volunteerism (i.e. limited economic opportunities, high costs of communication and transport, complaints from family regarding continued absence from home) and therefore seek more lucrative opportunities. One of the key contributors in alleviating attrition, however, as reported by the CHWs interviewed in this study, was the trust that CHWs gained with their community: good relations with community members earned volunteers much respect in the community, leading to longer time spent on the job as a CHW.

Interviews with HSAs suggest that their colleagues have left because of better opportunities that provided alternative financial incentives, such as a guaranteed pension plan. The IPCA program has only been in effect for six months, and has not had any reported attrition thus far, primarily because the varied incentives encourage IPCAs to stay in their role and provide requisite services.

*Lesson: Social prestige and community approval, often linked with the incentives CHWs received, were key factors in achieving higher CHW retention for some CBDAs and other volunteers. Financial incentives, such as allowances, and nonfinancial incentives, such as supervision and training as provided to HSAs and IPCAs, were also key to improving motivation and retention of CHWs. Of course, non-programmatic attributes may also influence attrition.*

#### 7.2.5 Quality of Services Provided by CHWs

Quality improvement mechanisms, such as adherence to treatment guidelines, and use of peer review, training, and performance standards enable CHWs to learn continually and change the processes of care delivery with the goal of improved health outcomes.

This study did not include an in-depth assessment of the quality of services provided by CHWs or the quality of supervision and trainings. Instead, informants were asked about quality improvement mechanisms, such as adherence to treatment guidelines, and the use of peer review, training, and performance standards. Among the CHW cadres interviewed, only HSAs and IPCAs followed standard protocols and guidelines and reported that these tools allowed for a better grasp of their roles and responsibilities. Examples of the forms HSAs use to report data are available in Annex 6.

IPCAs are monitored through IPC officers who ensure monitoring, supervision, and feedback to evaluate IPC delivery and reinforce performance in accordance with the overall IPC strategy. A standardized tool is used to review lessons learned, challenges encountered in the field, and discuss best practices to strengthen the program. Quality of care is measured through regular monitoring of key forms: the daily activity report form used to register individual target groups reached, IPC referral vouchers, IPC supervisor forms, and target audience forms. The IPC officers closely monitor measures of efficiency and effectiveness of the IPC strategy. Efficiency is described as the number of women reached (through counseling or those who obtained a family planning service) by the number of referral cards redeemed. Effective referrals are defined as persons who showed up at a clinic after talking to IPC agents – usually measured through referral cards or intake questions at the clinic asking women how they heard about the clinic.

In lieu of conducting interviews with community members, this study examined the quality of care provided by HSAs through interviews with VHC members. VHCs often work together with HSAs at the village clinic by safeguarding the drug box and they help oversee the activities of the village clinic as well. All 14 different VHCs interviewed for this study reported that they conducted community monitoring to ensure that services being provided at the clinic were of certain standards and that the community members were satisfied with the quality of care. One VHC member in Machinga District reported,

*“Frequent meetings with the volunteers allow us to ensure that they tell us their problems and we also tell them our problems and agree on a way forward.”*

Others mentioned that their interaction with the community was important to ensure public health

*“Through reporting, we monitor performance. Patients report on how they are treated regularly, and if there are outbreaks we look to see that people are recovering and that such outbreaks do not reoccur.”*  
VHC member in Machinga District

The VHC members indicated that refresher trainings and more meetings would help prepare HSAs for the challenges faced in the community. At the same time, however, the VHCs also indicated the need for training on how to standardize their approach and interactions with HSAs so as to better monitor their activities. CBDAs and volunteers reported that community feedback influenced their performance.

*Lesson: The use of formal guidelines and protocols, common among HSAs and IPCAs, as well as regular community feedback, can contribute to improved quality of services and reporting.*

### 7.2.6 CHW Availability and Service Delivery Assumptions

Excessive workload can result in lowered job satisfaction, motivation, and CHW performance, and can be influenced by the time spent on tasks, or CHW availability, as well as the ratio of community members to CHWs. While the latter information was not always available for all CHWs in Malawi, CHWs reported that they were available to provide services at an average of five days per week throughout the year. CHWs reported working between one and eight hours per day. However, many

CHWs noted that they are also available on-call if needed. HSAs and IPCAs reported working between 5-7 hours daily. On average, the IMCI Unit reported that the population: HSA ratio is currently 1,530:1. The MOH is aiming to lower this to 1,000:1 so as to minimize the workload of HSAs and ease the burden of services that HSAs need to provide. A high number of patients can increase community expectation, result in increased loss to follow-up, and lowered motivation, as was observed by a few HSA and senior HSAs in this study. A low amount of time spent on clients, and a higher CHW-population ratio can influence the number of contacts made with patients, decreasing CHW competency.

Table 9 provides an overview of CHW work activities and time per activity. Due to practical considerations, this study did not conduct direct observations of labor time, nor were CHWs asked to keep timesheets. The study asked CHWs to assess workload through retrospective estimation, specifically to estimate their average workload over the past two weeks and also estimate a reasonable number of hours they may possibly work per week based on time available. CHWs were also asked about other income-generating activities. In addition, they were asked whether they knew at the time of being enrolled as volunteers that they would not be compensated. Almost all volunteers interviewed claimed they knew that fact, but the idea of nonfinancial incentives motivated them to take on the tasks that were required.

**Table 9: CHW workload**

|  | <b>HSAs</b>   | <b>IPCAs</b>   | <b>CBDAs</b>   | <b>Volunteer programs</b>   | <b>VHCs</b>  |
|--|---|--|--|---|--|
| Work activities                              | Provide a package of curative and preventive services and act as referral system in community to primary health centers | Conduct reproductive health education sessions, distribute family planning commodities, e.g. condoms, refer women to clinics | Mobilizing community members, educating them on family planning methods, providing condoms | Mobilizing community members, educating them on family planning methods, conducting health education sessions | Mobilizing community members, educating them on various health issues, providing necessary support to HSAs |
| Place of consultation                        | Village clinics and health centers  | Community  | Community  | Community   | Village clinic and community   |
| Median number of days worked in last 2 weeks | 10 days   | 8 days   | 3-4 days   | 4-5 days  | 10 days  |
| Median time per visit/consultation           | 30-60 minutes   | 1 hour for group session, 15-25 minutes for individual session   | 30-45 minutes  | 30 minutes  | Varies   |

Because CHWs may be involved in multiple community-based programs, it is difficult to discern how many hours each CHW devotes to each individual program. Based on interviews with volunteer CHWs, they reportedly worked only a few days per month to mobilize community members and educate them on available family planning methods and other health issues. Time spent by CHWs seemed to vary depending on the health interventions they are tasked with providing. For example, HSAs spent between 30 and 60 minutes diagnosing and treating cases of diarrhea, pneumonia, and malaria among children under age five at village clinics. They also spent small amounts time counseling new family planning users. None of the CHWs interviewed reported that they spent resources (monetary or otherwise) in helping

patients reach health facilities, if needed. However, HSAs did rely on support from VHCs to convince patients to go to health facilities if patients were unwilling to do so.

