



Rwanda Community Health Workers Programme : 1995 - 2015

20 Years of Building Healthier Communities



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Rwanda Governance Board - RGB



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ABBREVIATIONS AND ACRONYMS

ANC	Ante Natal Care	IGAs	Income Generating Activities
ARI	Acute Respiratory Infections	ISS	Integrated Supportive Supervision
ASM	Animatrice de Santé Maternelle	KIIs	Key Informant Interviews
CBNP	Community-Based Nutrition Program	LMIS	Logistics Management Information System
CBP	Community-Based Provision for Family Planning	LSTM	Liverpool School of Tropical Medicine
CHD	Community Health Desk	MCH	Maternal and Child Health
CHIS	Community Health Information System	MDG	Millennium Development Goals
CHP	Community Health Program	MNH	Maternal and Newborn Health
CHW	Community Health Worker	MOH	Ministry of Health
CHWC	Community Health Workers Cooperatives	MTR	Mid Term Review
CMNH	Community Maternal and Newborn Health	ORS	Oral Re-hydration Salt
CPBF	Community-based Performance Based Financing	ORS	Oral Re-hydration Solution
C-PBF	Community Performance-Based Funding	PBF	Performance Based Financing
C-DOTs	Community-Directly Observed Treatments	PHC	Primary Health Care
CRC	Citizen Report Card	PPH	Primary Postpartum Haemorrhage
CUG	Closed User Group	RBC	Rwanda Biomedical Center
DGG	Decentralization and Good Governance	RCHMIS	Rwanda Community Health Management Information System
DH	District Hospitals	RDHS	Rwanda Demographic and Health Survey
EDPRS	Economic Development and Poverty Reduction Strategy	RGB	Rwanda Governance Board
EDC	Early Childhood Development	RH	Reproductive Health
FGDs	Focus Group Discussion	RTD	Rapid Test Diagnosis
FP	Family Planning	TB	Tuberculosis
GBV	Gender Based Violence	ToT	Training of Trainers
GIZ	German Corporation for International Cooperation	U5	Under-Five
HB-MNH	Home-Based Maternal and Newborn Health	USA	United States of America
HC	Health Center	USAID	United States Agency for International Development
HGS	Home Grown Solutions	WHO	World Health Organization
HIV	Human Immunodeficiency Virus		
ICCM	Integrated Community Case Management		

FOREWORD

“In Rwanda, we have trained close to 50,000 health workers. We have seen the ability of community health workers to improve public health and believe that this initiative can serve the cause of public health throughout Africa [...]”.

HE Paul KAGAME, President of the Republic of Rwanda

Rwanda Governance Board is delighted to issue this publication on Rwanda’s Community Health Program (CHP). It was initiated by the Ministry of Health (MoH) in 1995 after the devastating 1994 Genocide against the Tutsi, to address challenges related to healthcare access and a shortage of the healthcare providers.

Community Health Workers (CHWs) constitute one of the Rwanda’s Home Grown Solutions (HGS). For two decades, the program has been empowering communities to take charge of their lives. Since its inception, it was extended to all villages in Rwanda and uses about 45 thousands CHWs, who provide healthcare services that contributed to the country’s remarkable progress in the health sector.

This report tells the story of one of the most impactful governance innovations in Rwanda. It report explores the CHP and documents features that make it unique; collates good practices that can be learnt from it and analyzes its set up, governance, performance, financing, citizen participation and satisfaction. It also looks at how collectively these contributed to the progress we bear witness today.

As Rwanda prepares for its next stage of development, sound evidence of what works and what needs to be improved in the application of HGS is of paramount importance to inform desired government decisions and actions in order to meet the imperatives of the national transformation. This publication aims at contributing to this goal.

We thank the Ministry of Health and GIZ for the support provided to this assessment and all those who diligently shared their knowledge and experience in this study. We also thank the team of consultants from the Ingenuity Ltd (Dr. David Kamugundu and Dr. Jacky Umunyana) who conducted the assessment as well as RGB staff (Mrs. Sybille Kamikazi, Mr. Justin Murwanashyaka, Mr. Anatole Mulindwa and Mr. Ferdinand Mbonaruzza) for their contribution to the production of this report.

We trust you will enjoy the reading.

Prof. Anastase SHYAKA
CEO, Rwanda Governance Board

Executive Summary

This report discusses the assessment of Rwanda's Community Health Program (CHP) conducted using: literature review, key informant interviews, focus group discussions with CHWs and members of the community, plus a survey of community satisfaction toward CHWs services using a citizen report card (CRC).

There is evidence showing that Ministry and partners successfully set up a coordinated system that allows CHWs to deliver intended services. This is built on an organizational structure which is reinforced by supervision, training, reporting, supply and resupply, provision of equipment; which together enable CHWs to provide services under their purview. CHWs have been instrumental in treatment of killers of pregnant women; children under five: malaria, pneumonia, and diarrhea; contributing to the observed improved health outcomes in Rwanda.

From 2012 to 2015, CHWs tested 1,694,695 under-five children for malaria; and treated 414,629 of them. In the same period they treated 967,072 cases of malaria, pneumonia and diarrhea combined; referred 525,363 pregnant women for antenatal care (ANC) during the first four months of pregnancy; and, identified and accompanied 40,107 women with high risk pregnancy.

In the community, CHWs interact with other members

and govern themselves through CHWs cooperatives. Cooperatives allow CHWs to set up income generating activities (IGAs), improve their livelihoods and offer a sustainability alternative for the program. Overall, IGAs have benefited CHWs and members of the community who are satisfied with CHWs services they receive.

The community's ability to address their own needs is a key lesson to from Rwanda's CHP which has also successfully implemented a remarkable technological innovations known as RapidSMS used for tracking of pregnant women and children up to 1000 days after birth. CHWs Cooperatives are an evolving innovation to potentially foster the program's medium to long-term sustainability.

Notable challenges are: increased CHWs reporting burden; inadequate CHWs skills to run IGAs: CHWs turnover, irregular and evaluative supervision; and inadequate CHWs equipment and sometimes stock out of medical supplies.

Evidence presented by this report indicates that Rwanda's CHP is well embedded with the community yet remains linked into the health mainstream; and, responded adequately to the objectives for which it was set up. Nonetheless, some challenges related to resources, capacity and systems remain.

The report makes the following recommendations:

- 1 Strengthen the CHW program through improved coordination improved management of cooperatives which is key to ensure the sustainability of the CHP.
- 2 Undertake an evaluation and / or sustainability assessment of the Community Health Program focusing on cooperatives; from which recommendations to strengthen them can be drawn.
- 3 The MoH should be cognizant of the already demanding CHWs reporting requirement. This should be considered every time a new package is to be added to ensure that data collected is only on required indicators.
- 4 The MoH should work with administrative districts to reinforce supervision of CHWs by incorporating follow up visits of CHWs into Integrated Supportive Supervision (ISS). This is more regular and more focused on capacity building.
- 5 To avoid stock out, district pharmacies and MoH should ensure capturing of CHWs supply needs into their quantification processes and streamline ensure timely delivery of supplies to health centers from where CHWs requisition their supplies.

Introduction

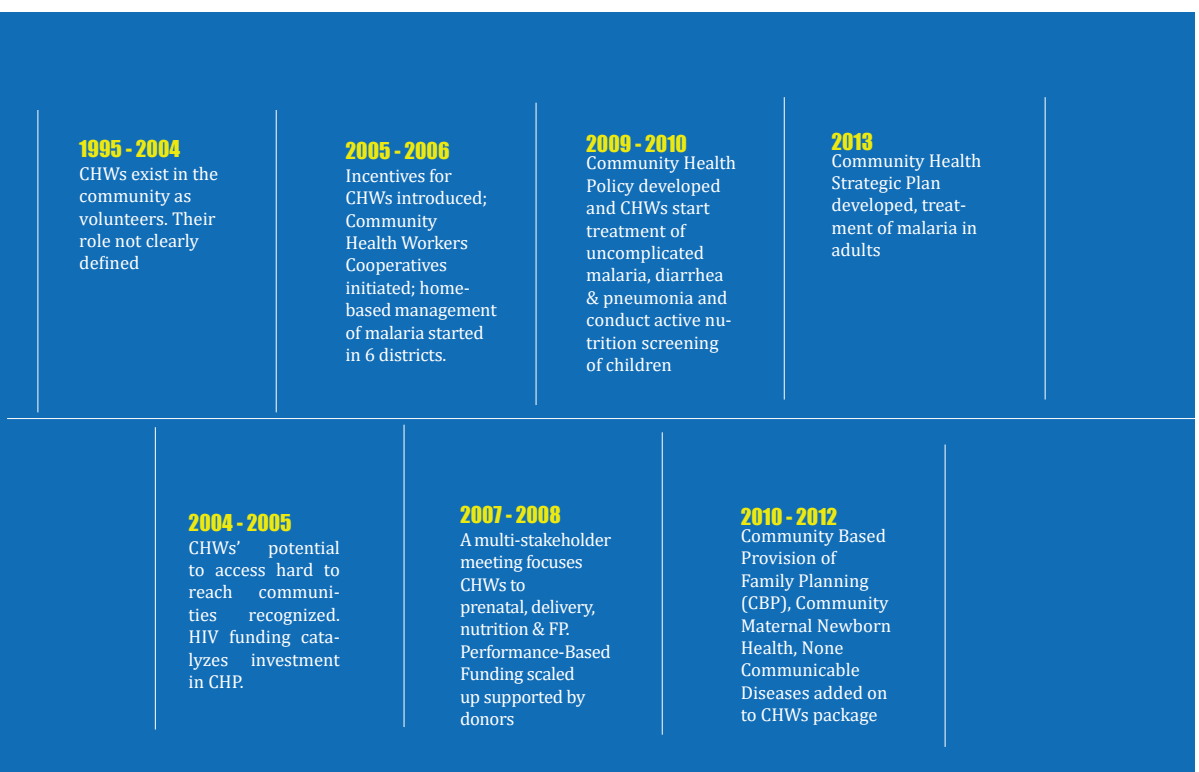
Worldwide, CHWs are used as a strategy to address the shortage of health workers, and render certain basic health services to their communities (e.g. USA, China, Brazil, and South Africa) (Prasad BM; VR Muraleedharan, 2007). Depending on the specific needs of countries and communities, CHWs' profiles vary in terms of activities, scope; training among others. WHO definition of CHWs is that they should be: "... members of the communities where they work; selected by the communities; answerable to the communities for their activities; supported by the health system but not necessarily a part of its organization; and, have shorter training than professional workers." (WHO; 2007; Uta Lehmann and David Sanders).

Rwanda started the community health program (Programme des animateurs de santé) in 1995 to address two key challenges: a) access to health

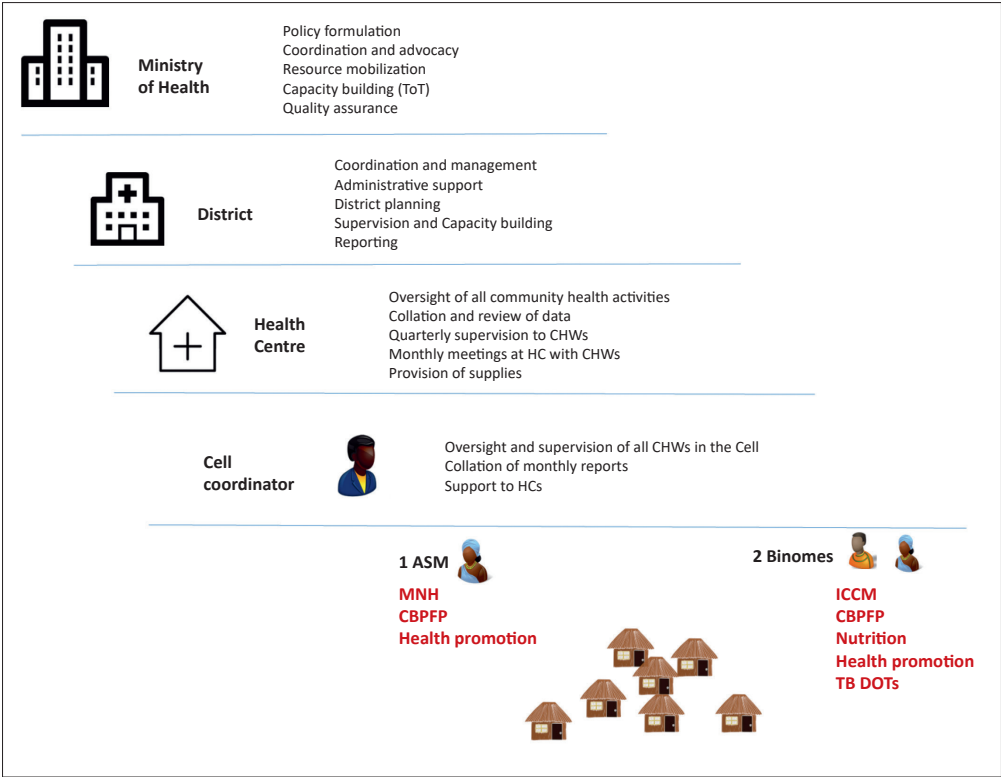
services; b) a shortage of the health care providers (MoH, CHP Strategic Plan). At the time, life expectancy at birth was estimated only at 31.2 years (World Bank, 2015). Maternal Mortality rate was 1071 per 100,000 live births, under-five mortality was 196 per 1,000, and infant mortality was estimated at 107 per 1000 live births (MoH, HSSP III).

Twenty years after, the health sector has registered remarkable progress. In fact, Rwanda is one of the few countries in sub-Saharan Africa to have met all health related Millennium Development Goals (MDG Report, 2013). Maternal mortality was slashed fivefold to 210 per 100,000 live births; while under-five mortality and infant mortality dropped more than threefold to 50 and 32 per 1000 live births respectively (DHS, 2015).

Rwanda's CHP implementation was characterized by progressive scale-up of service packages delivered by CHWs, since its initiation in 1995 as outlined below:



Roles and responsibilities of CHWs



Source: Liverpool School of Tropical Medicine (LSTM) Centre for Maternal and Newborn Health, Comprehensive Evaluation of the Community Health Program in Rwanda, December 2016.

Rwanda’s commitment to implement people-centered home grown solutions is likely to have played a key role in the country’s notable progress. Some of these home grown solutions include performance contracts (imihigo); one cow per family (girinka), ubudehe, gacaca; community health insurance (mutuelles), community health program etc.

HGS Documentation Center

To learn from its initiatives and share lessons, Rwanda is creating a Home Grown Solutions Documentation Center under Rwanda Governance Board (RGB) with an official mandate to:

1

Package Home Grown Solutions and best practices as a communication strategy to better account for the post-genocide Renaissance of Rwanda

2

Create an information bank for Home Grown Solutions and best practices that will always be referenced and used by interested parties

3

Provide an academic orientation, discourse and consultations through targeted publications

4

Counter negative reporting on Rwanda through facts and research based documents.

OBJECTIVES

In April 2016, the Rwanda Governance Board RGB launched an assessment of Rwanda's CHP with the following objectives.

Purpose and General Objective

The purpose of CHP assessment was to document the status of implementation of Rwanda's Community Health Program by collating, analyzing, and; documenting its unique features and innovations as one of Rwanda's home-grown solutions; as well as to reflect community's participation in healthcare delivery and governance as a critical pillar for socioeconomic transformation.

The general objective was to identify best practices, challenges, innovations; formulate policy recommendations and document lessons learnt from the implementation of the CHP in Rwanda.

Specific Objectives

1. To assess the institutional set up of the CHP.
2. To assess the CHWs Program performance.
3. To assess the governance set up of the CHWs program in terms of the level of citizen participation in CHWs program and interaction with each other.
4. To analyze the investments made with CHWs funds and the benefits of those investments.
5. To identify and document innovations of community health program, and suggest policy recommendations for its improvement.

