College of Medicine and Health Sciences
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Assessing Community Health Workers program ownership by the beneficiary community. Case of Kigembe Health Center.

A Thesis submitted in Partial Fulfillment of the requirements for the Award of Master of Science in Public Health (MPH) at University of Rwanda, College of Medicine and Health Sciences/School of Public Health (UR/CHMHS-SPH).

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ABSTRACT

Background: Despite the Rwanda substantial evidences about the positive impact of Community Health Workers on health outcomes especially the reduction of maternal and infant mortality rate, due to several efforts made by the Rwandan Government since 2007, less is known about how the decentralized level is prepared and involved to own the CHWs program for its successful continuation. This because the first stage of its initiation was strongly supported by different government partners and funders in all steps of its implementation (Financial, Technical and Monitoring & Evaluation). Therefore, we sought to assess the level at which the district and the community own the CHWs program for it sustainability.

Methods: This research was a case study using qualitative method. Purposive and conveniencesampling were techniquesthat have been used in the study. Data were generated from three focus group discussion with 24 participants (12 females and 12 males) whose age varies between 22 and 52 years. Those were completed with five in-depth interviews in which five key informants were interviewed: two technicians from Kigembe Heath Centre; one staff from Kibilizi Hospital; one technician from Gisagara District and one CHWs program partner of Gisagara District. Data were recorded using a digital voice recorder and expanded at the end of each day during its transcription in Kinyarwanda.The thematic content analysis was used to analyze and to interpret data of our study.

Results: Findings of our study demonstrated that community provides a limited support to Community Health Workers program. The role of the community to support the Community Health Workers is limited to the use of the Community Health Workers services and to put into practice Community Health Workers recommendations. During our study Community Health Workers and technicians of Community Health Workers program at their side claimed for more support from the community. Ownership of the program is partially conceived by the community. Most of participants asserted thatcommunity ownership level of the Community Health Workers program still low. This study also revealed few community members initiatives in place for Community Health Workers program. Findings from this study demonstrated that technically, supervision and training on sites were strategies in place to sustain Community Health Workers program. On the other hand, savings of Community Health Workers cooperative, fees of charge of under-five services are the main financial

mechanism planed for a sustainable Community Health Workers program especially in case other support from partners ceases.

Conclusion: The ownership of the CHWs program by beneficiary community is at a low level, Community members need to be sensitized and might be more involved in the management of the CHWs program for increased more gaining their support and for its ownership. Local leaders and district level are key to organize community members for initiatives to own and to support the CHWs program. More financial mechanisms have to be identified and implemented to guarantee a sustainable CHWs program.

RESUME

Contexte: Malgré les preuves substantielles du Rwanda au sujet de l'impact positif du programme des Agents de Santé Communautaires (ASCs) sur les résultats de santé, en particulier la réduction du taux de mortalité maternelle et infantile, en raison de plusieurs efforts déployés par le Gouvernement rwandais depuis 2007, on en sait moins sur la façon dont le niveau décentralisé est préparé et impliqué dans le processus de s'adonner au programme des ASCs pour aboutir à sa continuité étant donné que la première étape de son lancement a été fortement soutenue par les différents partenaires du gouvernement et des bailleurs de fonds dans toutes les étapes de sa mise en œuvre (financière, technique ainsi que celle de contrôle et d'évaluation). Par conséquent, nous avons cherché à évaluer le niveau auquel le district et la communauté conçoivent le programme des ASCs comme étant le leur pour assurer sa durabilité.

Méthode de collecte des données: Cette étude était une étude cas, ayant utilisé les méthodes qualitatives. Les données ont été collectées auprès de trois groupes de discussion avec 24 participants (12 femmes et 12 hommes) dont l'âge varie entre 22 et 52 ans. Ces informations ont été complétées par les données des interviews réalisés auprès des informateurs clés du programme des ASCs du district de Gisagara : deux techniciens du centre de santé Kigembe; le charge du programme des ASC de l'hôpital Kibilizi; un technicien de santé du District de Gisagara et un partenaire du District de Gisagara pour le programme des ASCs.

Les données ont été enregistrées à l'aide d'un enregistreur vocal numérique et à la fin de chaque jour la transcription en kinyarwanda a été réalisée. L'analyse du contenu thématique a été utilisée pour faire l'analyser et l'interprétation des données de notre étude. **Résultats**: Les résultats de notre étude ont démontré que la communauté fournit un soutien limité au programme ASC. Le rôle de la communauté pour soutenir les ASC est limité à l'utilisation des services qu'ils fournissent et la mise en pratique de leurs recommandations. L'appropriation du programme des ASCs par la communauté est partiellement conçue par la communauté, ceci se concrétise dans peu d'initiatives de la part des membres de lacommunauté dans le cadre de l'appropriation du programme des ASCs.