CHWs reported living an average of two hours (one way) from the closest health facility by walking. The further homes were 6-10 km away. Although not completely indicative, these figures do provide some insight into the opportunity costs CHWs experience in their role in providing services to their communities.

*Lessons: Heavy workloads and time commitments can translate to lowered motivation and performance among various cadres of CHWs.*

## 8. RECOMMENDATIONS

The findings of this study demonstrate that CHW performance in Malawi is highly influenced by the provision of both financial and nonfinancial incentives. Variations in design of CHW programs and the use of incentives have considerable influence on CHW performance. Based on the results of this study, there are a number of recommendations for governments and organizations to consider when implementing, adopting, or scaling up a community health program. The following lessons are intended to improve the performance of CHWs, and track related monitoring and the delivery of community-based health services.

1. Financial incentives serve to motivate CHWs in Malawi and serve to encourage them to be accountable to their job descriptions and be accountable to providing services in hard-to-reach areas. Such incentives can also lead to improved CHW knowledge, performance, quality of services provided, and reporting rates. However, consistency in the timing and amount of compensation, whether for salary, allowances, or per diem payments, is critical to sustain motivation.<sup>66</sup>
2. Nonfinancial incentives, such as training and opportunities for advancement and professional development, are important motivators for all types of CHWs. These incentives can serve to both motivate CHWs and increase capacity. They should be included in the design of both paid and volunteer CHW programs.
3. End-user or community-level measures for coverage and quality should be consistently defined and included in all reporting for community health programs. Evidence from Malawi has shown that evaluation of performance among CHW cadres is feasible when such program data are available (for example, through analysis of estimated demand met and use of services). This type of data management may provide opportunities to assess CHW performance and re-design intervention programs. Program indicators, such as CHW attrition, estimated demand met, use of services, and perceived quality (as measured through benchmarking of indicators and guideline adherence) should be consistently defined and included in all reporting for community health programs.
4. Implementing agencies, government partners, and donors supporting community health programs should collaborate to standardize incentives for CHWs. Program aspects such as trainings, reporting forms, reporting frequency, supervision, equipment, and available resources for support staff and supervisors should be complementary. The harmonization and integration of programs will help to

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<sup>66</sup> Kok, MC, Dieleman, M, Taegtmeier, M, et al. Which intervention design factors influence performance of community health workers in low- and middle-income countries? A systematic review. *Health Policy and Planning*. 2014.

reduce duplicative costs and improve CHW performance by influencing CHW capacity, use of services, and CHW motivation.

Based on this study and a review of both qualitative and quantitative data across multiple community health programs in Malawi, CHW performance and attrition (as measured through the results presented in Section 6) are highly influenced by the provision of both financial and nonfinancial incentives, each with their own unique advantages and disadvantages. However, CHW performance and attrition are also influenced by complex factors such as the availability of commodities, the environment of a CHW, the perceived quality of services provided, and his or her relationship with the community, among other factors.<sup>67</sup> As indicated in Table 10 below, when incentives are combined with such complex factors they can influence performance through various means, particularly by improving the quality and use of services and influencing attrition of CHWs.

## 9. CONCLUSIONS

Incentives must be sustained over time to ensure that CHWs obtain the needed support to provide access to high-quality health services. Frequently, interruptions in the delivery of health services are the result of completed or expired funding which supports key program components, including supervision, trainings, and commodities. Supporting volunteers through regular incentives and harmonized CHW programs can help to improve CHW capacity and provide valuable opportunities to link the community-based system with the broader health system.

This study aimed to identify and analyze the impact of incentives on CHW performance in Malawi. The findings and recommendations may be useful for countries that are considering introducing, modifying, or scaling up a community health program. As governments analyze efficiencies in the allocation of resources across health systems components, it is important to improve the planning of community health activities and optimize existing human resources for health. By understanding how design features of community-based programs affect CHW performance, interventions can be shaped and adjusted to achieve optimal health impact.

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<sup>67</sup> Karabi, Bhattacharyya; Winch, Peter; LeBan, Karen; and Tien, Marie. "Community health worker incentives and disincentives: how they affect motivation, retention, and sustainability." Published by the Basic Support for Institutionalizing Child Survival Project (BASICS II) for the United States Agency for International Development. Arlington, Virginia, October 2001.

**Table 10: Summary table across CHW cadres interviewed in Malawi**

|  | HSA   | IPC   | CBD  | VHC   | Volunteer programs   |
|--|---|---|--|---|--|
| Target population                                | 15,765,851  | NA  | NA   | 15,765,851  | NA   |
| Children >5 years (17%)                          | 2,647,891   | NA  | NA   | 2,647,891   | NA   |
| Regions with coverage                            | 3   | NA  | NA   | 3   | NA   |
| Districts with coverage                          | 28  | 12  | NA   | 28  | NA   |
| Total number of health facilities in CHW area    | 616   | 40  | NA   | 582   | NA   |
| Number of hard-to-reach areas                    | 4,592   | NA  | NA   | 4,592   | NA   |
| Total number of CHWs                             | 9,907   | 40  | NA   | 3,138   | NA   |
| <b>Financial incentives</b>                      |   |   |  |   |  |
| Salary   | ✓   |   |  |   |  |
| Per diem allowance                               | ✓   | ✓   | ✓  |   |  |
| User fees  |   |   |  |   |  |
| Performance-based incentives                     |   | ✓   |  |   |  |
| <b>Nonfinancial incentives</b>                   |   |   |  |   |  |
| Education and improved capacity of community     | ✓   | ✓   | ✓  | ✓   | ✓  |
| Equipment and materials                          | ✓   | ✓   | ✓  |   | ✓  |
| Supervision                                      | ✓   | ✓   |  |   | ✓  |
| Individual recognition from community and family | ✓   | ✓   | ✓  | ✓   | ✓  |
| Job advancement                                  | ✓   | ✓   | ✓  | ✓   | ✓  |
| <b>CHW workload</b>                              |   |   |  |   |  |
| Work activities                                  | Provide a package of curative and preventive services and act as referral system in community to primary health centers | Conduct reproductive health education sessions, distribute family planning commodities e.g. condoms, refer women to clinics | Mobilizing community members, educating them on family planning methods, providing condoms | Mobilizing community members, educating them on family planning methods, as well as doing health education sessions | Mobilizing community members, educating them on various health issues, providing support to HSAs |