Survey Methods

Five districts were selected; one per province and two health centers selected from each district based on: a) Number of CHWs (Health centers with the highest number of community health workers).

b) Setting: (1 rural health and 1 urban HC), and; c) Accessibility (accessible HC selected as long as (a) and (b) were fulfilled).

Health center managers provided a list of CHWs in their catchment area from which five CHWs were randomly selected and took part in focus group discussions. Managers also requested 5 community members to participate in separate FGDs. A total of 50 CHWs and 50 community beneficiaries participated in these FGDs. Qualitatively, data was collected by conducting a thorough desk review, holding key informant interviews with managers at different levels as well as focus group discussions with CHWs and members of the community as further described below.

Desk review: focused on relevant literature (e.g LSTM Centre for Maternal and Newborn Health, Comprehensive Evaluation Report of the CHP in Rwanda, December 2016), reports, guidelines and manuals, strategies, policies as well as empirical studies. The desk review was critical in identifying areas to focus interview questions and in responding to assessment objectives and informing this report.

Key Informant Interviews (KIIs): were conducted at different levels: national, district hospital, and health center.

At the national level, interviewees included Doctor Agnes Binagwaho, former Honorable Minister of Health, program managers and select partners. At the district level, interviewees included Vice Mayors of Social Affairs, Directors of District Hospitals, and Heads of Community Health Workers. At the health center level, health center managers and in-charges of CHWs were interviewed. In total 36 KIIs were conducted.

Data Collection: Experienced data collectors were recruited and trained by the consulting team. Training focused on how to use the tools as well as the general principles of conducting assessments – particularly on conducting FGDs. In each district, an interviewer led discussions, while a second data collector took notes. Voice recorders were used during each FGD session. Data collection was supervised by the consulting team; its transcription

was done daily and shared with supervisors by email and seek feedback as needed. At the end of data collection a debriefing meeting was held with all data collectors.

Focus group discussions were conducted with CHWs and members of the community. Across 5 selected districts (Kicukiro, Muhanga, Rubavu, Musanze and Gatsibo), 10 FGDs in total were conducted. Five of the FGDs were with CHWs and focused on key areas of the CHP, lessons learned, challenges, best practices; and recommendations to improve the program. The other five Focus Group Discussions were with members of the community and focused on their satisfaction toward CHP. Males and females were equally represented in FGDs.

Quantitative data were derived from two sources: Secondary data and CHWs reporting nationwide system (SISCom), and Citizen Report Card 2016 (CRC). CRC is a nationwide survey, conducted in 328 sectors and 734 villages with a 11, 011 sample size population above 18 years of age (57% female and 43% male). For secondary data, existing sources i.e. program reports and surveys (e.g. Demographic Health Survey) were consulted. The focus of this analysis was health indicators related to services provided by CHWs and health outcomes related to those services. These are also described in detail below.

Data on indicators related to CHWs, (from SISCom – a CHWs reporting system at the MoH) was requested from the MoH for 2012 to 2015 (this because SISCom was introduced in 2011); and, trends generated focusing on three areas of CHWs activities below:

1. Diagnosis and treatment of malaria in children by CHWs
2. Integrated Community Case Management (iCCM) of children under five years (U5); and,
3. Follow up pregnant women

Citizen Report Card (CRC) is conducted every year by RGB and assesses community satisfaction towards public services. This year, RGB collected data on satisfaction of community toward the following CHWs services from a total of 1,920 citizens in 5 districts of interest to this assessment.

1. Fighting malnutrition
2. Provision of CHWs primary care package
3. Family Planning
4. Care, support and follow of pregnant women
5. Mobilizing the community to join mutuelles (Community Health Insurance)
6. Mobilizing the community to use vaccination

This data was used to analyze respondents' satisfaction toward CHWs services.

Data analysis: Collected data was coded according to assessment objectives and synthesized to generate themes related to key lessons learnt; best practices; CHW program innovations, challenges; and recommendations across the five objective areas as applicable. A summary of key findings is presented in the next section of this report.

Limitations: While delivery of health services by CHWs is not new in Rwanda (or elsewhere); information related to some key domains remains scanty. Empirical evidence in the areas of CHWs program such as financing the cost of CHW program, remains limited. There has not been rigorous evaluation of the entire CHWs activities to link financial investments and interventions to the health outcomes. Most information available is related to daily monitoring reports obtainable from documents such as annual reports, policies and strategies. The assessment team relied mostly on information from these documents and qualitative data collected through interviews.

Thus data about program performance needs to be interpreted in light of the fact that observed improved health outcomes may have resulted from other interventions in addition to CHP.

1 Program Set up

This section of the report discusses the CHP set up and governance. Set up is divided into organizational (or structural) and functional set up of the system. Under organizational set up, the report covers the hierarchy of the system; CHWs roles and their selection while training supervision, CHWs equipment and integration are discussed under functional set up. On the other hand, under governance the report discusses CHWs self-governance under their cooperatives and community participation.

CHWs Program Set Up

Organization: Rwanda's Community Health Program has been community-driven since its inception as it was located at the lowest administrative level (the 'cellule' by then). There were 12,000 CHWs in 2005. That number has grown to 45,011 today with each village having 3 CHWs– a male-female pair "binomes" and one Animatrice de Santé Maternelle (ASM) (MoH, CHP Strategic Plan). The Community level is a formal part of the national health strategy; coordinated by Rwanda Biomedical Center (RBC) via district hospitals and health centers.

ASMS AND BINOMES: WHO THEY ARE?

42 Median age:

23% >
50 years

10%
Incomplete
primary school



54%
Recruited as
replacement

54%
Recruited
between 2005/09

84%
Have an occupation

85%
Married

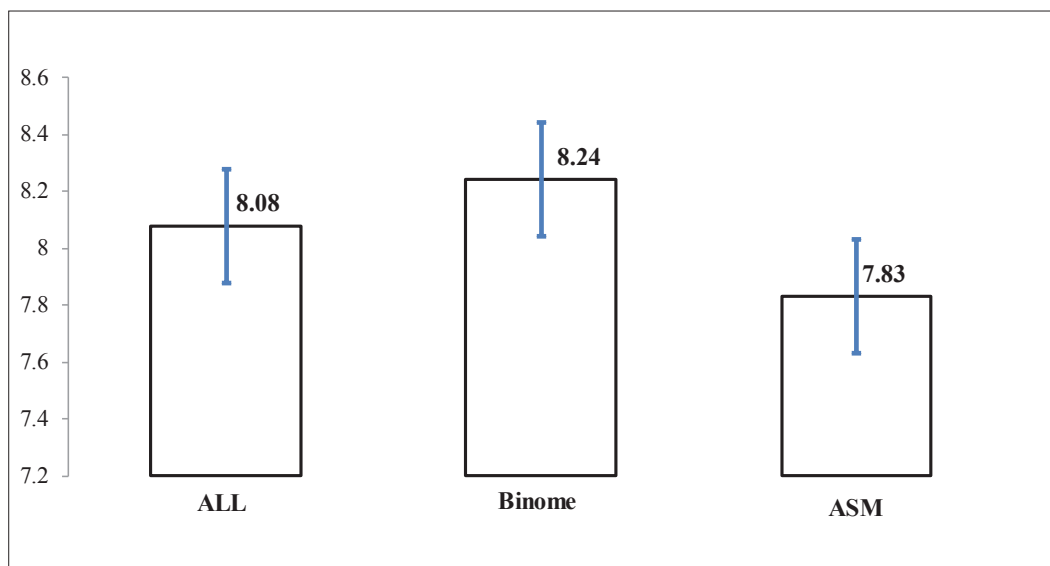
Source: Liverpool School of Tropical Medicine (LSTM) Centre for Maternal and Newborn Health, Comprehensive Evaluation of the Community Health Program in Rwanda, December 2016.

Model of service delivery

Hours spent per week on CHP activities by binomes and ASMs (LSTM, 2016)
(Model of service delivery)

CHWs spend on average eight hours per week on activities related to the CHP, i.e. less than 2 hours per day on an average five days' week of work.

Bar Graph 01: Hours / week spent on CHP activities: Workload (hrs per week)



Source: Liverpool School of Tropical Medicine (LSTM) Centre for Maternal and Newborn Health, Comprehensive Evaluation of the Community Health Program in Rwanda, December 2016.

Whilst this consideration would obviously require a shift in the model of pure volunteerism currently underpinning the program, one may assume that a redistribution of tasks amongst less CHWs per community (e.g. one binome and one ASM) would significantly reduce variable costs associated to deployment, training, reporting, supervision, and coordination.

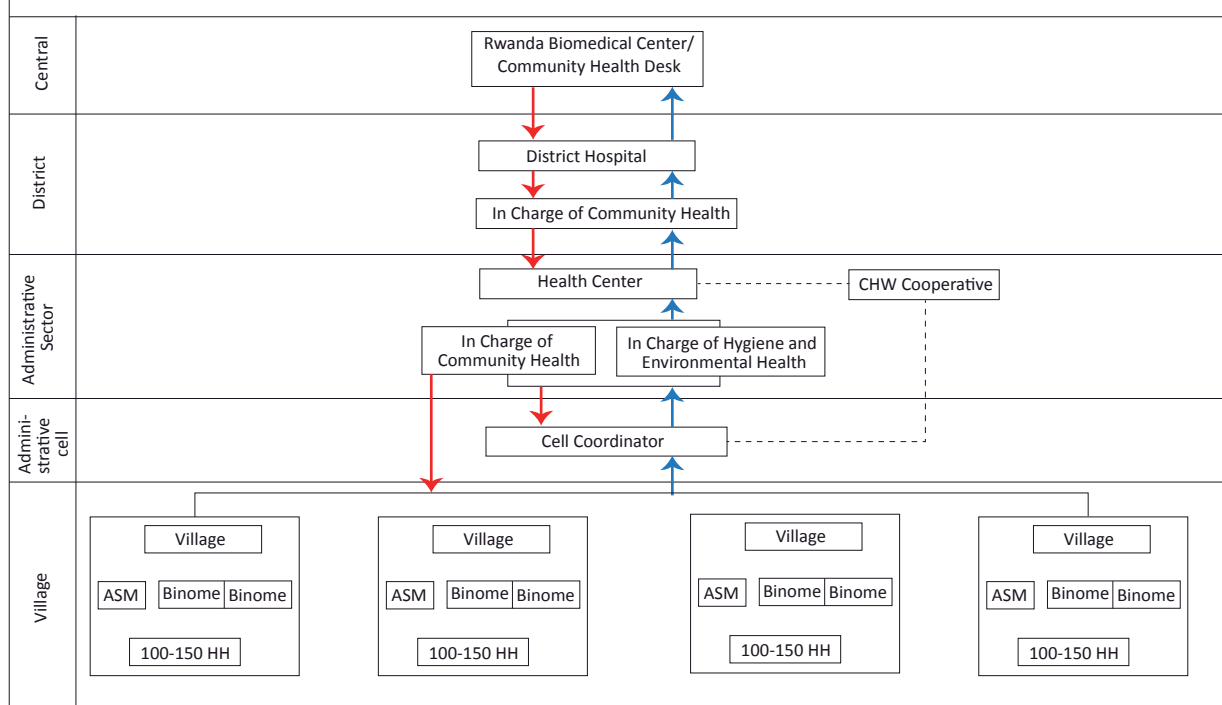
Challenges

For some of the services (primary postpartum haemorrhage (PPH), the prevalence is extremely low and they are virtually not provided by CHWs. For instance, the evaluation could not find any evidence of misoprostol being currently offered to post-partum women at community level.

Hence, the hypothetical additional costs of a theoretical fixed remuneration of CHWs may be recovered through the savings associated to the management of a smaller cadre of CHWs.

Yet this intervention comes with costs, related for instance to training; to the supply of medicines; and to the risk of expiry of medicines given the very rare use of misoprostol. Some interventions have varying demand in rural and urban areas and are delivered without proper training (LSTM, December 2016).

Figure 1: Rwanda's CHP - Organization and Hierarchy



Source: Data from MoH

Figure 1 shows the hierarchical organization of Rwanda's Community Health Program and summarizes the linkages between different levels of the program and relationships between entities at the same level.

Under Rwanda Biomedical Center, the Community Health Desk (CHD) designs policies, strategies and

guidelines; and, mobilizes required resources.

At the district level, the In-Charge of Community Health Workers provides districtwide stewardship of CHWs' activities. Each health center has an in-charge of CHWs who liaises with in-charges of social affairs at the administrative sector. Cell coordinators at the administrative cell level oversee CHWs activities within their cell.

CHWs' Roles: At the beginning of the program, CHWs performed tasks related to health education and facilitated campaigns on immunization. The MoH gradually expanded their roles and responsibility into a more comprehensive health care service package.

Today, binomes' core roles relate to integrated community case management (iCCM: i.e. treatment of malaria, pneumonia, and diarrhea in children under five years); while Animatrice de Santé Maternelle (ASM) are in charge of maternal and new born health (MoH, CHP Strategic Plan).

Community Health Workers official role:

1. Community Case Management -ICCM)
2. Community Mother and Newborn Health Program (C-MNH)
3. Reproductive Health (RH)
4. Family Planning (FP)-community-based distribution of family planning services (CBP)
5. Community-Based Nutrition (CBN)
6. Behavior Change Communication (BCC) and Community
7. Health Management Information System (RCHMIS)

Source: CHD Strategic Plan

CHWs' Selection: CHWs are elected by members of their communities based on a ten-point criteria outlined below:

- Able to read, write and calculate
- Be seen as honest by community peers
- Willing to maintain confidentiality
- Accept volunteer status
- Be a resident of the village
- Be between 20-50 years
- Must be available and accessible person
- Must not be a local leader
- Must be exemplary and serve as a positive role
- Must be elected by the community

Training: From interviews held at different levels, training was reported as a key enabler of CHWs to accomplish their mandate. Over the years, whenever a new CHW service package was added, the central level (through the Community Health Desk – CHD) developed requisite resources including treatment protocols, guidelines, reporting templates and registers. These resources are the ones used to train CHWs according to their roles (binomes or ASM); and enables them to provide services of desired quality. The content of the training depends on the area of CHW program component (FP, ICCM... etc.). It was clear that the CHP is set up in a way that each level plays a distinct role when it comes to training of CHWs.

CHWs follow a training course on malaria treatment



- The central level trains national trainers (central-level staff responsible for the related CHP package);
- Once trained, national trainers conduct training of trainers – ToT (district hospital in-charge of community health activities);
- Once the trainers at the district are trained, they train those in charge of CHWs at the health center, who then train CHWs in their health center zones.

Interviewees reported refresher training which aims to strengthen further CHWs' capacity and skills on an ongoing basis. Training empowers CHWs to identify and manage illnesses; or refer patients they cannot manage to the health center for more professional treatment. Training was reported by CHWs, health providers, and central level managers to have played a critical role in the success of CHP. However, coverage of training often depends on availability of funds.

Re-training (i.e. conducting a similar training as one previously held) was reported and attributable mostly to CHWs attrition which continues to be a challenge for the program.

A recently concluded mid-term review of Health Sector Strategic Plan estimated CHWs attrition rate at 5-10% per year (anecdotally, CHWs' attrition is said to be a result of relocation to other areas in pursuit of economic opportunities).

The report observed that with dwindling external resources, there is a risk of a decline in effectiveness of the community health program (MTR; HSSP III, 2015). In short and long term, attrition and declining funding are considered major challenges. Attrition means that MoH must continually identify new CHWs, and secure resources to train them so as to enable them to provide health services of the desired standard.