La supervision et la formation sur les sites sont des stratégies techniques mises en place pour la pérennisation du programme dans le cadre du renforcement des capacités des ASCs.

D'autre part les épargnes faites par les ASC dans leurs coopératives et les tickets modérateurs tirés dans le service rendu aux enfants de moins de cinq ans sont les principaux mécanismes financiers rabotés pour rendre le programme des ASCs durable, en particulier dans le cas où le soutien des partenaires s'arrête.

Conclusion: L'appropriation du programme des ASCs par la communauté bénéficiaire reste un niveau trop bas. Les membres de la Communauté doivent être sensibilisés pour être impliqués dans la gestion du programme des ASCs pour l'obtention de leur soutien et pour y participer de manière décisive. Les dirigeants locaux au niveau peuvent jouer un rôle essentiel pour organiser les membres de la communauté et les encourager à prendre des initiatives visant à soutenir le programme des ASC. Plus de mécanismes financiers doivent être identifiés et mis en œuvre pour garantir la pérennité du programme des ASCs.

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DEDICATION

This thesis is dedicated to my parents, my husband and to my family members.

ACRONYMS AND ABBREVIATIONS

AIDs : Acquired Immune- Deficiency Syndrome

ASC : Agent de santé communautaire

ASM : Agent de santé matérnelle

BINOME : Community Health worker at the village level in charge of underfive diseasetreatment, malaria case management, Family planning services and TB treatment

CHWs: Community Health Workers

HC: Heath Centre

HIV: Human Immunodeficiency Virus

IDI: In depth interview

FGD: Focus Group Discussion

LMICs: Low Middle Incomes Countries

MCCH: Maternal Community and Child Health

MDGs: Millennium Development Goals

MOH: Ministry of Health

SED: Social Economic development officer of cell

RBC: Rwanda Bio Medical Center

RDHS: Rwanda Demographic and Health Survey

RSEC-C: Research Screening and Ethical Clearance Committee

TB: Tuberculosis

TDR: Test Diagnostic Rapid

UNICEF: United Nation Children's Fund

VHWs: Volunteers Health Workers

WHO: World Health Organization

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I. INTRODUCTION

I.1 Definition of key terms

Program ownership by the community

A sense of ownership involves the processes by which voices are heard and considered legitimate or valid and secondly it's involves who has influence over the outcome through decision making. The sense of ownership provides an explicit focus on the influence or direct authority over decision-making and the execution of actions**(1)**.

For the community this means communities thrive when they develop their own assets, but also when they "own" their problems and issues. When communities accept that it is "their" problem, then they are more likely to work together to develop a solution, and the solution will be better than one provided solely by an external "expert"**(2).**

Briefly community ownership is people working together voluntarily to achieve their own initiatives using available resources to shape their own destiny **(3).**

Community participation

Participation, in the development context, is a process through which all members of a community or organization are involved in and have influence on decisions related to development activities that will affect them.

Program sustainability

There is no standard approach for defining or conceptualizing sustainability. In some situations, it is simply a continuity of a program or services the ability to carry on program services through funding and resource shifts or losses. Sustainability is effectively leveraging partnerships and resources to continue programs, services, and/or strategic activities that result in improvements in the health and well-being of the population **(4).**

According to Schell.et al sustainability is not simply the result of a process but is action-oriented: the "ability to maintain programming and its benefits over time".

The continued use of program components and activities for the continued achievement of desirable program and population outcomes,[)] and it can be measured in diverse ways such as

a program's duration, the resources required to enable the program to survive, or the duration of the program's benefit **(5).**

Community Health Workers Program

Community Health Workers (CHWs) around the world are men and women who work to improve the health outcomes and general well-being of their fellow community members. The 1978 Declaration of Alma-Ata described CHWs as a major vehicle for the advancement of Primary Health Care in areas with limited resources, starting, "The people have the right and duty to participate individually and collectively in the planning and implementation of health care. CHWs provide a vital link between community members and health centers and hospitals; they extend the reach of the clinic by supporting disease prevention, treatment, and case-finding effort. They also amplify the voice of the community to the medical establishment by informing doctors, nurses, and other health professionals of the needs and conditions in the community that affect health.