|   | HSA                                | IPCAs                                     | CBDAs         | VHCs       | Volunteer programs           |
|---|------------------------------------|---|---------------|------------|------------------------------|
| Place of consultation   | Village clinics and health centers | Community                                 | Community     | Community  | Village clinic and community |
| Median number of days worked in last 2 weeks  | 10 days                            | 8 days                                    | 3-4 days      | 4-5 days   | 10 days                      |
| Median time per visit/consultation  | 30-60 minutes                      | 1 hr group session; 15-25 min. individual | 30-45 minutes | 30 minutes | Varies                       |
| Services provided, nationally   |                                    |   |               |            |                              |
| Reporting period  | Jan-Dec 2014                       | July-Dec 2014                             | Jan-Dec 2014  | NA         | NA                           |
| Family planning services  |                                    |   |               |            |                              |
| Number of persons receiving 3 months' supply of condoms   | 212,320                            | NA  | NA            | -          | -                            |
| Number of persons receiving 3 months' supply of oral pills  | 145,067                            | -   | NA            | -          | -                            |
| Number of persons receiving Depo-Provera  | 1,522,510                          | -   | -             | -          | -                            |
| Number of men and women counseled on reproductive health issues via <u>group</u> education sessions           | -                                  | 26,880                                    | -             | -          | -                            |
| Number of men and women counseled on reproductive health issues via one-to-one or couples counseling sessions | -                                  | 13,440                                    | -             | -          | -                            |
| Number of women referred to private social franchise clinics  | -                                  | NA  | -             | -          | -                            |
| iCCM services   |                                    |   |               |            |                              |
| Total number of iCCM services provided  | 1,594,613                          | -   | -             | -          | -                            |
| Estimated total number of iCCM services per capita per year   | 1.66                               | -   | -             | -          | -                            |
| Total number of iCCM cases provided per CHW per month (average)*  | 29.1                               | -   | -             | -          | -                            |
| Total fever cases per year**  | 874,124                            | -   | -             | -          | -                            |
| Total acute respiratory infection cases treated per year  | 511,839                            | -   | -             | -          | -                            |
| Total diarrhea cases treated per year   | 208,650                            | -   | -             | -          | -                            |

\*Corresponding to 40% of the total population

Data source for HSAs and VHCs is CHW use data from IMCI Unit, MOH

\*Based on the 4,572 HSAs trained in iCCM so far, not the total number of HSAs in Malawi, i.e. 9,907

\*\*HSAs do not currently use rapid diagnostic tests to test for malaria

NA indicates that the data on indicated services were not available from the CHWs

- Indicates that these services were not provided by the CHW cadre (and therefore no data were available)

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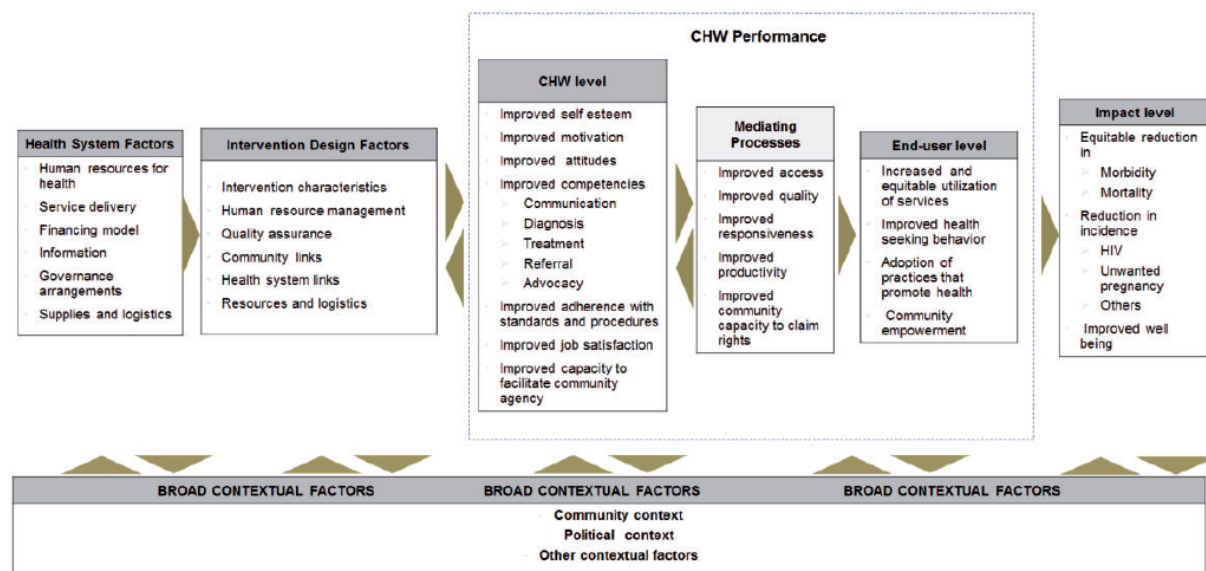
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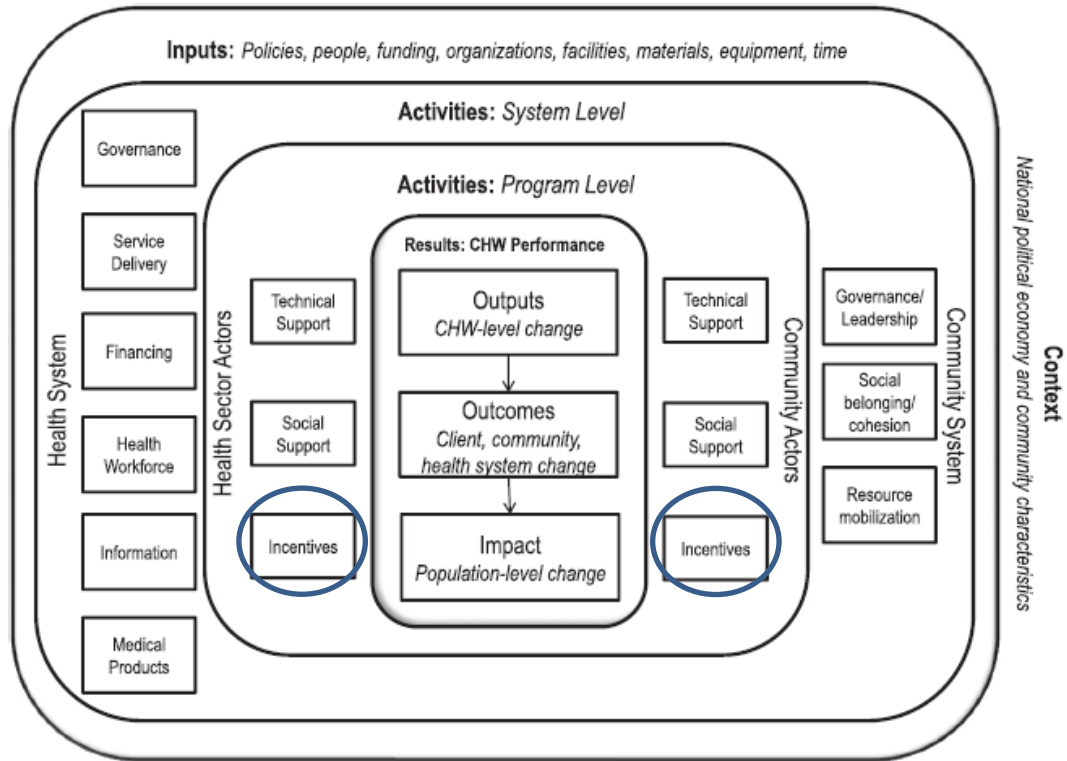
# ANNEX I: Conceptual Frameworks of Factors Influencing CHW Performance



## Factors influencing CHW performance <sup>68</sup>

*This framework measures CHW performance at the level of the individual CHW through factors such as self-esteem, motivation, attitudes, competencies, adherence to guidelines, job satisfaction, and capacity to facilitate community empowerment. It also measures performances through the end-user via increased use of services, improved behavior, and adoption of best health-promoting practices. Intermediate measures such as quality, access, and productivity help to quantify CHW performance. Under this framework, CHW performance is influenced by: a) contextual factors (related to political and community contexts); b) health system factors (such as the ways in which health care is financed and organized) and; c) intervention design factors.*

<sup>68</sup> Kok MC, Dieleman M, Taegtmeier M, et al. Which intervention design factors influence performance of community health workers in low- and middle-income countries? A systematic review. Health Policy and Planning. 2014.