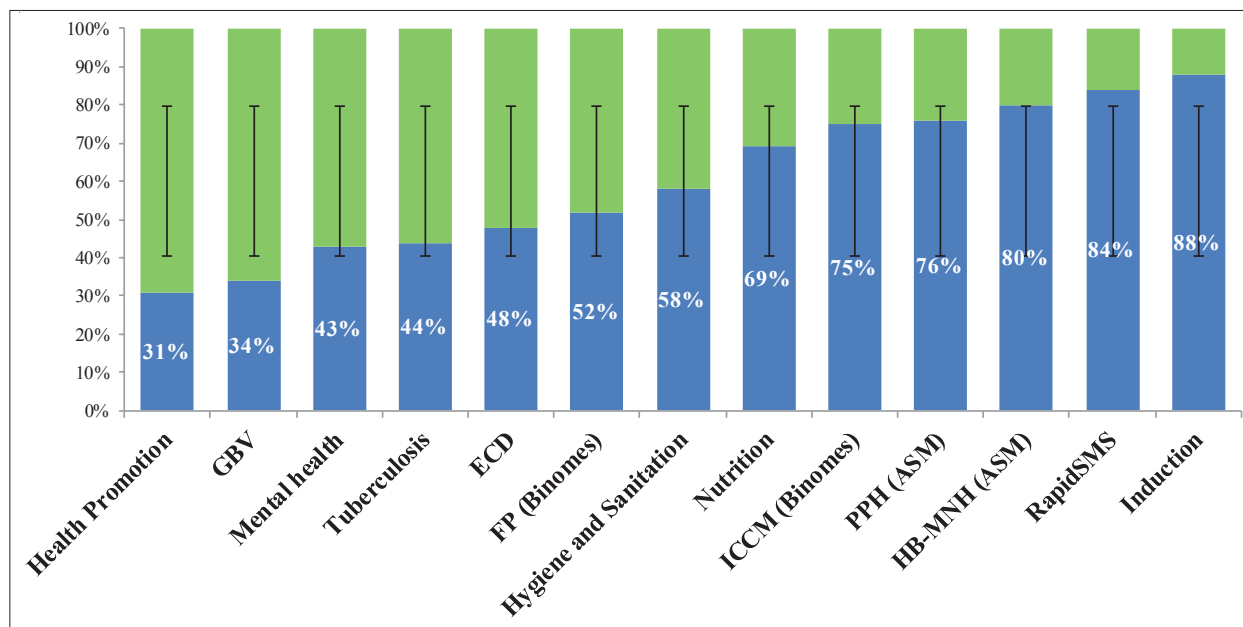
"I am the only CHW who got the (induction) training in my village because others are new since they joined the Community Health Programme as replacements. So it is challenging to my colleagues to perform their tasks while they didn't receive the training".

CHW in a urban area of Kigali region.



A CHW shows and explain hygiene issues to community members

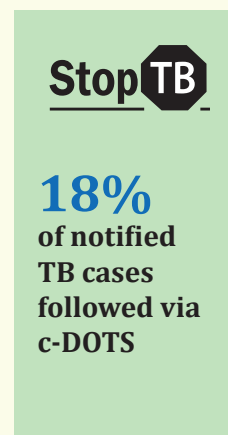
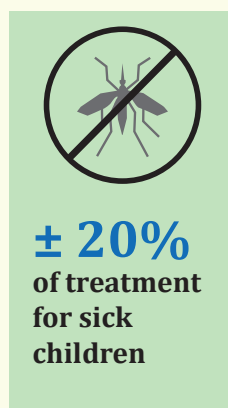
Bar Graph 02: Proportion of CHWs reporting to have received trainings (LSTM)



Source: Liverpool School of Tropical Medicine (LSTM) Centre for Maternal and Newborn Health, Comprehensive Evaluation of the Community Health Program in Rwanda, December 2016.

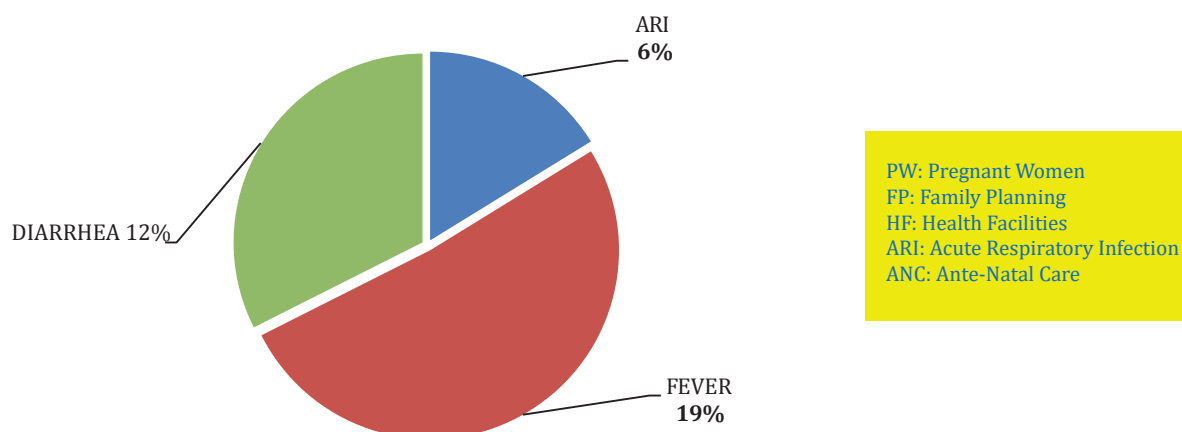
Even though the survey data indicates that 88% of CHWs received an induction training during FGDs, CHWs complained about challenges faced by newly recruited CHWs because they did not get the induction training.

Demand met by CHWs



Source: Liverpool School of Tropical Medicine (LSTM) Centre for Maternal and Newborn Health, Comprehensive Evaluation of the Community Health Program in Rwanda, December 2016.

Pie Chart 01. Demand of services (Childhood Acute Respiratory Infection, Fever, and Diarrhea) by citizens from CHWs



Source: Liverpool School of Tropical Medicine (LSTM) Centre for Maternal and Newborn Health, Comprehensive Evaluation of the Community Health Program in Rwanda, December 2016.

Acute respiratory infection (ARI), fever, and dehydration from diarrhea are important contributing causes of childhood morbidity and mortality in developing countries (WHO, 2003). Prompt medical attention when a child has the symptoms of these illnesses is, therefore, crucial in reducing child deaths. In the 2014-15 RDHS, for each child under age 5, mothers were asked if the child had experienced an episode of diarrhea; a cough accompanied by short, rapid breathing or difficulty breathing as a result of a chest-related problem (symptoms of ARI); or a fever in the two weeks preceding the survey. Respondents were also asked if treatment was sought when the child was ill. Overall, 6 percent of children under age 5 showed symptoms of ARI, 19 percent had a fever, and 12 percent experienced diarrhea in the two weeks preceding the survey (data not shown). It should be noted that the prevalence of these morbidities is seasonal and subject to a mother's reporting of illnesses (National Institute of Statistics, RDHS 2014-2015).

Achievements in 2015

1,100,000
Children screened for growth monitoring

900,000
Sick children seen by binomes in 2015 only (2.6 consultations/CHW/month)

240,000
PW identified; 175,000 accompanied to HF for ANC and delivery

170,000
New clients referred for initiation of FP

93,000
TB suspected cases referred to HF

Source: Liverpool School of Tropical Medicine (LSTM) Centre for Maternal and Newborn Health, Comprehensive Evaluation of the Community Health Program in Rwanda, December 2016.

Antenatal care (ANC) from a skilled provider is important to monitor pregnancy and reduce morbidity and mortality risks for the mother and child during pregnancy, at delivery, and during the postnatal period (within 42 days after delivery). The 2014-15 RDHS results show that practically all women (99 percent) who gave birth in the five years preceding the survey received antenatal care from a skilled provider at least once for their last birth. Forty-four percent of women had four or more ANC visits. Women living in the South province and those completing secondary education or higher were more likely than other women to have had four or more ANC visits (National Institute of Statistics, RDHS 2014-2015).



Source: Liverpool School of Tropical Medicine (LSTM) Centre for Maternal and Newborn Health, Comprehensive Evaluation of the Community Health Program in Rwanda, December 2016.

Supervision

CHWs are supervised by health centers which are in turn supervised by district hospitals on a quarterly basis; to assess implementation of community health activities; identify gaps and discuss solutions with in-charge of CHWs. Supervision seeks to:

- Provide oversight of quality of services (by checking adherence to norms/standards; and availability of drugs and supplies);
- Ensure a supportive environment (motivational, coaching and problem-solving); and,
- Maintain communication and information flow (educational messages, collect data, feedback...etc.).

For supervision, in-charge of CHWs, based at the health centers, must conduct visits to villages on a monthly basis and organize monthly meetings with CHWs to discuss and identify areas where more support is needed.

During monthly meetings, community health workers are provided with ongoing support to better understand and apply treatment protocols, and reporting tools. Interviewees both at the health center and community level reported that they received supervisory visits and that such visits are essential for continuous capacity building because they discuss and receive feedback from supervisors.

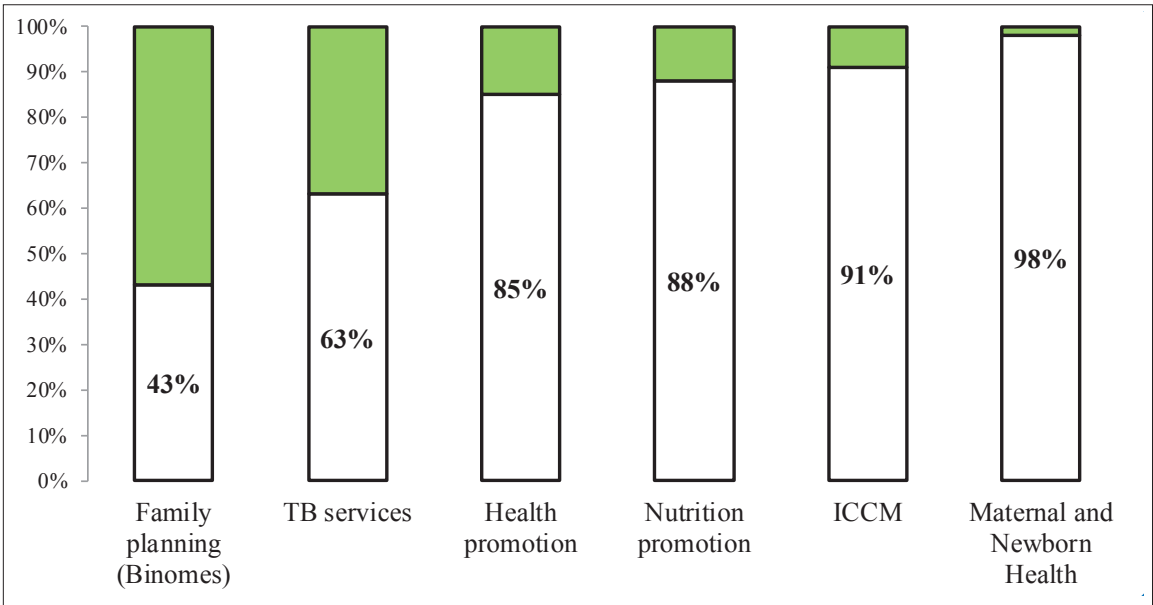
It was noted that visits are not conducted regularly both by the district hospital CHW supervisors to the health centers as well as health center CHWs in-charges to the community. Mainly, this was attributed from inadequate financial resources (for incidental,

transport) and time constraints due to heavy workloads of supervisors.

In some instances, when visits happen, supervisors may employ evaluative rather than supportive approaches focusing on indicators incentivized by performance based financing, which affects the quality of supervision. CHWs participating in focus groups and health providers in KIIs, pointed to a need for supervision to be regular and more formative.

Strengthening integrated supportive supervision that the MoH has been developing holds promise to overcome some of the above challenges and provide an avenue for multidisciplinary and mutual accountability.

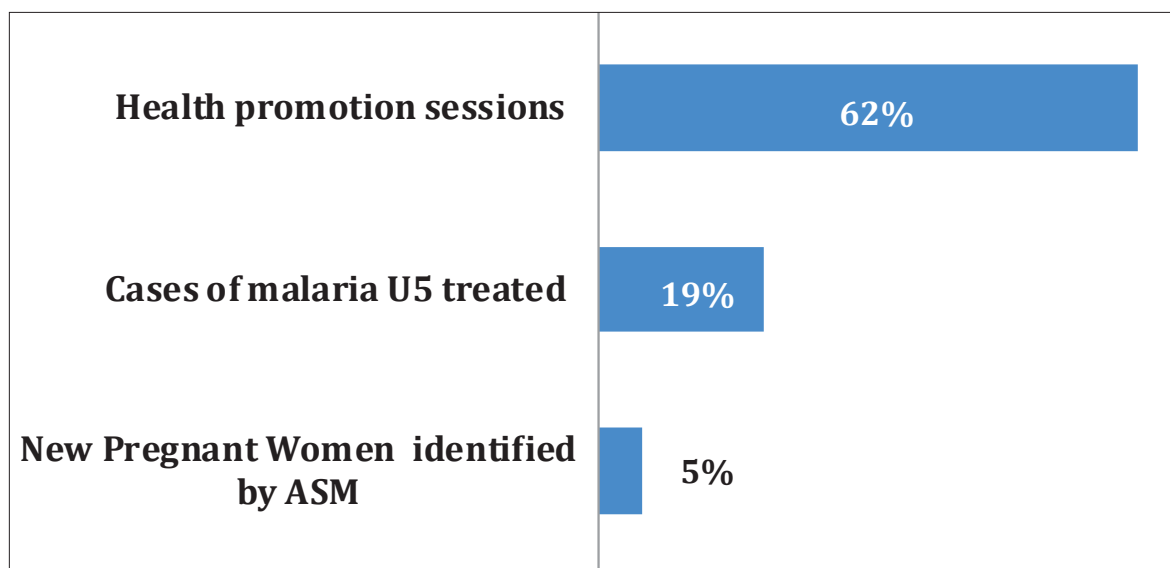
Bar Graph 03: Proportion of CHWs reporting to deliver services (LSTM)



Source: Liverpool School of Tropical Medicine (LSTM) Centre for Maternal and Newborn Health, Comprehensive Evaluation of the Community Health Program in Rwanda, December 2016.

Whereas the active CHWs currently delivering Integrated Community Cases Management - ICCM (91% of binomes) and MNH (98% of ASM) is close to optimum, the proportion of CHWs delivering TB services (63%) and family planning (43% of active binomes) instead presents significant opportunities to enhance service delivery. In the case of family planning, in 16 out of the 30 districts, only one of the two binomes available in each village was trained to deliver FP due to lack of funding.

Bar Graph 04: Additional services that may be provided by CHWs, if 100% of CHWs delivered the intervention



Source: Liverpool School of Tropical Medicine (LSTM) Centre for Maternal and Newborn Health, Comprehensive Evaluation of the Community Health Program in Rwanda, December 2016.

The analysis shows the additional number of activities that might be theoretically reached for various interventions, if 100% of CHWs delivered those interventions at the same average level of performance of the one's currently delivering services i.e 62% more health promotion sessions could be delivered, about 19% more malaria cases among children under five ages could be treated and each CHW as ASM could identify at least 5% of new pregnant women at community level.

ASMs' work in identification and follow-up of pregnant women throughout pregnancy and during the postnatal period has been stable over the past years. Also, as shown in bar graph 04, the ASMs are able to maintain an effective contact with their clients throughout the period: in 2015, ASMs identified more than 230,000 newly pregnant women, and actively followed more than 170,000 pregnant women during antenatal care and delivery (LSTM, December 2016).

CHWs Equipment materials and supplies



A CHW shows supplies and equipment they use routinely

For Community Health Workers to accomplish their roles, they are provided with equipment; materials, and commodities (depending on service packages under their scope).