### Community health worker generic logic model<sup>69</sup>

This framework describes how CHW performance is a function of high-quality CHW programming and scaled through the use of health system functions and community systems. These systems mobilize inputs and processes, including technical and social support, as well as incentives to achieve CHW performance objectives.

<sup>69</sup> Naimoli J et al. "A community health worker 'logical model': towards a theory of enhanced performance in low- and middle-income countries." *Human Resources for Health* (2014), 12:56: 1-16.

## ANNEX 2: CHW Questionnaire



### Community Health Worker Incentives – Lessons Learned and Best Practices



Type of interview: CHW

Good day! My name is \_\_\_\_\_

We are here on behalf of the Ministry of Health in Malawi and Management Sciences for Health (MSH) conducting a study to assist various implementing partners understand community health service provision in Malawi. This study is possible through the support of United States Agency for International Development and implemented under the African Strategies for Health (ASH) project.

You were selected to participate in this study. We will be asking several questions about the types of services that are provided, as well as about the training and incentives provided to conduct these activities.

**(IF YOU ARE A CHW**, we are particularly interested in what drives you to continue to be one.)

The information you provide us would be used to plan service improvements or further studies of services, but would not in any way evaluate your work or performance.

Neither your name nor that of any health worker respondents participating in the study will be included in the dataset or in any report; however, we ask for your help to ensure that the information we collect is accurate.

You may refuse to answer any question or choose to stop the interview at any time.

Do you have any questions about the study?

Do I have your agreement to proceed? May I begin?

YES / NO

Thank you in advance for your time.

Date and time of interview:

Location of interview:

Name of person being interviewed:

Title:

Contact number:

#### **A) Type of CHW**

- 1) How many years of education have you completed in total, starting from primary, secondary and further education?
- 2) What is your current occupational category or qualification?

- 3) When did you graduate with this qualification? If no technical qualification, what year did you complete basis training for current occupational category?
- 4) In what year did you start working in this facility?
- 5) How were you selected for your job?
- 6) What type of CHW category do you belong to? If Health Surveillance Assistant (HSA), then regular or senior HSA?
- 7) Please state your job description.
- 8) Do you have to sometimes conduct activities outside your job description? If so, what? And what % of your overall activities are these?
- 9) At what type of facility do you provide services (e.g. health post, clinic, etc.)?
- 10) Who is the managing authority for this facility: government, CHAM, private, NGO, company?

### **B) Population served by CHW**

- 1) What is the total population of the CHW's village or community?
- 2) How many households in the village?
- 3) How many clients do you serve?
- 4) Do you go to the patient or does the patient come to you?
- 5) Is there more than one CHW working in this village?
- 6) If yes (and if so, describe the services they provide).
- 6a) Do you divide the population between the CHWs, or cover the entire population or alternate?
- 6b) What is the total population served by the CHWs?
- 6c) What are the total number of households covered by the CHWs?
- 7) By walking distance (or other transport), how long does it take to get to the furthest home?
- 8) Are there mechanisms (such as peer support, mobile phones, etc.) connecting you to the other CHWs in the area?

### **C) CHW Time**

- 1) In general, how many hours per day are you available to work as a CHW?
- 2) In general, how many days per week are you available to work as a CHW?
- 3) In general, do you work as a CHW all year, or are there days/months that you take off?
- 5) How many hours per day is the maximum you could work as a CHW?
- 6) How much time do you spend on providing services?

### **D) Supervision and Reporting – for HSAs, this should refer to both a) HSA supervisor at the health center; and b)CCM-supervisor**

- 1) With what frequency do you travel to the health center to give your reports or have data validation?
- 2) With what frequency do you fill out regular CHW or community health activity reports specific to diseases? If HAS, how frequently do you fill out: a) Sick Child Recording Form; b) iCCM Register; and c) iCCM reports?

- 3) How many days per month do you spend filling out the monthly report?
- 4) With what frequency do you travel to the health center to re-stock on drugs and supplies?
- 5) How long does it take to go to the health center, and how far away is it?
- 6) Do you spend the whole day to go to the health center (round trip)?
- 7) When was the last time you received a supervision visit by your supervisor?
- 8) Are there opportunities to supervise other CHWs ("peer supervision")? This refers to other HSAs (and separately, if they supervise CHVs such TBAs or CBDAs).
- 9) On the days that you go to the facility (for a CHW meeting or reporting), are you able to do your CHW activities, like seeing patients or following up?

### **E) Meetings and Trainings**

- 1) Do you attend meetings or trainings at the facility (besides those for supervision or reporting)?
- 2) Was the in-service training, training update, or refresher within the past 24 months or more than 24 months ago?
- 3) What kinds of training do you receive?
- 4) Was the CHW paid a per diem or incentive? If yes, how much? Were travel costs provided?
- 5) Do you attend any meetings with the village committee? If so, what kind of community support is provided?
- 6) Do you receive training in areas not directly relevant to the services you provide (but may help generate supplementary income)?
- 7) Are there opportunities to progress to peer-trainer level to train your other colleagues?

### **F) CHW Services**

- 1) What illnesses are you trained to treat? What services are you trained to provide?
- 2) Assuming you had the medicines you needed, were you treating the same illnesses in 2013?
- 3) How long does it take you from the time the mother comes with a sick child until when she leaves?
- 4) In your current position, do you personally provide any child vaccination services?
- 5) In your current position, do you personally provide any child growth monitoring services?
- 6) In your current position, do you personally provide any child curative care services?
- 7) REFERRALS
- 7a) When you refer a patient, do you typically assess and provide initial treatment before referring?
- 7b) If YES, how long does it take to assess and treat the patient?  
Follow-up
- 7c) For following up on a referral, do you go to patient's house or do they come to yours?
- 7d) If you decide to refer a patient to the facility, do you go with the caregiver and child to VHC to assist with the referrals they make?
- 7e) If yes, how long does it take you to accompany the child and caregiver to the VHC?
- 7f) When a patient is referred to the health center, do you record the patient in your register?

## G) Medications, supplies, and equipment

- 1) Please describe the process by which you obtain medications, supplies, and equipment.
- 2) When was the last time you received medications or went to the primary health care center to obtain stock (in months)?
- 3) Have you had medicine stock-outs in the last 2 months? If so, for which medicines?
- 4) When you are out of medicines, do you have the same number of patients or do fewer patients come for care? Why?