The list on the right side gives essentials that make CHWs package of medical materials, equipment and medicine supplies.

Medical Materials

Anatomical arm model
Timer
Mid Upper Arm Circumference tape
Thermometer
Electronic Weighing Scale

Equipment

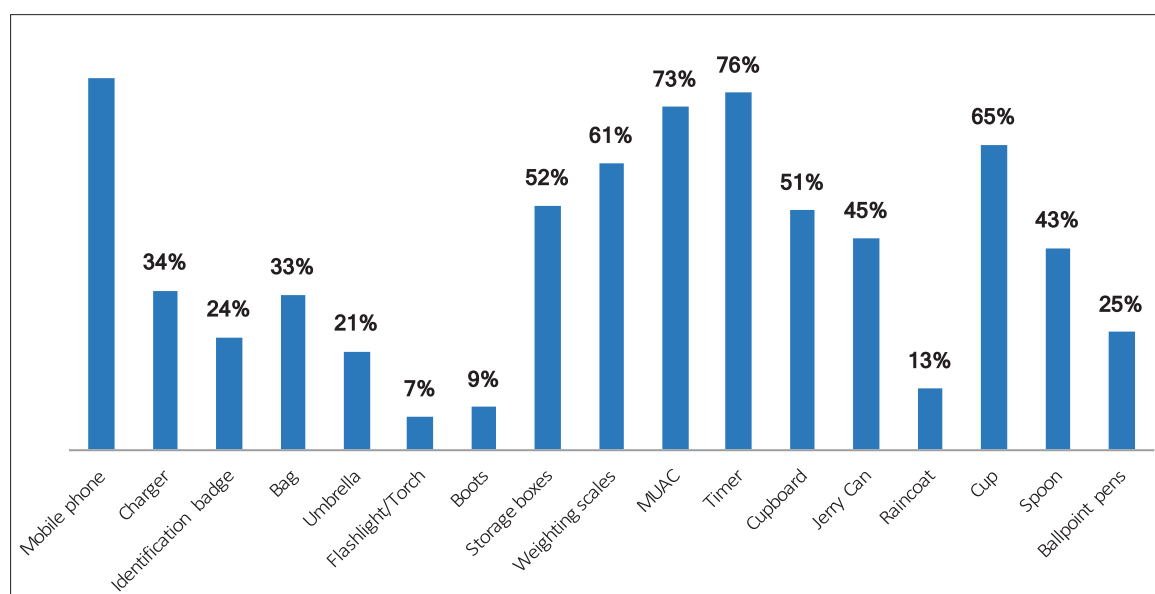
Boots
Rain coat
Bag
Torch
Ioin cloth (Kitenge)
Umbrella
Jerry can
Cup
Cupboard

Medical Supplies

Amoxicillin
ORS
Zinc
Coartem
Rapid Test Diagnostics (RTD)
Depo Provera Pills

Respondents including CHWs reported that MoH and partners have done a commendable job to provide the majority of the above basic essentials to CHWs. Also, for medicines, the MoH has put in place a system to resupply CHWs via the health center after presenting a report of patients/

clients and doses of medicines used. In turn the health center is re-supplied by the district pharmacy. Records of these medicines are kept in registers which CHWs reported to have received from MoH.



The availability of basic equipment and materials that CHWs should have at their disposal is behind expectations. Personal utilities (like telephone, boots, torch, etc.) are present, but only the telephone reach a high coverage (79%) where all other items are at a rate of a maximum of 30%.

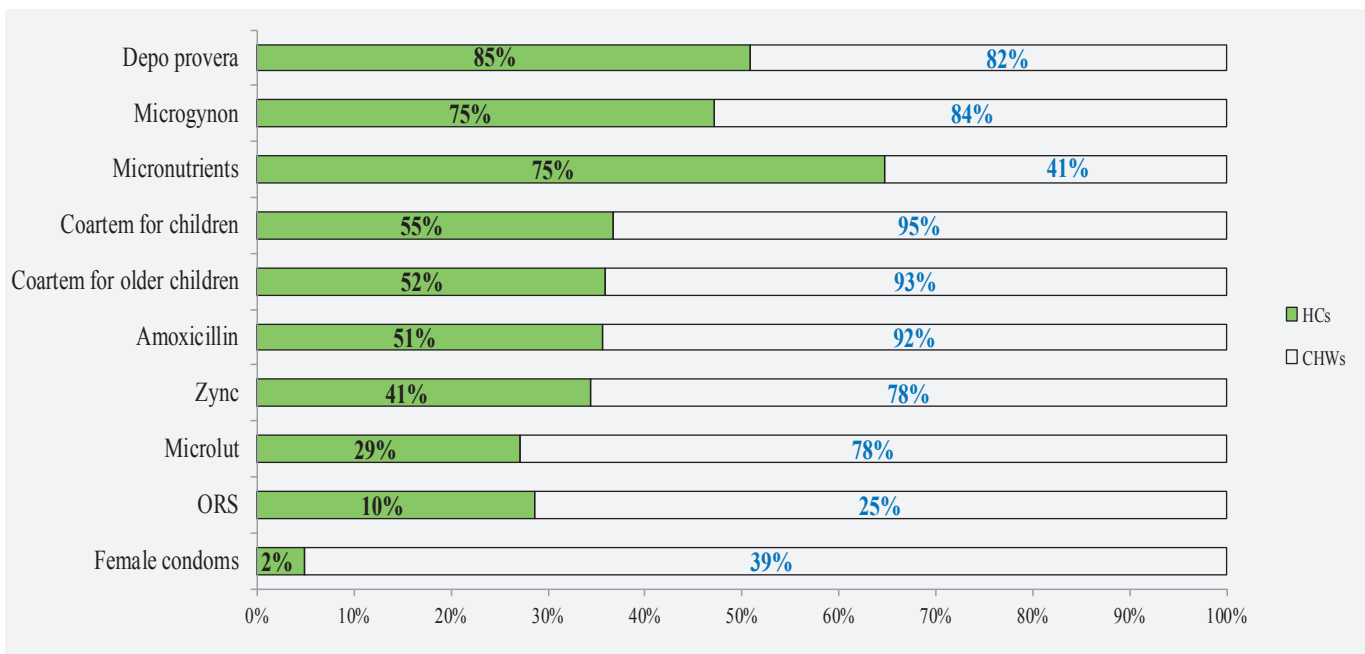
This is confirmed by similar low stock availability at the HC (around 29%) which is the entity that should resupply CHWs with these utilities. The most probable cause of this rather low presence is the fact that CHWs receive the items after the initial training and MoH does not yet have a policy of timely replacement of equipment items, and replacement stock at HC is low or totally

absent. The availability of instruments (scale, cup, timer, spoon, etc.) is on the critical low side where only the timer is available at a rate of 76%. This constraint is confirmed by a low number of HC which hold stock of these items.

Over 80% of CHW have a storage box or a cupboard available; 79% of the cupboard are lockable. Both conditions are basic guidelines for good pharmaceutical storage practice. Over 80% of binomes have stock cards, and over 70% of HC hold replenishment stock (LSTM, December 2016).

CHWs also reported having received other resources such as reporting templates either at the end of training or periodically from the central level. However, participants reported inadequacy of transport facilitation, and a periodic lack of some of the above materials and equipment (boots, rain coats, torches) for their routine activities.

Bar Graph 06: Proportion of Health Committees (HCs) and CHWs with medicines in stock (LSTM)



Source: Liverpool School of Tropical Medicine (LSTM) Centre for Maternal and Newborn Health, Comprehensive Evaluation of the Community Health Program in Rwanda, December 2016.

Tools

According to the LSTM report, the availability of essential tools is high for the “referral and counter referral forms” and the “monthly reporting forms”; however, all other tools are under an availability rate of 55%. On the contrary, most of these tools are available at higher stock rates at HCs.

Medical supplies

A high proportion of HC hold stock of the medical supplies the day of the visit (spot checked). Good stock (higher than 70%) is available for high rotation items like cotton wool, gloves, disposal box and RTDs. Low rotation items like thermometers and alcohol has reliable stock levels. Stock of sanitary towels is available in only around 32% of HC.

Medicines

High stock levels were found for medicines at health facility level: nine out of the 13 items have stock levels of 78% or higher. The other four items (Ongera, ORS, female condoms, Misoprostol) are under 41%. Such levels of stock-out are not reflected in equivalent availability of drugs at community level.

Stock out of consumables was also reported by some FGDs participants resulting from untimely delivery of supplies to the district pharmacy by the national level or financial constraints affecting adequate availability of the supplies

“We receive the medications which are supposed to last for a month, but then they get finished before the end of the month. But the problem is that we don’t immediately receive the other medications after they are finished, rather it takes two months to receive them again.”

CHW in a urban area of Kigali region.

Despite the challenges, interviewees report that CHWs successfully delivered their role using available resources. MoH also has continued to address challenges related to the supply system through different initiatives such as the integrated Logistics Management Supply Information (USAID | DELIVER PROJEC, 2013) and now covers all health facilities.



Community members follow a play on fistula

Integration of CHP within and reporting into general health mainstream

For purposes of this assessment, integration refers to the way CHWs relate with the higher level of the health system hierarchy (health center, or district). As Community Health Workers are not professionally trained, they provide a customized package of services on which they have been trained.

Their services are different from those provided at the health centers or district hospitals. CHWs refer patients to these levels when they are not in position to treat them. Thus, referral and/accompaniment of patients represents one way through which CHWs integrated into health mainstream.

The in-charges of community health and that of hygiene and environmental health compile reports received from cell coordinators; conduct data quality check and report to the in-charge of community health workers at the district hospital, who submits the data to the national level.

Alongside mainstream reporting, exists other systems of data collection among them the RapidSMS which is a mobile platform used for early pregnancy identification, antenatal care, post-natal care, nutrition etc.

Additionally, they link to the health system via a coordinated and consistent reporting mechanism to which CHWs submit data on a monthly basis via cell coordinators who submit CHWs' compiled reports to the health center in turn

The main challenge associated with reporting relates to expansion of CHW packages which has gradually increased the reporting burden of CHWs, because each new package added requires CHWs to report on its activities in addition to those they already report on.

2 Governance Impact

For this assessment, governance has been defined in terms of: (a) program management and coordination; (b) interaction with members of the community; and, (c) CHWs self-governance via cooperatives. In this section, the report discusses interaction with members of the community and CHWs self-governance via cooperatives; since program management and coordination was already discussed under institutional set up

Community participation

Community involvement in CHP is key. CHWs reported the community and the local leadership invites them to engage with citizens via umuganda; ubudehe; umugoroba w'ababyeyi...etc. Advantages of being involved in such forums are:

- CHWs target audiences with a specific messages (e.g. mutuelles);
- CHWs share multiple messages in a single gathering;
- Community provides feedback to CHWs about services they offer;
- Local leadership interacts with CHWs and community members at ago.

Community gatherings provide awareness platforms addressing health issues.





A CHW explains a point in a training on cooperatives

Cooperatives are linked to the health center through the in-charge of CHWs, but he/she must not interfere with cooperatives' operations, but rather play an oversight or advisory role. Cooperative members elect an administrative council constituted by the president, vice president, secretary and the treasurer. The council ensures day-to-day management of cooperative activities.

The general assembly attended by all cooperative members is the supreme governance body. It also decides income generating activities where to invest cooperative funds by consensus. Members of the cooperatives are updated on the progress of their income generating activities during the assembly meetings held quarterly.

As applicable, members share dividends mostly at the end of the year. According to the interviewees, the cooperative system has continually been strengthened. MoH worked to address capacity management gaps manifested at the beginning, through training.

A key area requiring focus as reported across FGD most of CHWs' capacity is limited to conceptualizing lucrative IGAs, thus requiring continued support to manage cooperatives. Other areas needing support are business development, record keeping, and financial management among others.

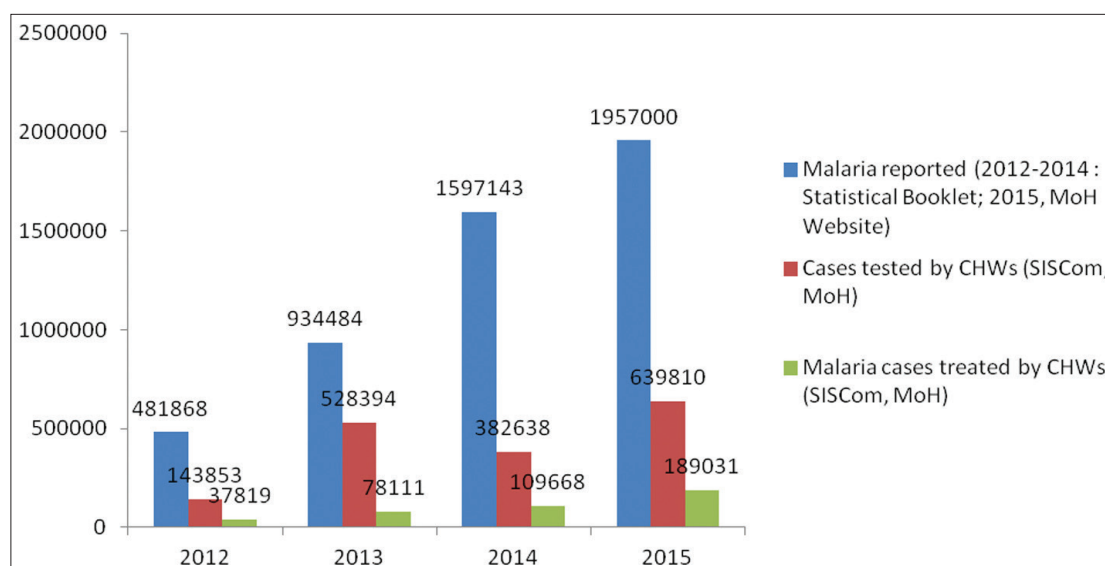
3 Community Health Workers performance

This section discusses selected CHWs activities and their contribution to the positive health outcomes of children and pregnant mothers. It focuses on following indicators:

1. Diagnosis and treatment of malaria in children
2. Integrated Community Case Management (iCCM) of U5 children; and,
3. Follow up pregnant women

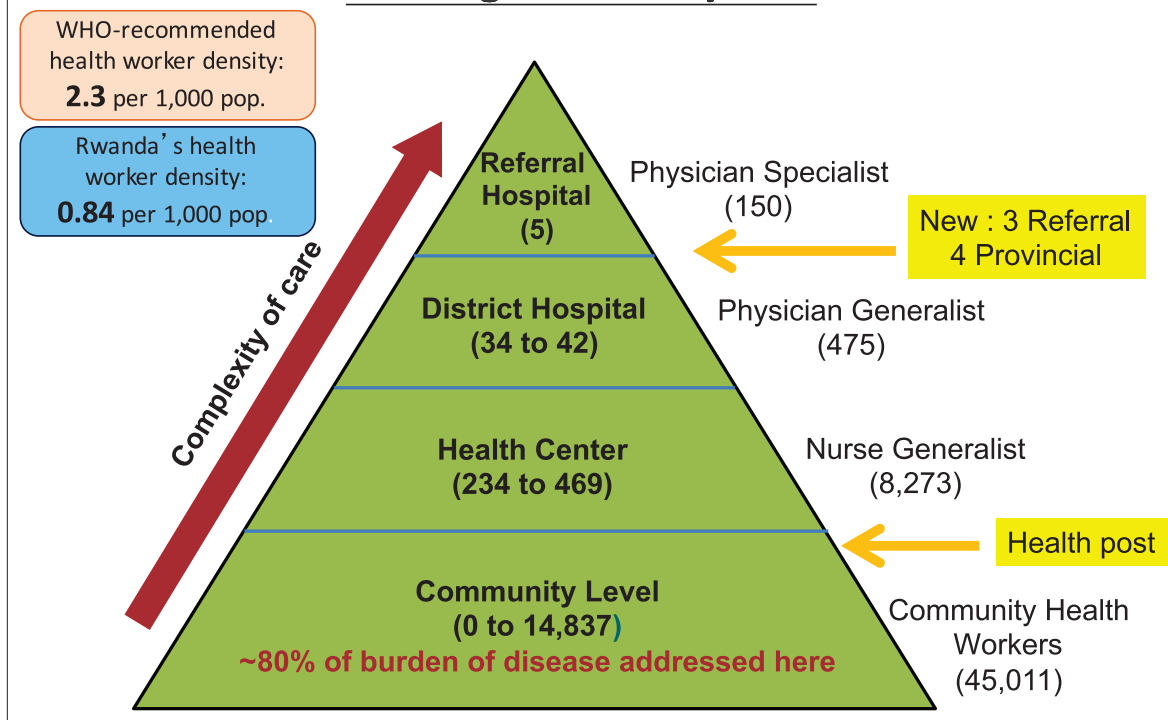
It should be noted that the CHP has other indicators not presented in this report. These were selected due to their close relationship with child and maternal health outcomes. Their analysis covers the period from 2012 to 2015 for activities implemented under iCCM; (i.e., treatment of malaria, pneumonia and diarrhea) as it was rolled out nationally in 2012. In the past, CHWs were only involved in prevention activities. It is critical that CHWs are able to test and treat malaria in a timely manner to mitigate complications (including death), and avoid the need for referral.