## G) Incentives

- 1) Are you paid a regular salary?
- 2) Do you charge a user fee for your services as a CHW (in cash or in kind)? If so please specify by service/commodity provided.
- 2a) If yes, from what source is the payment, and how much?
- 3) Do you sell medicines/supplies and is there a mark-up you obtain?
- 4) Do you receive any incentives "in kind" for services as a CHW? Tick the appropriate boxes.

|                    | Have ever Y/N | Currently have Y/N |                     | Have ever Y/N | Currently have Y/N |
|--------------------|---------------|--------------------|---------------------|---------------|--------------------|
| T-shirt            |               |                    | ID card             |               |                    |
| Bicycle            |               |                    | Mobile-phone        |               |                    |
| Gumboots           |               |                    | Mobile-phone credit |               |                    |
| Kit-bag            |               |                    | Drugs               |               |                    |
| First-aid supplies |               |                    | Sterile instruments |               |                    |
| IEC materials      |               |                    | Others (specify)    |               |                    |

- 4a) If yes, from what source is the incentive?
- 5) Do you face any costs in providing care to patients or those in the community (surveyor asks about opportunity costs – give examples such as travel costs, foregone income, time spent doing something economically beneficial or socially beneficial.
- 6) How much do you believe you deserve to be compensated for your work?
- 7) Do you have opportunities to progress in your professional role? If so, how?
- 8) Does your family complain about demands of your provider work?
- 9) Do you meet other volunteers or CHWs to discuss your work?
- 10) What are key aspects of motivation related to your work? What motivates you to work? What demotivates you to work?
- 11) Does your community respect your position as a CHW?
- 12) Are there other remuneration schemes besides salary and revolving funds: flat fee per services, collective funds or microcredit strategies for CHWs to access certain products, e.g. sanitary products? Ask about village savings and loan associations too.
- 13) CHW perception of satisfiers and dissatisfiers - which of these does the CHW identify with?

Circle appropriately

Salary and Position

Salary is low and not based on qualifications

No opportunity to promotion

Training

No refresher courses available

Favoritism for selection of CHWs to attend workshop

The job

Heavy workload

Involvement in activities other than job description

Social

Low recognition of HSAs from other staff and management/supervisory level

Social problems of living in remote area

Educational status of target group (community) resulting in problems

Absent or inadequate VHCs

Communication and supervision

Poor communication between health staff at different levels, no feedback, meetings, work plans, or reports

Lack of supervision system with clear criteria

Other factors of concern

Transport problems

Poor roads, telecomm

Lack of uniforms/protective clothing

Poor housing



## ANNEX 3: Village Health Committee Questionnaire



### Community Health Worker Incentives – Lessons Learned and Best Practices



Type of interview: Village Committee

Good day! My name is \_\_\_\_\_

We are here on behalf of the Ministry of Health in Malawi and Management Sciences for Health (MSH) conducting a study to assist various implementing partners understand community health service provision in Malawi. This study is possible through the support of United States Agency for International Development and implemented under the African Strategies for Health (ASH) project.

Your district/facility/you was/was/were selected to participate in this study. We will be asking several questions about the types of services that are provided, as well as about the training and incentives provided to conduct these activities.

**(IF YOU ARE A CHW**, we are particularly interested in what drives you to continue to be one.)

The information you provide us would be used to plan service improvements or further studies of services, but would not in any way evaluate your work or performance.

Neither your name nor that of any health worker respondents participating in the study will be included in the dataset or in any report; however, we ask for your help to ensure that the information we collect is accurate.

You may refuse to answer any question or choose to stop the interview at any time.

Do you have any questions about the study?

Do I have your agreement to proceed? May I begin?

YES / NO

Thank you in advance for your time.

Date and time of interview:

Location of interview:

Name of person being interviewed:

Title:

Contact number:

Supervising Health facility:

**A. Community Health Activities – cluster supervisor and in-charge of facility and/or village committee**

- 1) Please list all community health-related activities in this region/district (e.g. iCCM, neonatal sepsis, family planning, HIV, TB, nutrition, bed net distribution, etc.).
- 2) Where are these activities conducted (CHW home, health post, patient home, etc.)?
- 3) How many different types of facilities are there?
- 4) Who are the managing authorities for these facilities (i.e. CHAM, NGO, government, company)?
- 5) How many CHWs are working in this catchment area?
- 6) How were these CHWs selected?
- 7) How far is the closest health facility?

**B. CHW Performance – cluster supervisor and VHC in-charge**

- 1) Are CHWs typically available to provide services/treatment to those in the community?
- 2) Are there times when CHWs have not been available to provide services?
- 3) Have there been times when CHWs have not had available medicines?
- 4) After providing services, do CHWs typically follow up with patients?
- 5) Are CHWs respected within the community?
- 6) Are they frequently utilized by the community?
- 7) Are there standard operating procedures and/or protocols or guidelines for CHWs?
- 8) Does the village committee conduct any kind of community monitoring on CHW performance to ensure quality of care?

**C) CHW Motivation – in-charge**

- 1) In your opinion, are CHWs trained and motivated to complete their tasks?
- 2) In your opinion, what motivates CHWs to complete their work?
- 3) Do CHWs receive financial or in-kind incentives from the community, NGOs, PHCs?
- 4) Do CHWs charge for services or treatments provided? If so, please specify.

## **ANNEX 4: Letter to District Health Offices from Ministry of Health**

**Ref: IMCI/006**

**19<sup>th</sup> February, 2015**

**FROM :** THE SECRETARY FOR HEALTH, IMCI UNIT, P/BAG 65, LILONGWE

**TO:** THE DHO, MCHINJI DISTRICT HEALTH OFFICE,  
P.O. BOX 36, MCHINJI

THE DHO, MANGOCHI DISTRICT HEALTH OFFICE,  
P.O.BOX 42, MANGOCHI

THE DHO, SALIMA DISTRICT HEALTH OFFICE,  
P.O.BOX 53, SALIMA

THE DHO, NTCHEU DISTRICT HEALTH OFFICE,  
P/BAG 5, NTCHEU

THE DHO, KASUNGU DISTRICT HEALTH OFFICE,  
P.O.BOX 19, KASUNGU

THE DHO, MACHINGA DISTRICT HEALTH OFFICE,  
P.O.BOX 44, MACHINGA

### **REQUEST AND NOTIFICATION FOR SUPPORT TO CONDUCT STUDY ON “BEST PRACTICES OF HSAs/CHWs INCENTIVE PROGRAMS”**

At a USAID-sponsored side-session “Moving from Fragmentation to Synergy to Achieve Universal Health Coverage” at the Third Global Forum on Human Resources for Health in Brazil in November 2013, the Global Health Workforce Alliance released a document “Knowledge gaps and a need based global research agenda by 2015.” One topic identified in this document was: *Remuneration of Community Health Workers – One of the huge variations within the groups that constitute HSAs is remuneration varying from no payment (volunteerism) to salaried by government or NGOs. Studies show that depending on the setting, both systems seem to be possibly effective. More information is needed about the effectiveness of paid versus voluntary HSAs and the underlying factors associated with this effectiveness.*

I am writing to request support to obtain more information on Health Surveillance Assistants (HSAs) that cover over 84% of hard-to-reach areas, improving access to health care in the community. In particular, the team from IMCI unit in the Ministry and Management Sciences for Health (MSH) would welcome your support as they look to better understand the impact of remunerated HSAs and volunteers. They aim to do this by collecting several elements of data through field visits and would welcome you and your team’s support and introduction of those in the health facilities and district health offices, and others involved in strengthening community level systems using various innovations such as cStock and District Product Availability Teams (DPATs) to improve performance of HSAs and the quality of care that they provide.