Bar Graph 07: Malaria cases reported, tested and treated by CHWs



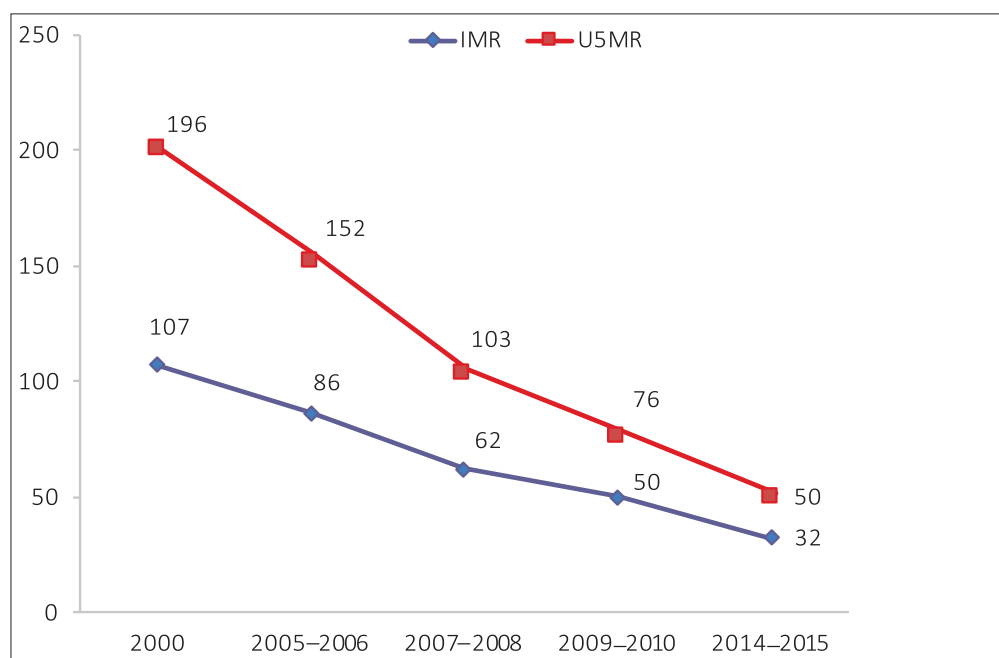
Source: Data from MoH, 2012 - 2015.

Building a Health System



Source: Liverpool School of Tropical Medicine (LSTM) Centre for Maternal and Newborn Health, Comprehensive Evaluation of the Community Health Program in Rwanda, December 2016.

Line Graph 01: Child mortality rate: Infant and Under five child deaths per



Source: RGB, National Umushyikirano Council. A Decade of Delivering Democracy and Development to Rwandans. 2003 - 2014.

There were 481,868 reported cases of malaria in 2012; 934,484 in 2013; 1,597,143 in 2014; and, nearly 2 million cases in 2015. During this period, CHWs tested 1,694,695 under-five children and successfully treated 414,629 (24%) diagnosed with malaria. This means that in 2012 and 2013 respectively, CHWs treated 8% of all malaria cases in Rwanda; 7% in 2014; and, a whopping 10% in 2015.

This clearly indicates that CHWs are actually playing an active role in treatment of malaria. According to the National Maternal, Neonatal and Child Health National Strategy, malaria is the second most common killer of under-five children contributing 18% of child death in Rwanda (National Maternal, Neonatal and Child Health National Strategy).

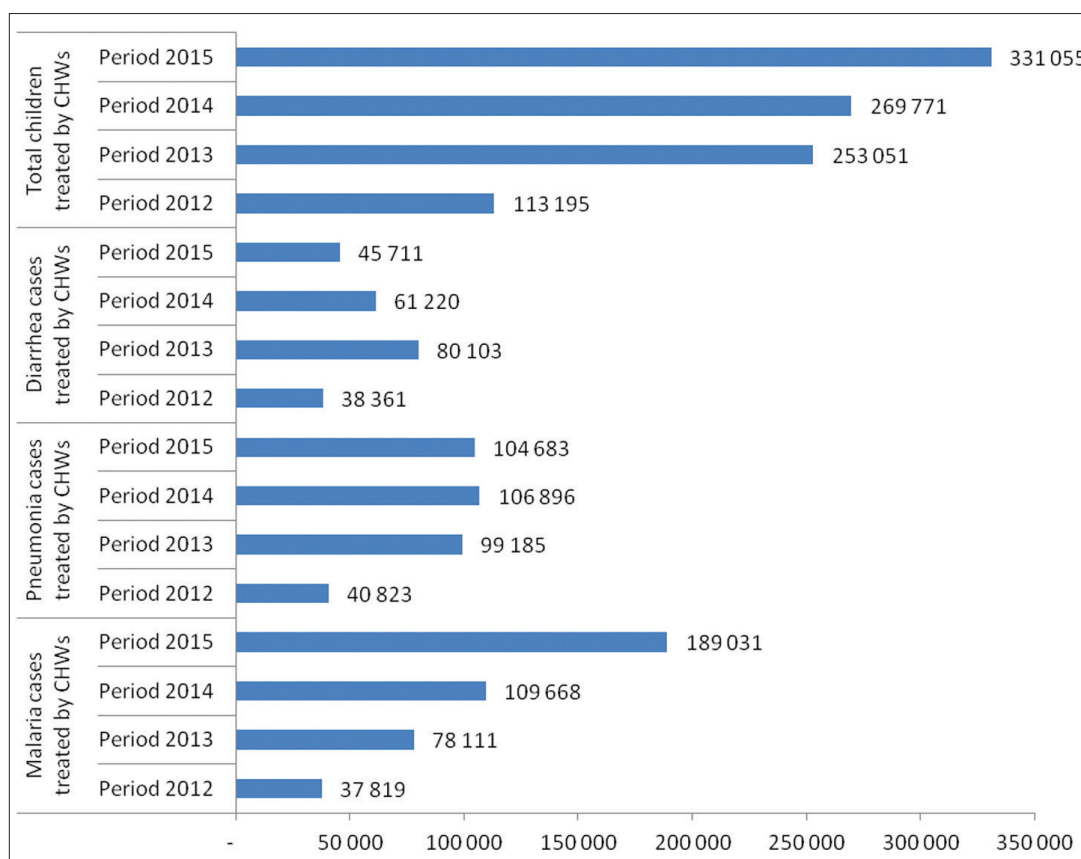
Therefore, CHWs being actively involved in diagnosis of malaria and in its treatment (of more than 400,000 children), is a strong indicator that

they contribute to the observed overall reduction in under-five and child mortality. The data shows an upward trend in malaria diagnosis which is consistent with the malaria upsurge that Rwanda is currently experiencing.

Integrated Community Case Management (ICCM)

Integrated Community Case Management (ICCM) combines treatment of the three leading causes of U5 deaths-- namely pneumonia; malaria; and, diarrhea by Community Health Workers. In Rwanda these three diseases account for nearly 60% of U5 deaths (National Maternal, Neonatal and Child Health National Strategy).

Bar Graph 08: Malaria cases reported, tested and treated by CHWs



Source: Data from MoH

Introduced in 2009, iCCM was gradually put to the national scale through training of CHWs on treatment of the three diseases; establishment of a supply system for required medicines; plus supervision and monitoring among other interventions initiated. From 2012 to 2015, a combined total of 967,072 children were treated by CHWs for pneumonia, malaria and diarrhea.

The ability of CHWs to treat children with these diseases does not just relieve the burden off the mainstream healthcare system; it also offers a real-time treatment option for those diseases and avoids complications (including death) and/or a need for referral.

Since these diseases still contribute the bulk of all under-five (National Maternal, Neonatal and Child Health National Strategy) deaths, the ability of CHWs to treat them is a strong indicator of their contribution to the reduction of U5 and child morbidity and mortality in Rwanda.

Follow up of pregnant women

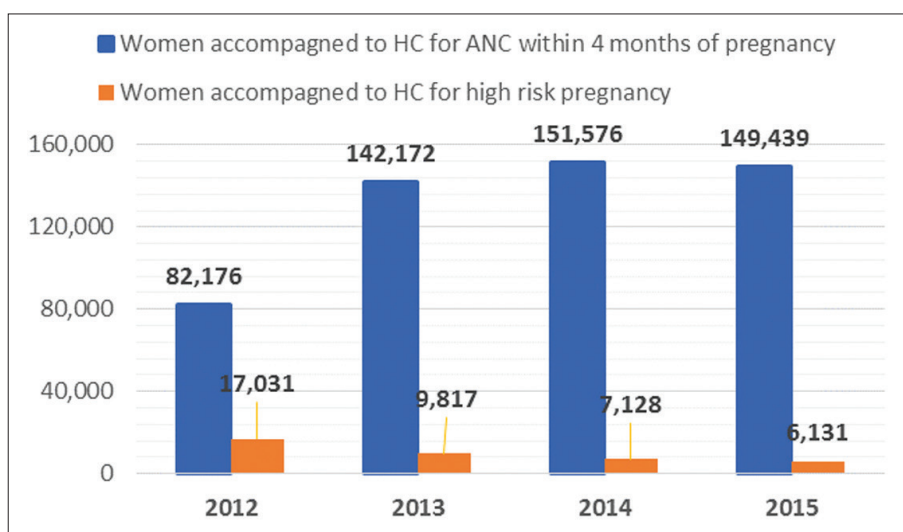
Another area of active CHWs engagement (particularly ASM) is follow up of pregnant women. ASM's role includes: identifying pregnant women and encouraging them to use Ante Natal Care services, advising them on birth preparedness; and to deliver in the health facilities; visiting pregnant women to ensure that they take an HIV test and have insurance, and that their basic needs such as proper feeding, use of mosquito nets and hygiene are covered.

They also identify pregnant women, mothers and with danger signs and refer them for care at the health facility; accompany women in labor; and, administer misoprostol to women who deliver at the community to reduce the risk of bleeding after birth (National Maternal, Neonatal and Child Health National Strategy).



A woman is examined accompanied by a CHW to the HC

Bar Graph 09: Malaria cases reported, tested and treated by CHWs



Source: SISCom- MoH

The graph shows that from 2012 to 2015, CHWs accompanied 525,363 pregnant women for ANC during the first four months of pregnancy. During the same period, they identified 40,107 with high risky pregnancy and accompanied them to the health centers so that they may be offered professional care.

The first ANC visit is one of the crucial visits during which women receive professional counselling early in pregnancy; and, are educated on respecting subsequent visits. When all ANC visits are respected, health providers are able to identify and address any health issues including risks associated with pregnancy as they do arise.

The role played by CHWs in ensuring that women attend ANC, and identifying those at risk is an indication of their contribution to positive maternal outcomes (and in fact newborn outcomes).

The declining trend of high risk pregnant mothers identified by CHWs, shown in graph 9 indicates that the quality of follow up of pregnant women has been improving.

Rwanda is one of the countries to have registered remarkable reduction in maternal mortality, thanks to a combination of interventions including those implemented by CHWs. Tasks such as the ones described above ensure that women receive proper healthcare during pregnancy; delivery and after.

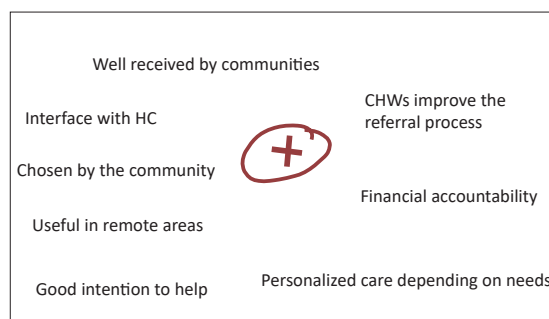
They are simple; high impact interventions which have been proven to improve maternal health and newborn outcomes (January 2015. Ending Preventable Maternal Mortality; USAID). Therefore, the fact that CHWs are delivering them to those in need is evidence that they (CHWs) are contributing to Rwanda's progress in health; particularly for pregnant mothers and U5 children.

4 Community Satisfaction for Community Health Workers program

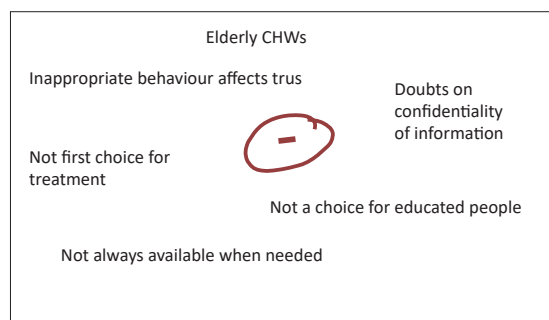
This section discusses satisfaction of the community for services provided by CHWs, which is derived from data collected using Rwanda Governance Board's Citizen Report Card (CRC); and is analysed in conjunction with perspectives collected from focus group discussions with members of community. A total of 1,920 respondents from Kicukiro, Muhanga, Rubavu, Musanze and Gatsibo were surveyed.

The demographic details of these respondents are summarized in table 1 which shows that 1,436 (74.8%) out of 1,920 citizens interviewed were married; 1,058 (55.1%) completed primary education, 958 (46.9%) are in the second category of Ubudehe, while 1,274 (66.4%) are farmers. These were interviewed on their satisfaction for: (i) immunization, (ii) sensitization of the community to enrol in mutuelles, (iii) caring for pregnant mothers, (iv) Family Planning; and, (v) provision of primary care.

Relevance to end users: what works well



Relevance to end users: what needs attention



Source: Liverpool School of Tropical Medicine (LSTM) Centre for Maternal and Newborn Health, Comprehensive Evaluation of the Community Health Program in Rwanda, December 2016.

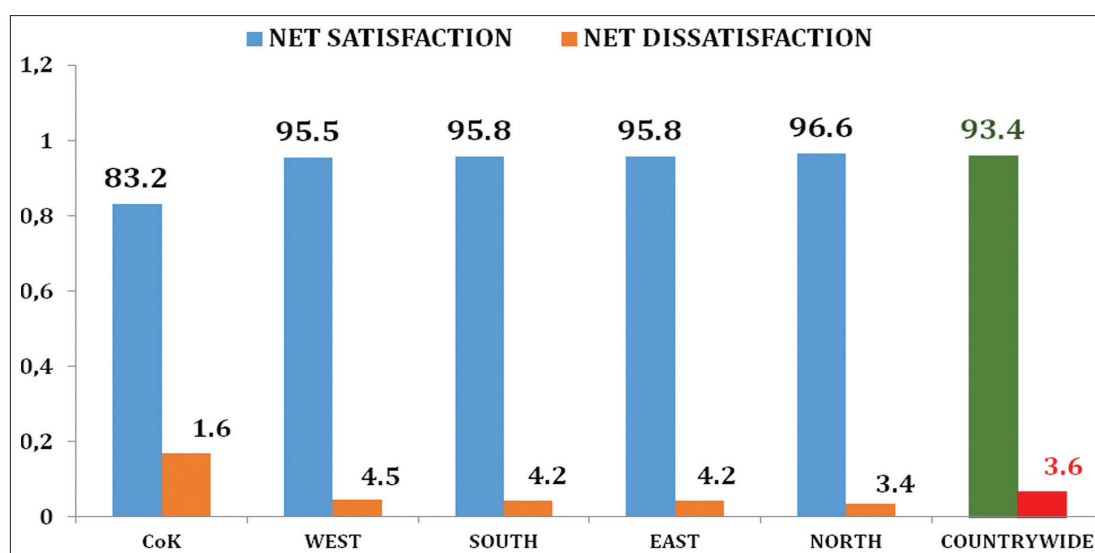
Table 1: Demographic Characteristics

Characteristic	Number	%
Marital Status		
Single	241	12.6
Married	1436	74.8
Widow/Widower	186	9.7
Separated	51	2.7
Divorced	6	0.3
Level of education		
None	470	24.5
Primary	1,058	55.1
Vocational	83	4.3
High school	214	11.1
Graduate	95	4.9
Ubudehe Category		
1	270	13.2
2	958	46.9
3	627	30.7
4	11	0.5
Do not know	175	8.6
Employment status		
None	136	7.1
Student	75	3.9
Farmer	1,274	66.4
Self employed	152	7.9
Trader	165	8.6
Local Authority	33	1.7
NGO	70	3.6

Analysis of interviewees' responses in relation to their satisfaction toward CHWs services shows that overall, more than 90% of respondents are satisfied with all CHWs services as shown in figure 5.

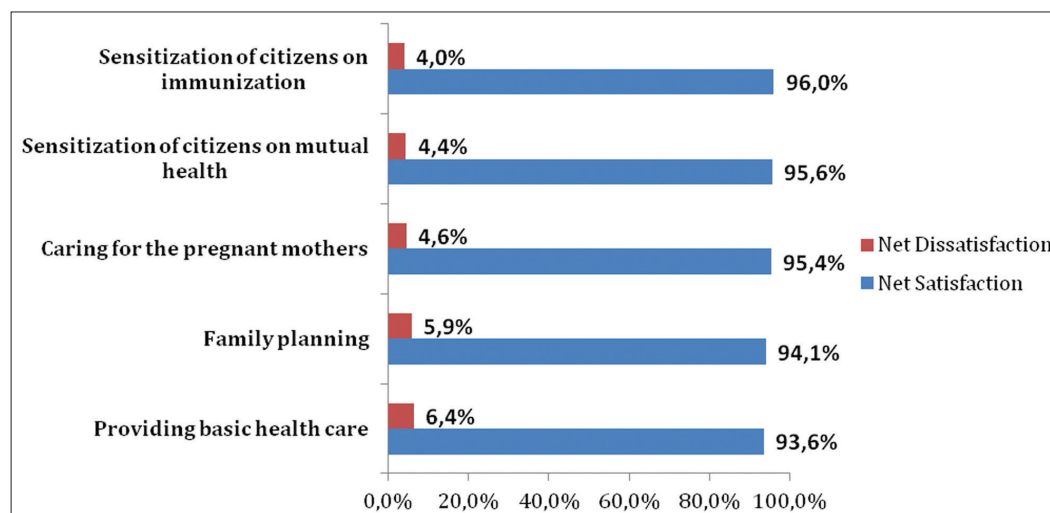
The graph 10 shows that, 96% of the respondents reported that they are satisfied with immunization; 95.6% with mutuelles sensitization; 95.5% with caring of pregnant women, 94.1% with family planning; while 93.5 expressed satisfaction with primary care.

These findings reinforce those reflected by FGDs participants both whom (CHWs and community members) reported being appreciative of each other's roles. The high satisfaction level also is a good indicator of community ownership and confidence in CHWs and the services they offer.

Bar Graph 10: Overall citizens' satisfaction for CHWs Services per province

Source: RGB CRC 2016

Bar Graph 11. Overall citizens' satisfaction for CHWs Services per indicator



Source: RGB CRC 2016

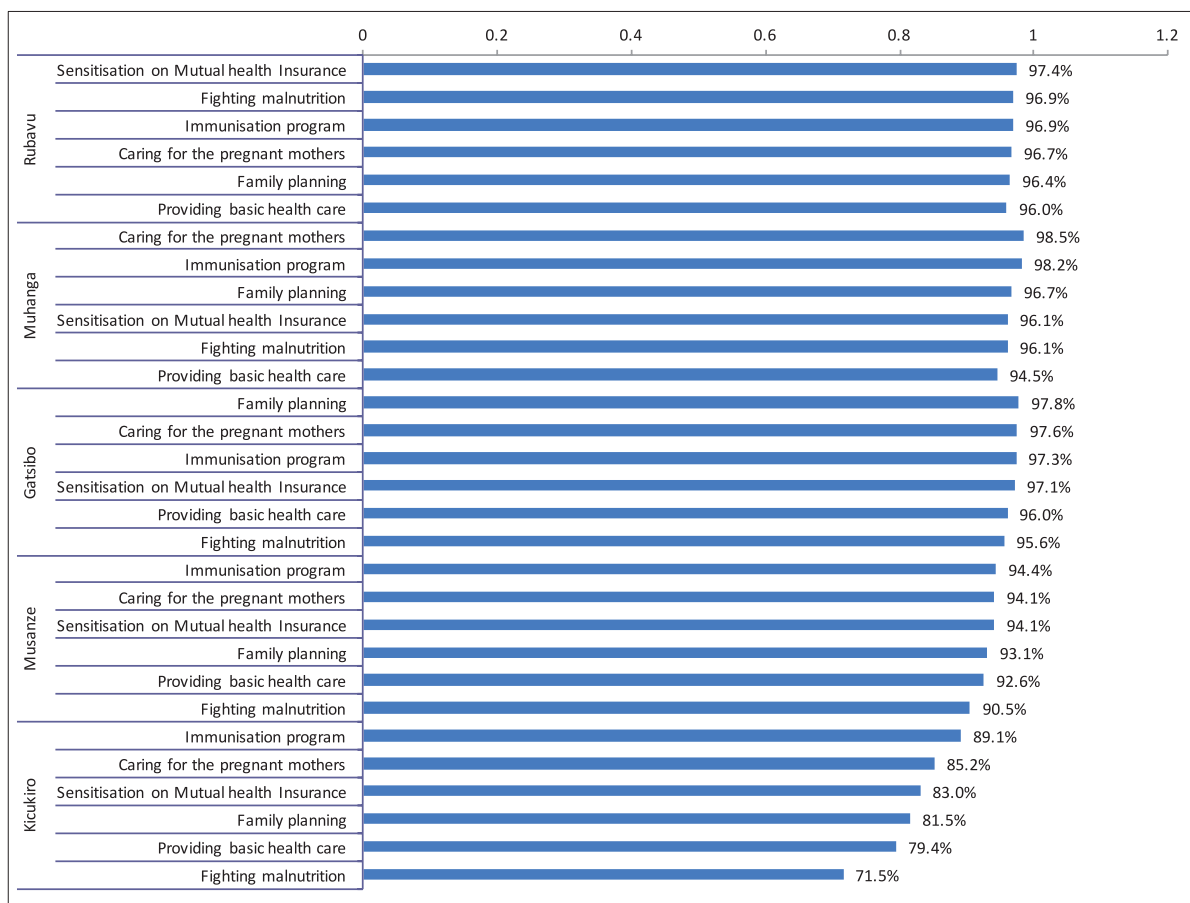
The high satisfaction level also is a good indicator of community ownership and confidence in CHWs and the services they offer. Another area of active CHWs engagement (particularly ASM) is follow up of pregnant women. ASM's role includes: identifying pregnant women and encouraging them to use ANC services, advising them on birth preparedness; and to deliver in the health facilities; visiting pregnant women to ensure that they take an HIV test and have insurance.

A detailed analysis of satisfaction for services provided by CHWs by community members in each of assessed district is presented in detail below.

Citizens' satisfaction on CHWS services across Districts

There is slight variation in satisfaction towards CHWs services when data from different districts is compared. Figure 6 shows that in four districts out of five, (Muhanga, Rubavu, Musanze and Gatsibo), the overall community satisfaction for CHWs service areas was more than 90%.

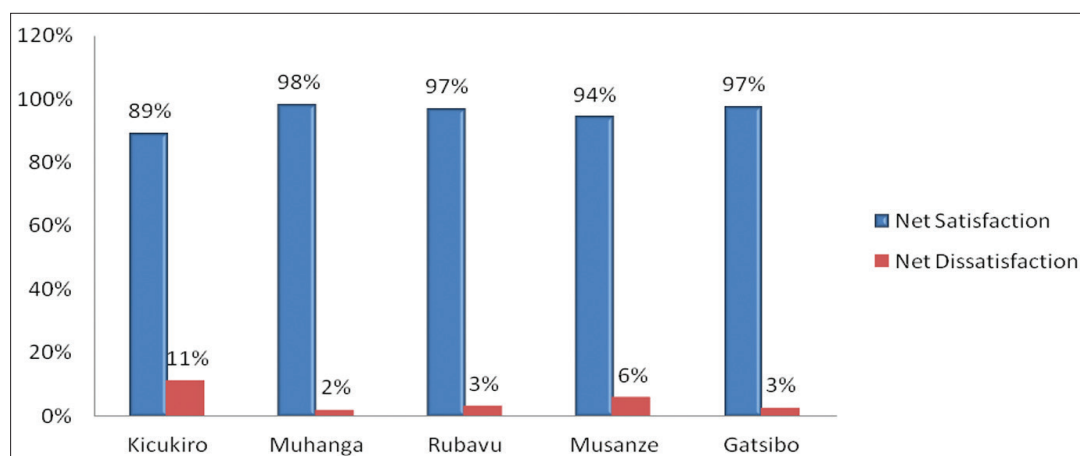
Bar Graph 12. Citizens' Satisfaction for CHWs Services per District



Source: RGB CRC 2016

Kicukiro district shows slightly lower satisfaction toward CHWs services compared with other districts. The least satisfaction was for fighting malnutrition (71.5%); while the most was for immunization (89%). In either case, the level of satisfaction is less than that reported in other districts.

Bar Graph 13: Citizens' satisfaction towards immunization services provided by chws



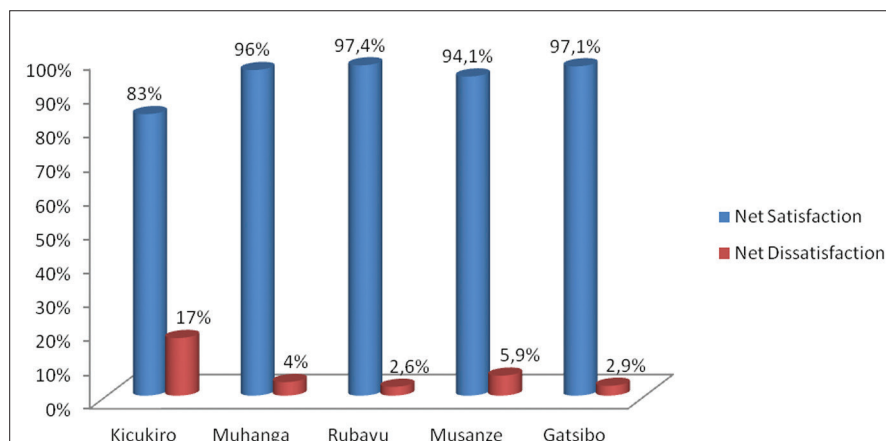
Source: RGB CRC 2016

Community members interviewed reported a high level of satisfaction toward immunization services provided by CHWs across the five districts surveyed. In four out of five, more than 90% of respondents surveyed reported being satisfied with immunization services provided by CHWs as shown in figure 7. The highest satisfaction for immunization services was reported in Muhanga (97.4%); followed by Rubavu and Gatsibo (97% each); followed by Musanze (94%), while the least satisfaction was reported in Kicukiro (89%).

Citizens' satisfaction toward CBHI sensitization activities by CHWs

Community members interviewed reported a high level of satisfaction toward sensitization activities on Community Based Health Insurance (CBHI) conducted by CHWs across the five districts surveyed.

Bar Graph 14: Citizens' satisfaction towards community health insurance services provided by CHWs



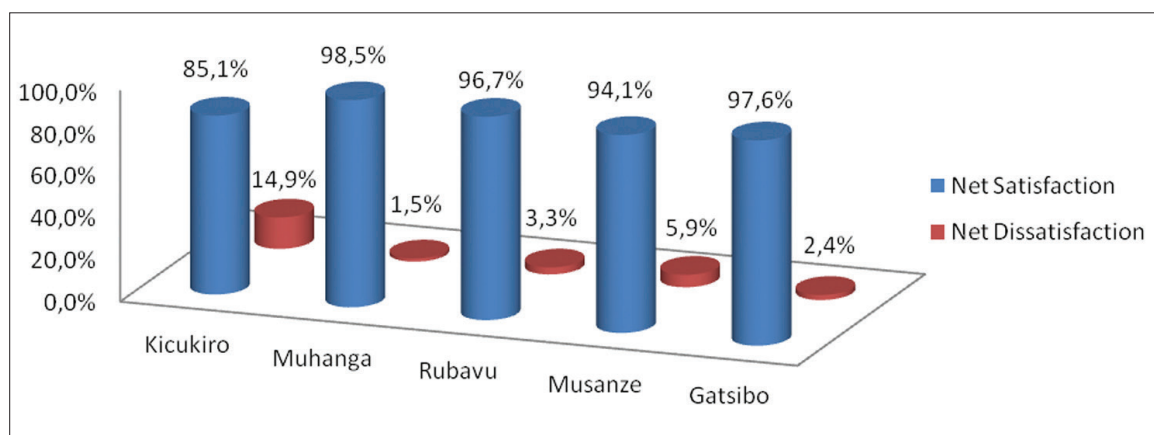
Source: RGB CRC 2016

In four out of five, more than 90% of respondents surveyed reported being satisfied with CHWs activities on CHBI as shown in figure 8. The highest satisfaction was reported in Rubavu (97.4%); followed by Gatsibo (97.1%); followed by Muhanga (96%), Musanze (94.1%), while the least was reported in Kicukiro (83%).

Citizens' satisfaction towards caring for pregnant mothers

Community members interviewed reported a high level of satisfaction toward services provided by CHWs related to caring for pregnant mothers across five districts surveyed.