The team would target to interview DHMT members at the district level, facility in-charges at 2 facilities, and also 2 CHWs at each facility, as well as more volunteers.

It is in this regards that I write to formally request you for your support in order to actualize this important mission. You will certainly have the opportunity to review your district's case study.

Please let me know if you have any questions or concerns or you may contact **Ernest Kaludzu on +265 999 240 788.**

Your usual support is always appreciated.

Yours faithfully,

A handwritten signature in black ink, appearing to be 'H. K. Nsona', with a long horizontal stroke extending to the right.

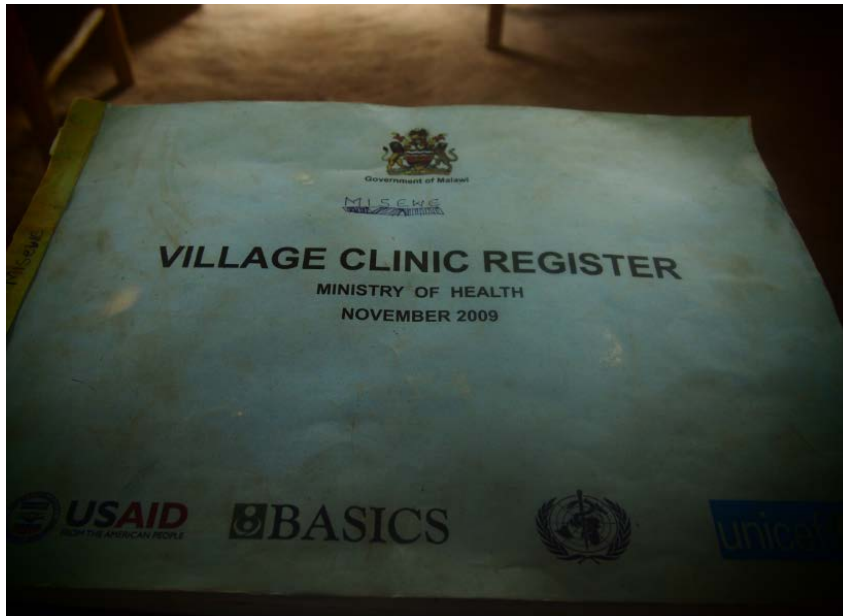
H. K. Nsona.

**HEAD - IMCI UNIT**

## ANNEX 5: Interview Sampling

| District*  | Programs sampled                        | CHWs represented |
|--|---|------------------|
| <b>Kasungu</b> <ul style="list-style-type: none"> <li>Mdunga Health Center</li> <li>Chikanda Health Post</li> <li>Tunza Clinic</li> </ul>  | HSA                                     | 3                |
|  | PSI Tunza Clinic                        | 2                |
|  | Volunteer (Red Cross)                   | 1                |
|  | Volunteer (growth monitoring volunteer) | 1                |
|  | VHC                                     | 2                |
| <b>Machinga</b> <ul style="list-style-type: none"> <li>Chamba Health Center and Misewe Village Clinic</li> <li>Mbonechela Health Center</li> <li>Nsanama Health Center (CHAM)</li> </ul> | HSA                                     | 6                |
|  | Volunteer                               | 2                |
|  | CBDA                                    | 2                |
|  | Volunteer (health promoter)             | 2                |
|  | VHC                                     | 3                |
| <b>Mangochi</b> <ul style="list-style-type: none"> <li>St Martin's Hospital (CHAM)</li> <li>Lungwena Health Center</li> <li>Chikole Health Center</li> </ul>                             | HSA                                     | 4                |
|  | CBDA                                    | 3                |
|  | VHC                                     | 2                |
| <b>Mchinji</b> <ul style="list-style-type: none"> <li>Kaigwazanga Health Center</li> <li>Tunza ITES Clinic</li> <li>Mkanda Health Center</li> </ul>                                      | HSA                                     | 2                |
|  | CBDA                                    | 1                |
|  | PSI Tunza clinic                        | 2                |
|  | VHC                                     | 2                |
| <b>Salima</b> <ul style="list-style-type: none"> <li>Khombedza Health Center</li> <li>Chitala Health Center (CHAM)</li> <li>Chagunda Health Center</li> </ul>                            | HSA                                     | 3                |
|  | CBDA                                    | 6                |
|  | Volunteer (Mai Khanda)                  | 1                |
|  | Volunteer (community action group)      | 2                |
|  | VHC                                     | 3                |
| Total CHWs interviewed   |   | 55               |
| *In all districts, the VHCs included multiple members; answers to questions were solicited based on consensus among the group.   |   |                  |