Bar Graph 15. Citizens' satisfaction towards caring for pregnant mothers



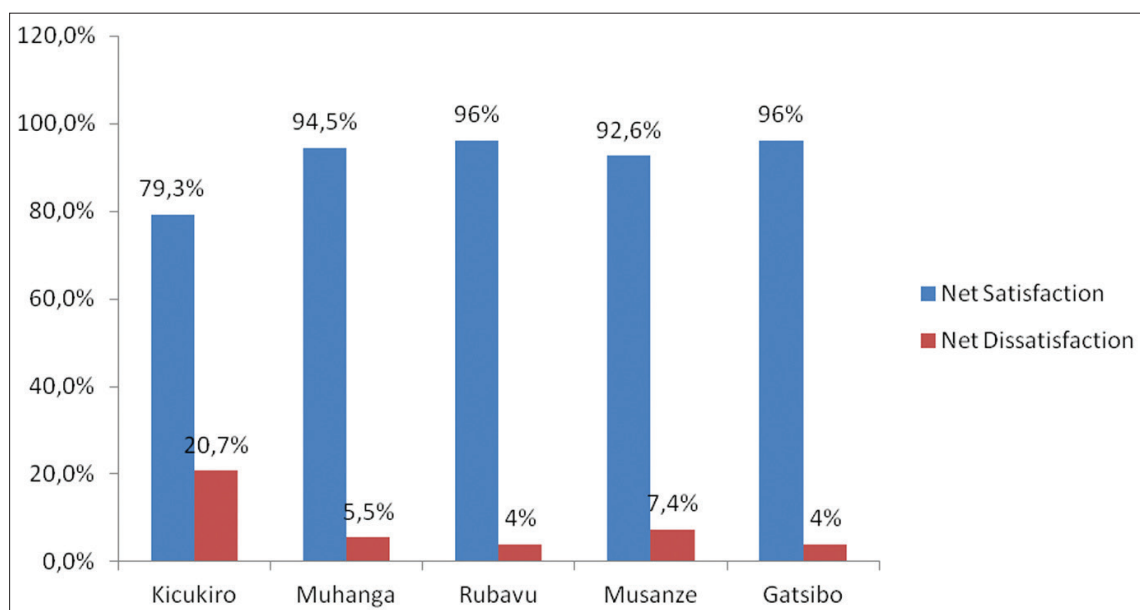
Source: RGB CRC 2016

In four out of five, more than 90% of respondents surveyed reported being satisfied services provided by CHWs related to caring for pregnant mother as shown in figure 9. The highest satisfaction was reported in Muhanga (98.5%); followed by Gatsibo (97.6%); Rubavu (96.7%), followed by Musanze (94.1%), while the least satisfaction was reported in Kicukiro (85.1%).

Citizens' satisfaction toward provision of basic healthcare by CHWs

Community members interviewed reported a high level of satisfaction toward basic health services provided by CHWs across the five districts surveyed.

Bar Graph 16: Citizens' satisfaction towards provision of basic health cares



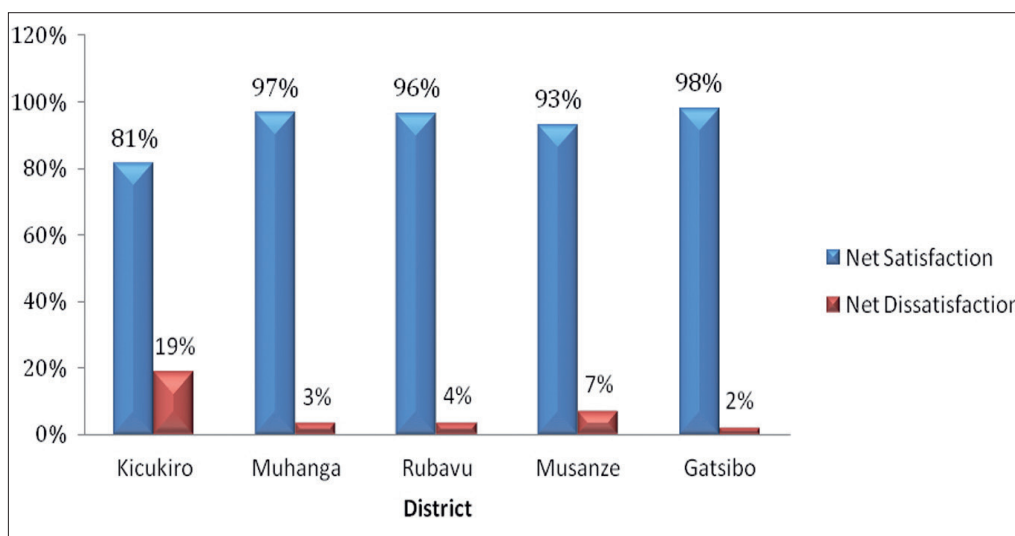
Source: RGB CRC 2016

In four out of five, more than 90% of respondents surveyed reported being satisfied with basic services provided by CHWs as shown in figure 10. The highest satisfaction was reported in Rubavu and Gatsibo (96% each); followed by Muhanga (94.5%); Musanze (92.6%), while the least satisfaction was reported in Kicukiro district (79.3%).

Citizens' satisfaction toward provision of family planning by CHWs

Community members interviewed reported a high level of satisfaction toward family planning services provided by CHWs across the five districts surveyed.

Bar Graph 17: Citizens' satisfaction towards caring for pregnant mothers

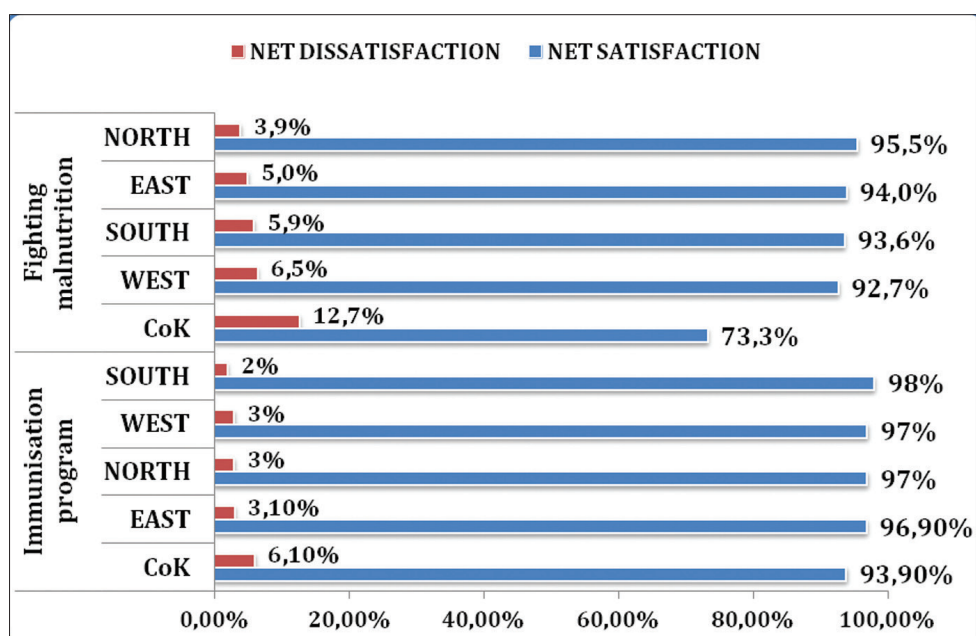


Source: RGB CRC 2016

In four out of the five, more than 90% of respondents surveyed reported being satisfied with family planning services that CHWs provide as shown in figure 11. The highest satisfaction was reported in Gatsibo (98%); followed by Muhanga (97%); Rubavu (96%), followed by Musanze (93%), while the least satisfaction was reported in Kicukiro (81%).

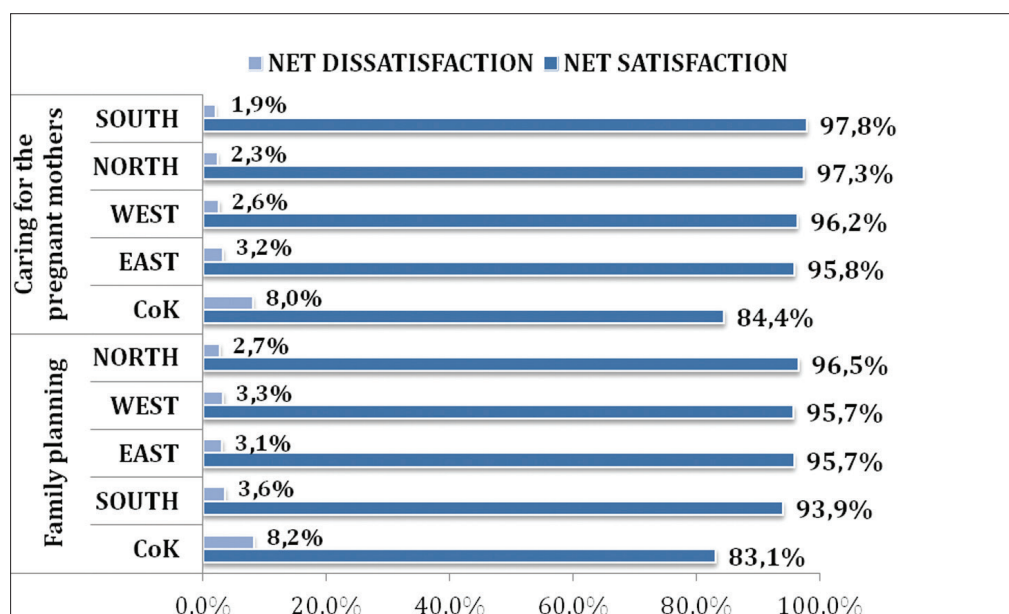
As seen in graph 10-17 above, the level of satisfaction reported was lowest in Kicukiro district. This could be related to Kicukiro district being located in an urban area with a more affluent population which is more likely to use formal health facilities than going to CHWs. Further analysis which is beyond the scope of this is needed to reflect on the possible causes of the observed differences

Bar graph 18: Citizens' satisfaction on CHWs services across provinces



Source: RGB CRC 2016

Bar graph 19: Citizens' satisfaction on CHWs services across provinces



Source: RGB CRC 2016

As illustrated by the graph, fighting malnutrition, providing basic health care and family planning have scored high in all provinces – above 90% – except for CoK.

The graph shows also that satisfaction on Immunization program has the highest score in all provinces and CoK; with 98% in the South province.

For the GoR, reducing the infant and child mortality is not a dream; infant mortality remarkably declined from 107 deaths in 2000 to 32 deaths/1000 live births in 2015, a decline of 70%. And under 5 mortality decreased by 74% from 196 deaths in 2000 to

50 deaths/1000 live births in 2015. This is not a result of mere chance; many things have been done to improve health of Rwandan citizens, with other interventions we have to mention the introduction of new vaccines in routine immunization, supplementary immunization activities, and improvement of access of child to health care using Community Health Workers during community assemblies.

5 Financing and Economic Benefits

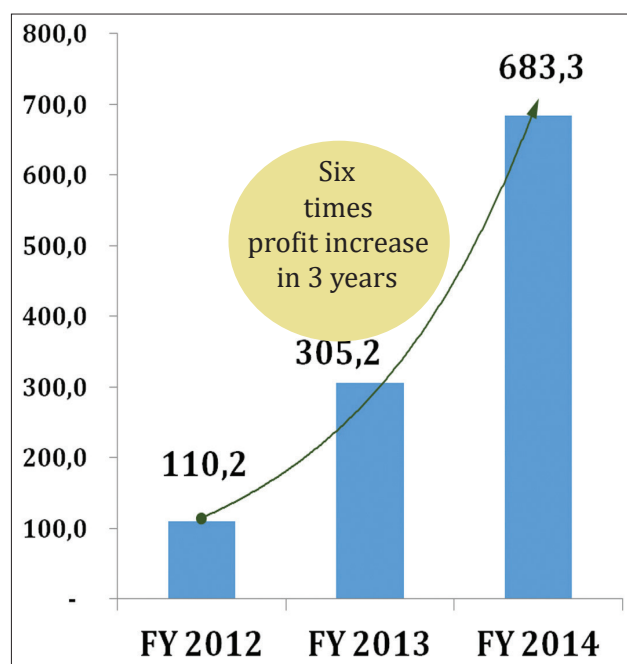
In this section, the report discusses CHP financing, and benefits to CHWs as well as members of the community. These are both social and economic; and, emanate from CHWs health, and income generating activities mainly implemented through CHWs cooperatives financed mainly through performance based financing (PBF).

Performance Based Financing

Community Performance Based Financing (C-PBF) is a key strategy of Rwanda's CHP. Through C-PBF, MoH provides direct cash incentives to CHWs by remunerating results for selected indicators. Funds are disbursed quarterly based on results of evaluation of those indicators conducted by a steering committee based at the district, followed by the approval of funds by both the district and central levels.

Using this mechanism, MoH has been channelling significant resources into community PBF. The incentives benefit CHWs directly as they share 30% of the total received. CHWs then invest the remaining 70% in IGAs through CHWs cooperatives. CHWs recognize this financing framework, and those interviewed demonstrated great initiative and aspiration to develop cooperatives

Bar graph 20: Total profits by CHWs cooperatives valued in billion Frws



Source: Assessment of CHWs Cooperatives, MoH; 2015

Income Generating Activities

From the start of the CHP, sustainability was a critical consideration for the MoH. Most of the initial funding came from development partners, which reinforced the need to search for a sustainable solution. This culminated in initiation of CHWs cooperatives in 2006.

Despite the fact that some cooperatives still need to improve in management aspects current efforts such as hiring of accountants have been initiated as part of the larger re-organization of CHWs cooperative functions.

To date, according to MoH, more than 353 out of 475 (75%) cooperatives are officially registered with Rwanda Cooperative Agency (MoH, 2015: A comprehensive assessment of community health workers' cooperatives), and the ministry has been supporting cooperatives carrying out similar activities to form district-level cooperative unions.

It is planned that CHWs cooperatives will eventually come together to form national unions,

and although many still require support, they cooperatives offer a reasonable sustainability alternative for the CHP.

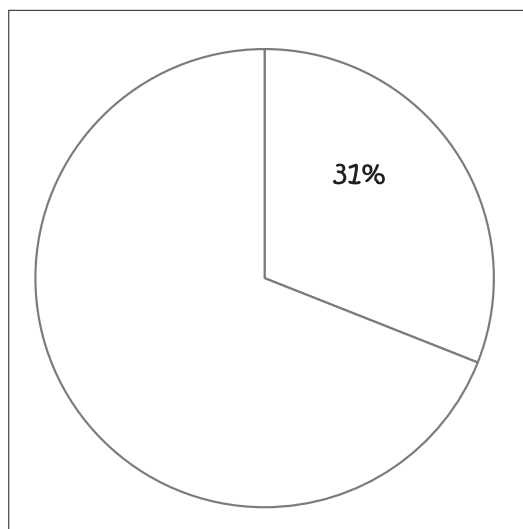
Figure 12 above shows the overall profit of all CHWs cooperatives from 2012-2014, and depicts a positive trend that CHWs are generally starting to make a profit. This data shows the profit combined across all cooperatives masking those which made no profit. Still, the fact that some are able to make a profit is commendable and could offer useful lessons to those that have not made a profit as yet.

Economic Benefits

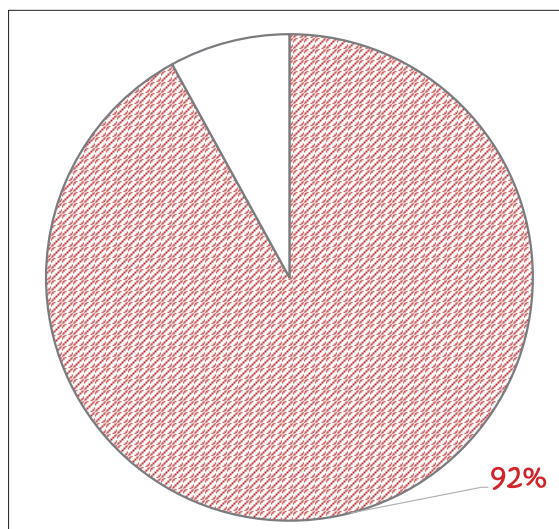
Community Health Workers are volunteers who do not receive payment for work they do. To support their livelihood, MoH and its partners initially grouped them in associations in which they were encouraged to carry out income generating activities (IGAs).

The associations gradually evolved into cooperatives (described above); which today are a critical source of economic benefit to their members (CHWs).

Pie Chart 02: Performance Based Financing (PBF) as an incentive to stay in post: CHWS satisfied with PBF



Pie Chart 03: PBF as an incentive to stay in post: CHWS who would stay in post if PBF ceased

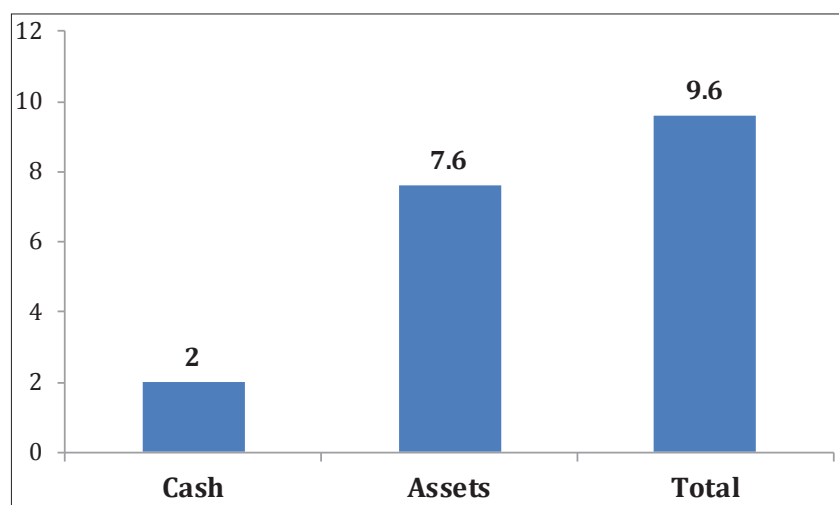


Source: Liverpool School of Tropical Medicine (LSTM) Centre for Maternal and Newborn Health, Comprehensive Evaluation of the Community Health Program in Rwanda, December 2016.

Across ten health centers visited, CHWs reported being involved in different types of IGAs, the choice of which depends on opportunities available in that location. Some of the noted IGAs are:

1. Acquisition of assets such as plots of land, houses for rent;
2. Farming (including livestock farming projects, vegetable growing projects, banana plantation);
3. Selling of utilities such as electricity, airtime, mobile money;
4. Running stationery shops;
5. Grinding/milling machines;
6. Providing event management services such as sound systems, tents...etc;
7. Handcraft making associations.

Bar Graph 21: Cash and Assets of CHWs' Cooperatives



Source: Assessment of CHWs Cooperatives, MoH; 2015

Evidence continues to emerge that depicts CHWs cooperatives as an interesting model with potential to sustain the CHP in long term. The assessment of CHWs cooperatives mentioned earlier revealed that as of December 31, 2014, the total cash value across all the CHWs cooperatives in the country stood at 2,030,423,541 Frw.

The assets were valued at 7,626,838,784 Frw, while the total value of CHWs cooperatives (cash and assets) was estimated at 9,657,262,325 Frw.

At the individual level, due to such economic activities, CHWs reported that they have been able to address some of their basic needs which include:

- *Being able to pay community health insurance (mutuelles) using funds generated from IGAs*
- *Some cooperatives reported paying mutuelles for up to 3-5 family members of each CHW.*
- *CHWs use part of their incentive to support each other (on a rotating basis) to acquire basic items like mattresses, livestock such as goats and pigs.*

Interviewees reported that there were capacity challenges initially related to business (IGA) conceptualization and ability of CHWs to manage cooperatives which still persist. To respond to this challenge, in consultation with MoH, many of the cooperatives have now employed trained accountants who are helping to streamline accounting and financial management.

Members of the Community: It was noted that CHWs IGAs benefit members of the surrounding communities in addition to CHWs. In fact during the data collection, the team witnessed a cooperative in Musanze selling off five piglets to community members.

Reported benefits of CHWs to the community include:

- *Accesses to manure from CHWs livestock projects*
- *Purchase of seedlings and other agricultural products*
- *Rent of CHWs cooperative materials or equipment (e.g. tents, sound systems, houses, etc.).*

Economic contribution of CHP to the community was best epitomized in Musanze in a cooperative at Rwaza HC where CHWs own land on which they grow Irish potatoes to sell to the community for consumption, while the rest is sold to business people.

Previously, the cooperative was forced to sell their produce to the middle men on a giveaway price. In the current season, the Administrative Sector invited bids so that winner will purchase all potatoes grown in the sector. This was done mitigate middlemen price manipulation.

As the CHWs cooperative at Rwaza is legally registered, it made a submission and won the tender. Now they will be selling not only their own produce but also that of the community at a stable price. This benefit them as well as members of community.



A CHW shows a garden of Irish potatoes for their Cooperative

6 Social Benefits

Over the time, new services were added onto the CHWs packages. It was anticipated that with increased workload, CHWs attrition would increase but it remained relatively low and stable.

From interviews, it was clear that CHWs are mostly interested in contributing to social change, by addressing issues like disease. It is for this reason that CHWs accept their increasing responsibility with honour; and, pride in being entrusted with implementing government programs to contribute to the wellbeing of their community.

They appreciate the community friendliness and support rendered for their work. They are generally motivated by being recognized, respected; by acquiring of new skills and knowledge; having an uplifted status and gaining assertiveness at the household and community level; as well as being viewed as role models.

“I was happy to be elected by the community. I used to see mothers dying in their homes during child birth, and children suffering from malnutrition. As a mother I feel motivated to advise others to seek ANC services, deliver at the HC and eat a balanced diet”...FGD at Nyundo health

“In the villages, we are considered exemplary when it comes sensitizing community members and promoting government programs. The local leadership entrusts us to lead community initiatives: ubudehe, umugoroba w’ababyeyi

and umuganda” where we deliver health related messages ...FGD at Musanze HC

Lessons and Challenges

This section discusses select lessons innovations and some challenges still faced by CHP. All these were derived from discussions held at different levels of the community health program (central, district, and health center). There are two key lessons – namely:

1. Community’s ability to address their own needs (Leadership and Community Power)
2. Use of technology to address health issues (RapidSMS)

Leadership and Community Power

One of the biggest lessons from Rwanda’s CHP is the community’s ability to address their own needs with support from a committed leadership. The success of the CHP has to be seen in the light of the fact that healthcare is an extremely specialized and delicate field.

In this respect, for the success of the CHP therefore, two elements are worth highlighting: (a) high level political commitment; and (b) full community engagement. The political leadership ensured that concerns on CHWs’ ability are addressed at all levels (national, district, HC) through training, supervision, advocacy...etc At the community level, commitment and acceptance was demonstrated at two levels:



President Paul Kagame meeting CHWs in Kigali, 2010

(a) at the level of CHWs' flexibility to take on an ever expanding service package.

(b) at the level of community's uptake of the services provided by CHWs with full knowledge that they underwent just a few weeks of training.

These two are remarkable and go a long way to demonstrate the willingness of the community to seek solutions. Thus, ultimately, the success of Rwanda's CHP is a combination of good partnership between the leadership and the community and is an excellent lesson worth learning.

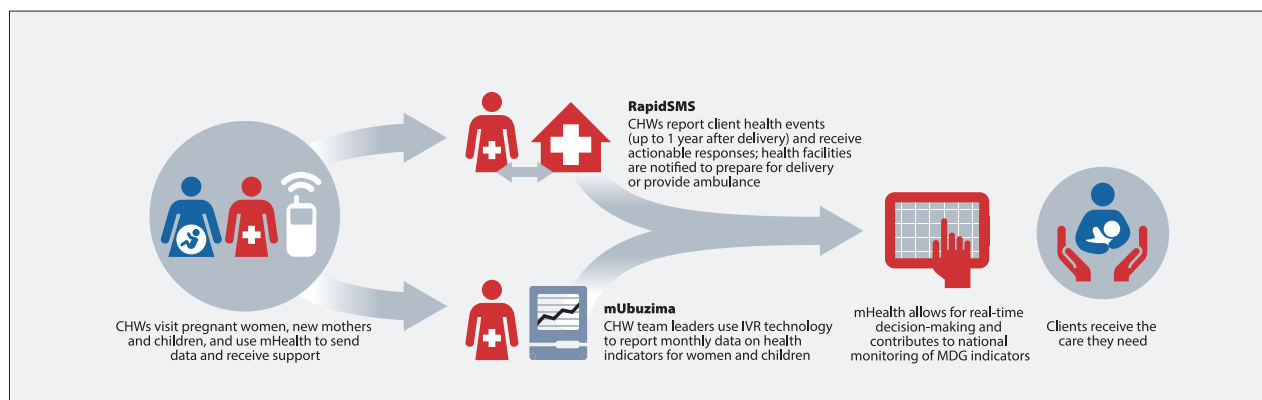
Use of Technology to address Health issues

RapidSMS has already been mentioned in this report which is a mobile platform that builds on Rwanda's mobile penetration that over the years, increased to the current 78.2% according to Rwanda Utilities Regulatory Agency (RURA). This has made it possible to use mobile-based applications such as the RapidSMS to address real life challenges. RapidSMS was introduced

in Rwanda in 2009, and has been scaled up nationally, and used to follow up mothers during pregnancy, tracking delivery period and the first 1000 days of the child after delivery. This has remarkably changed the way that pregnant mothers and their children are monitored. In addition, RapidSMS has been used to track nutrition, immunization schedule, disability conditions like cleft lips and palate (ibibari), as well as hygiene and sanitation at homes (kandagira ukarabe).

How it works: RapidSMS is an open source (free) software. In Rwanda, the system is based at the central level and offers the opportunity to register pregnancies at village level through CHWs mobile phones; and to monitor pregnancy conditions in real time by use of text messages sent by CHWs.

Providers at central and health facility level are able to track individual cases including high risk pregnancies, high risk newborns, status of child nutrition, major child killer diseases (malaria, pneumonia & diarrhea), un-immunized children in the community, and maternal, newborn and child deaths.



Source: Assisting CHWs, MoH's Rapid SMS and mUbuZima published by World Health Organisation (WHO)

Value: CHWs and health care providers track the pregnancy cycle, new born, infant and child continuum of care for up to two years of age.

Application

- **Pregnancy Tracking:**
Registration of confirmed pregnancy; height and weight of pregnant mother, antenatal care visits, risks, death reports and delivery outcomes.
- **Child Health:**
Reports on monthly child health visits, growth, vaccinations, death reports
- **Newborn:**
Newborn care visits during first 42 days of life, breastfeeding within the first hour of life and exclusive breastfeeding in first 6 months; death reports.
- **Postnatal Care:**
Post-natal home visits after home delivery (Day 1), post-natal home visits after assisted health facility delivery (on Day 1, Day 3, and Day 28).

- **Community Case Management:**
Main childhood killer diseases treated or referred (diarrhea, malaria and pneumonia)

A comprehensive evaluation of the RapidSMS is currently underway and its results will be available at the end of 2016. An earlier study conducted in Musanze district whose results were published in PanAfrican Medical Journal, demonstrated appreciable results in improving maternal and child health. One year after the launch of RapidSMS, home deliveries decreased by 54 percent, while deliveries at health facilities increased by 26 percent

The above observation is possibly because RapidSMS ensures that every pregnancy is registered, tracked and not forgotten, which increases delivery at health facilities.

Challenges

This assessment noted challenges related to resource gaps, capacity and others related to system functions. Key among these challenges are outlined below:

- 1 Reporting burden:

It was reported that CHWs reporting burden has been growing with expansion of the service package they deliver. This stretches CHW's already big workload and may affect the quality of services they offer;

- 2 Inadequate skills of conceptualizing and running IGA:

CHW cooperatives operate income-generation activities, but some cooperatives have not been able to make a profit. There is keen interest in expanding income generation and improving efficiencies, but cooperative members and administrative council still lack business and management skills to fully support their cooperatives;

- 3 CHWs turnover:

Although, it has remained stable and CHWs who remain in practice show great self-motivation, attrition of up to 10% is reported. Loss of CHWs with skills and experience is undesirable while bringing in new ones requires to train newly, and requires resources;

- 4 Many CHWs were trained, but the new ones who joined the programmes as replacement have not yet been trained so far;

5 Irregular supervision:

It was noted that supervision of CHWs activities is not always conducted as provided for in the national guidelines. In some cases, supervision was reported to be more evaluative than formative.

16% of CHWs received no supervision during the 12 months preceding the survey (LSTM)

Forty percent (40%) of CHWs received 4 or more supervision visits during the 12 months preceding the survey (LSTM);

- 7 Despite the fact that MoH provides CHWs equipment, some CHWs reported a lack of those and a few even reported stock out of medicines which compromises CHWs’;
- 8 Many CHWs were trained, but the new ones who joined the programmes as replacement have not yet been trained so far;
- 11 Some interventions are not actually delivered (eg PPH) and yet they generate costs for training, equipment, meds, etc;
- 12 Some interventions are delivered without proper training (TB).

Conclusion and Recommendation

Evidence presented in this report shows that Rwanda's CHP has made remarkable progress since it was first introduced in 1995. To a great extent, it has responded to the objectives for which it was set up:

(a) improving access; and, (b) addressing the shortage of the health care provider work force. Today, all villages across Rwanda have 3 CHWs and the package of CHWs services has expanded considerably. 2/3 of these CHWs are women.

The MoH has successfully built a coordinated system from the central to community level that coordinates CHWs activities and capacitates them through training, supervision, reporting, supply and resupply of essential medicines; and, provision of CHWs equipment to deliver desired services.

This system and the cadre of CHWs in place have contributed to the reduction of maternal and child mortality outcomes by being actively involved in activities like treatment of malaria, pneumonia, and diarrhea in U5s; follow up pregnant women and provision of other services under CHWs' purview.

CHWs have been supported to interact with the community and self-govern via CHWs cooperatives through which MoH and partners have been channeling incentives used for setting up income generating activities (IGAs) that benefit both CHWs and members of the community.

As such, members of the community are very satisfied with services offered to them by CHWs. As well, CHWs appreciate support and encouragement rendered by the community. In

the course of CHP implementation, a key lesson has been the community's ability to address its own needs under guidance from the leadership.

The CHP program has successfully implemented one of the most remarkable technological innovations known as RapidSMS which allows tracking of pregnant women and children. The CHWs cooperatives (through which IGAs are implemented) potentially represents an emerging innovation for long term sustainability.

Based on all the findings and the challenges, this report makes the following recommendations:

- ① Strengthen the CHW program through improved coordination and improved management of cooperatives. This could be for example on business development training, record keeping, accounting, financial management and other good business practices.
- ② Demanding CHWs reporting requirement. This should be considered every time a new package is to be added to ensure that data collected is only on required indicators.
- ③ The MoH should work with administrative districts to follow up with district level CHWs supervisors so that their activities are incorporated into Integrated Supportive Supervision which is more regular and capacity building oriented.
- ④ To avoid stock out, district pharmacies and MoH should ensure capturing of CHWs supply needs into their quantification processes (through LMIS) and ensure timely delivery of supplies to health centers from where CHWs requisition their supplies.

⑤ It is worthwhile to undertake an evaluation and / or sustainability assessment of the Community Health Program focusing on cooperatives; from which recommendations to strengthen them can be drawn.

⑥ The MoH and RCA should support all cooperative to have accountants with clearly defined tasks and responsibilities.

⑦ Integrated training approach.

⑧ Regular refreshers via e-training (or distance learning).

⑨ Streamline the double reporting system into one.

⑩ Move out from a log frame approach to a real time dashboard to manage the CHP

⑪ Redesign/assess Procurement and Supply Management (PSM) system: quantification/distribution/reporting.

⑫ Based on information on costs and benefits of the program, develop immediately a 'Business case' for the CHP.

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