# ANNEX 6: Reporting Forms (HSA)



Village clinic register used by HSAs

| 1.4 Present in last 7 days? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>If cough: <input checked="" type="checkbox"/> 1-2 months, 10 days or more <input type="checkbox"/> 2-3 months, 10 days or more <input type="checkbox"/> 4-6 months, 10 days or more   |           | 1.5 Treat: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br><input type="checkbox"/> Very sleepy or unconscious? <input type="checkbox"/> Convulsions? <input type="checkbox"/> Difficulty drinking or feeding? <input type="checkbox"/> Vomiting?   |               |                |                   |                |           |                   |               |              |                   |               |               |                   |               |                  |                   |                  |           |  |           |           |                   |               |           |                   |               |           |                   |               |           |                   |               |           |                   |               |           |                   |               |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
|--|-----------|--|---------------|----------------|-------------------|----------------|-----------|-------------------|---------------|--------------|-------------------|---------------|---------------|-------------------|---------------|------------------|-------------------|------------------|-----------|--|-----------|-----------|-------------------|---------------|-----------|-------------------|---------------|-----------|-------------------|---------------|-----------|-------------------|---------------|-----------|-------------------|---------------|-----------|-------------------|---------------|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Danger sign (Look):<br><input type="checkbox"/> Chest indrawing <input type="checkbox"/> Very sleepy or unconscious <input type="checkbox"/> Palmar Pallor <input type="checkbox"/> Red / yellow on MUAC tape <input type="checkbox"/> Swelling of both feet <input type="checkbox"/> Other problem to refer   |           | Sick but no danger sign:<br><input type="checkbox"/> Diarrhoea (less than 14 days and no blood in stool) <input type="checkbox"/> Fever (less than 7 days) <input type="checkbox"/> Red eye (less than 4 days) <input type="checkbox"/> Fast breathing   |               |                |                   |                |           |                   |               |              |                   |               |               |                   |               |                  |                   |                  |           |  |           |           |                   |               |           |                   |               |           |                   |               |           |                   |               |           |                   |               |           |                   |               |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Decide: refer or treat child (risk decision)<br><input type="checkbox"/> IF ANY danger sign refer <input type="checkbox"/> Condition you can not treat or <input type="checkbox"/> IF NO danger sign treat at home and advise caregiver <input checked="" type="checkbox"/> NO danger sign treat at home and advise caregiver <input type="checkbox"/> Stock out refer   |           | Prepare for referral (child who can drink)<br>Diarrhoea: <input type="checkbox"/> ORS given <input type="checkbox"/> LA 5 months up to 3 yrs (1 tab) <input type="checkbox"/> LA 3 yrs up to 5 yrs (2 tabs)<br>Fever: <input type="checkbox"/> Paracetamol 2 months to 3 yrs (2 tabs) <input type="checkbox"/> Paracetamol 3 yrs to 5 yrs (5 tabs) <input type="checkbox"/> LA 5 months up to 3 yrs (5 tabs) <input type="checkbox"/> LA 3 yrs up to 5 yrs (12 tabs) |               |                |                   |                |           |                   |               |              |                   |               |               |                   |               |                  |                   |                  |           |  |           |           |                   |               |           |                   |               |           |                   |               |           |                   |               |           |                   |               |           |                   |               |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Age: <u>1</u> Years <u>6</u> Months <u>6</u> Days<br>Sex: <input checked="" type="checkbox"/> Girl <input type="checkbox"/> Boy<br>Caregiver Name: <u>Martha</u><br>Relationship: <input checked="" type="checkbox"/> Mother <input type="checkbox"/> Father <input type="checkbox"/> Other  |           | Physical Address: <u>Kwilaki</u><br>Village: <u>Misewe</u>   |               |                |                   |                |           |                   |               |              |                   |               |               |                   |               |                  |                   |                  |           |  |           |           |                   |               |           |                   |               |           |                   |               |           |                   |               |           |                   |               |           |                   |               |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Days? <input checked="" type="checkbox"/> Diarrhoea, <u>2</u> Days? <input type="checkbox"/> Blood in stool?<br>If cough: breathe for 1 minute: <input type="checkbox"/> < 12 months, 30 days or more <input type="checkbox"/> > 12 months, 40 days or more  |           | 1.5 Treat: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br><input type="checkbox"/> Very sleepy or unconscious? <input type="checkbox"/> Convulsions? <input type="checkbox"/> Difficulty drinking or feeding? <input type="checkbox"/> Vomiting?<br><input type="checkbox"/> Unable to drink or feed anything? <input type="checkbox"/> Swelling of both feet?   |               |                |                   |                |           |                   |               |              |                   |               |               |                   |               |                  |                   |                  |           |  |           |           |                   |               |           |                   |               |           |                   |               |           |                   |               |           |                   |               |           |                   |               |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Danger sign (Look):<br><input type="checkbox"/> Chest indrawing <input type="checkbox"/> Very sleepy or unconscious <input type="checkbox"/> Palmar Pallor <input type="checkbox"/> Red / yellow on MUAC tape <input type="checkbox"/> Swelling of both feet <input type="checkbox"/> Other problem to refer   |           | Sick but no danger sign:<br><input checked="" type="checkbox"/> Diarrhoea (less than 14 days and no blood in stool) <input type="checkbox"/> Fever (less than 7 days) <input type="checkbox"/> Red eye (less than 4 days) <input type="checkbox"/> Fast breathing  |               |                |                   |                |           |                   |               |              |                   |               |               |                   |               |                  |                   |                  |           |  |           |           |                   |               |           |                   |               |           |                   |               |           |                   |               |           |                   |               |           |                   |               |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Decide: refer or treat child (risk decision)<br><input type="checkbox"/> IF ANY danger sign refer <input type="checkbox"/> Condition you can not treat or <input type="checkbox"/> IF NO danger sign treat at home and advise caregiver <input checked="" type="checkbox"/> NO danger sign treat at home and advise caregiver <input type="checkbox"/> Stock out refer   |           | Prepare for referral (child who can drink)<br>Diarrhoea: <input type="checkbox"/> ORS given <input type="checkbox"/> LA 5 months up to 3 yrs (1 tab) <input type="checkbox"/> LA 3 yrs up to 5 yrs (2 tabs)<br>Fever: <input type="checkbox"/> Paracetamol 2 months to 3 yrs (2 tabs) <input type="checkbox"/> Paracetamol 3 yrs to 5 yrs (5 tabs) <input type="checkbox"/> LA 5 months up to 3 yrs (5 tabs) <input type="checkbox"/> LA 3 yrs up to 5 yrs (12 tabs) |               |                |                   |                |           |                   |               |              |                   |               |               |                   |               |                  |                   |                  |           |  |           |           |                   |               |           |                   |               |           |                   |               |           |                   |               |           |                   |               |           |                   |               |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Condition: Diarrhoea, Fast breathing, Red eye, Malnutrition, Palmar pallor, Other conditions   |           | Treat at home: Diarrhoea: <input checked="" type="checkbox"/> ORS 3 tabs <input type="checkbox"/> Zinc 2 months up to 6 months (5 tabs) <input type="checkbox"/> Zinc 6 months up to 5 yrs (10 tabs) <input type="checkbox"/> Paracetamol 2 months to 3 yrs (2 tabs) <input type="checkbox"/> Paracetamol 3 yrs to 5 yrs (5 tabs) <input type="checkbox"/> LA 5 months up to 3 yrs (5 tabs) <input type="checkbox"/> LA 3 yrs up to 5 yrs (12 tabs)                  |               |                |                   |                |           |                   |               |              |                   |               |               |                   |               |                  |                   |                  |           |  |           |           |                   |               |           |                   |               |           |                   |               |           |                   |               |           |                   |               |           |                   |               |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| <table border="1"> <thead> <tr> <th rowspan="2">Age in Months</th> <th colspan="3">Diarrhoea</th> <th colspan="3">Fast breathing</th> <th colspan="3">Red eye</th> <th colspan="3">Malnutrition</th> <th colspan="3">Palmar pallor</th> <th colspan="3">Other conditions</th> <th rowspan="2">New Cases</th> </tr> <tr> <th>New Cases</th> <th>Danger Sign-refer</th> <th>No drug refer</th> <th>New Cases</th> <th>Danger Sign-refer</th> <th>No drug refer</th> <th>New Cases</th> <th>Danger Sign-refer</th> <th>No drug refer</th> <th>New Cases</th> <th>Danger Sign-refer</th> <th>No drug refer</th> <th>New Cases</th> <th>Danger Sign-refer</th> <th>No drug refer</th> <th>New Cases</th> <th>Danger Sign-refer</th> <th>No drug refer</th> </tr> </thead> <tbody> <tr> <td>0-11</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>12-59</td> <td>0</td> <td>0</td> <td>0</td> <td>2</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Total</td> <td>0</td> <td>0</td> <td>0</td> <td>2</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> </tbody> </table> |           | Age in Months  | Diarrhoea     |                |                   | Fast breathing |           |                   | Red eye       |              |                   | Malnutrition  |               |                   | Palmar pallor |                  |                   | Other conditions |           |  | New Cases | New Cases | Danger Sign-refer | No drug refer | New Cases | Danger Sign-refer | No drug refer | New Cases | Danger Sign-refer | No drug refer | New Cases | Danger Sign-refer | No drug refer | New Cases | Danger Sign-refer | No drug refer | New Cases | Danger Sign-refer | No drug refer | 0-11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12-59 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Total | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Nutrition (red, yellow muac and swollen feet) |  |
| Age in Months  | Diarrhoea |  |               | Fast breathing |                   |                | Red eye   |                   |               | Malnutrition |                   |               | Palmar pallor |                   |               | Other conditions |                   |                  | New Cases |  |           |           |                   |               |           |                   |               |           |                   |               |           |                   |               |           |                   |               |           |                   |               |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
|  | New Cases | Danger Sign-refer  | No drug refer | New Cases      | Danger Sign-refer | No drug refer  | New Cases | Danger Sign-refer | No drug refer | New Cases    | Danger Sign-refer | No drug refer | New Cases     | Danger Sign-refer | No drug refer | New Cases        | Danger Sign-refer | No drug refer    |           |  |           |           |                   |               |           |                   |               |           |                   |               |           |                   |               |           |                   |               |           |                   |               |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 0-11   | 0         | 0  | 0             | 0              | 0                 | 0              | 0         | 0                 | 0             | 0            | 0                 | 0             | 0             | 0                 | 0             | 0                | 0                 | 0                | 0         |  |           |           |                   |               |           |                   |               |           |                   |               |           |                   |               |           |                   |               |           |                   |               |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 12-59  | 0         | 0  | 0             | 2              | 0                 | 0              | 0         | 0                 | 0             | 0            | 0                 | 0             | 0             | 0                 | 0             | 0                | 0                 | 0                | 0         |  |           |           |                   |               |           |                   |               |           |                   |               |           |                   |               |           |                   |               |           |                   |               |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Total  | 0         | 0  | 0             | 2              | 0                 | 0              | 0         | 0                 | 0             | 0            | 0                 | 0             | 0             | 0                 | 0             | 0                | 0                 | 0                | 0         |  |           |           |                   |               |           |                   |               |           |                   |               |           |                   |               |           |                   |               |           |                   |               |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |

Sample reporting sheet for HSA (from village clinic register)

The image shows a sample reporting sheet for HSA (from village clinic register). The form is a grid of checkboxes and text boxes, organized into sections for patient information, symptoms, and clinical decisions. It includes fields for Age, Sex, Caregiver Name, Relationship, Physical Address, and Village. The form is divided into two identical sections, one above the other.

Sample reporting sheet for HSA (from village clinic register)

## ANNEX 7: Persons Contacted

| Organization                            | Title/Role   | Name                 | Email                           |
|---|--|----------------------|---------------------------------|
| Clinton Health Access Initiative (CHAI) | Senior Program Manager, Human Resources for Health   | Taryn Barker         | tbarker@clintonhealthaccess.org |
| Evidence 4 Action                       | Research Fellow (University College London)  | Bejoy Nambiar        | b.nambiar@ucl.ac.uk             |
| Mai Mwana                               | Program Manager  | Tambosi Phiri        | tambosiphiri@gmail.com          |
| Ministry of Health                      | Health Technical Support Services  | Boniface Chiphanga   | onchiphanga@yahoo.com           |
| Ministry of Health                      | Director of Planning and Policy Development  | Dalitso Kabambe      | dkabambe2001@yahoo.com          |
| Ministry of Health                      | Economist, Overseas Development Institute Fellow, Department of Planning and Policy Development, | Poorna Mazumdar      | poorna.m@gmail.com              |
| Ministry of Health                      | M&E Officer, IMCI Unit   | Ernest Kaludzu       | ernestkaludzu@yahoo.com         |
| Ministry of Health                      | Head, IMCI Unit  | Humphreys Nsona      | hnsona@gmail.com                |
| Ministry of Health                      | Psychiatric Clinical Officer, Kamuzu Central Hospital (Lilongwe) and IMCI Facilitator            | Madalitso Makhallira | m_makhallira@yahoo.com          |
| Ministry of Health                      | Chief Economist, Central Monitoring and Evaluation Division                                      | Rhino Mchenga        | rhinomchenga@yahoo.co.uk        |
| Ministry of Health                      | Health Informatics Technical Assistant, Central Monitoring and Evaluation Division               | Maganizo Monawe      | mmonawe@gmail.com               |
| Ministry of Health                      | Economist, Central Monitoring and Evaluation Division  | Mwayi Kachapila      | mwayikac@gmail.com              |
| Ministry of Health                      | Director, Preventive   | Storn Kabuluzi       | skabuluzi@yahoo.com             |



| Organization                             | Title/Role                                  | Name             | Email                              |
|--|---|------------------|------------------------------------|
|  | Health Services                             |                  |                                    |
| Ministry of Health                       | PHC (Primary Health Care)                   | Precious Phiri   | phiriwilliamprecious@yahoo.com     |
| Ministry of Health /WHO                  |   | Humphreys Masuku | dzanjom@yahoo.co.uk                |
| Management Sciences for Health-Malawi    | Health Planning Specialist                  | Flora Khoma      | fkhoma@msh.org                     |
| Management Sciences for Health-Malawi    | Project Director                            | Erik Schouten    | eschouten@msh.org                  |
| Management Sciences for Health-Malawi    | Country Operations Director                 | Robert Komakech  | rkomakech@msh.org                  |
| Management Sciences for Health-Malawi    | Administrative Coordinator                  | Kettie Ndhlamini | kndhlamini@msh.org                 |
| Management Sciences for Health-Malawi    | Senior Operations Officer                   | Maureen Kamanga  | mkamanga@msh.org                   |
| Population Services International-Malawi | Director of Programs                        | Antonia Powell   | apowell@psimalawi.org              |
| Population Services International-Malawi | IPC Program Manager                         | Meskerem Abera   | mabera@psimalawi.org               |
| Population Services International-Malawi | IPC Program Officer in Mchinji              | Harvey Matabwa   | hmatabwa@psimalawi.org             |
| Population Services International-Malawi | IPC Program Officer in Kasungu              | Joan Phiri       | jphiri@psimalawi.org               |
| REACH Trust                              | Executive Director                          | Irene Namakhoma  | ireen@reachtrust.org               |
| REACH Trust                              | Senior Social Science Researcher            | Lot Nyirenda     | nyirendalot@yahoo.co.uk            |
| Save the Children                        | Child Health and Nutrition Advisor          | Tiyese Chimuna   | tiyese.chimuna@savethechildren.org |
| USAID/Malawi                             | Health Systems Team Lead                    | Amy Diallo       | adiallo@usaid.gov                  |
| World Vision Malawi                      | Maternal, Newborn, and Child Health Advisor | Theresa Banda    | Theresa_Banda@wvi.org              |

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