I.2 Problem formulation

The positive impact of CHWs on diseases prevention, healthy behavior adoption, and access to care has been documented in diverse contexts. In LMICs, CHWs have been found to be effective in reducing neonatal mortality, child mortality attributable to pneumonia, and mortality caused by malaria. In addition, CHWs have been successful in promoting improved health behaviors including exclusive breastfeeding, adherence to HIV antiretroviral therapy and counseling, childhood immunization, early prenatal care usage, and tuberculosis treatment completion. They have also been a central component in the implementation of Integrated Management of Childhood Illness strategies, which have succeeded in reducing child mortality in multiple LMICs **(6).**

In below mentioned global health outcomes actually achieved, CHWs program contribute to have such successfully results.

According to UNICEF report 2014 **(7),** globally, under-five mortality rate has decreased by 53%, from an estimated rate of 91 deaths per 1000 live births in 1990 to 43 deaths per 1000 live births in 2015. The average annual rate of reduction in under-five mortality has accelerated – from 1.8% a year over the period 1990–2000 to 3.9% for 2000–2015, about half of under-five deaths occur in only five countries: China, Democratic Republic of the Congo,

India, Nigeria and Pakistan. India (21%) and Nigeria (13%) together account for more than a third of all under-five deaths. Though Sub-Saharan Africa has seen the decline in the under-five mortality rate accelerate, with the average annual rate of reduction increasing from 0.8 percent in 1990–1995 to 4.2 percent in 2005–2013.

For maternal health, indicators progress is notable, globally, there were an estimated 289 000 maternal deaths in 2013, a decline of 45% from 1990. The sub-Saharan Africa region alone accounted for 62% (179 000) of global deaths followed by Southern Asia at 24%.**(8)**

Brazil has one of the most rapidly declining under-five mortality rates in the world due to CHWs program adopted (and in fact it achieved is MDG target for child mortality in 2010, five years ahead of schedule). Now, only 2% of children are underweight, immunization coverage is 99%, 91% of women obtain four or more prenatal visits, 93% of the demand for family planning has been met, 90% of eligible women receive treatment to prevent mother-to child transmission of HIV, 88% of cases of TB are estimated to be detected, drinking water coverage and improved sanitation coverage are 98% and 96% respectively, and 95% of AIDS patients in need of medication are receiving it.

According to the Rwanda Ministry of Health (MOH), Rwanda has made remarkable gains in maternal and child health. The maternal mortality ratio has been reduced from one of the world's highest in 2005 at 750 deaths per 100 000 live births down to 210 in 2015, and the under-5 mortality rate has been reduced by half during the same period (152 for 1000 in 2005 and 50 per 1000 in 2015), infant motility rate reduced to 32%0, actual immunization coverage is 92.6%, children fully immunized are 90%, proportion of malnourished children reduced at 9.3%, delivery at the Health facilities is 91%, births attended by skilled health care providers is now 91%, Family planning coverage 48% **(8).**

These important results have been obtained through CHWs with the financial support from different development partners. Approximately **14,873** CHWs/ASM have received training on how to monitor and promote maternal and newborn health, identify potential risks and promote antenatal care at health-care facilities. In additional **29,746** CHWs/Binome actually are trained to provide treatment to under-five for Malaria, Respiratory infection disease, diarrhea, to ensure the follow up of TB cases and HIV/AIDs cases.

The problem is how all these achievements will be maintained whether the external support (technical and financial) from development partners will end up. Strategies should be early put in place to ensure the sustainability of CHWs program.

Savaya *et al***. (9)** estimated that up to 40% of all new community health programs do not last beyond the first few years after the end of initial funding. CHW programs are therefore neither the panacea for weak health systems nor a cheap option to provide access to health care for underserved populations.

Numerous programs have failed in the past because of unrealistic expectations, poor planning and an underestimation of the effort and input required to make them work. This has unnecessarily undermined and damaged the credibility of the CHW concept.

By their very nature CHW programs are vulnerable unless they are driven, owned by and firmly embedded in communities themselves. However, the concept of community ownership and participation is often ill-conceived and poorly understood as a product of programs initiated from the Centre level. Another key challenge lies on the in institutionalizing and mainstreaming community participation. To date, the largest and most successful program in this regard is the CHWs Program which has integrated CHWs into its health services and institutionalized community health committees as part of municipal health services to sustain social participation Example of Brazilian CHWs program of Family Health **(10).**

Also the question of voluntarism character of CHWs remains controversial. There exists virtually no evidence that volunteerism can be sustained for long periods: as a rule, Community Health Workers are poor and expect and require an income.

In Rwanda few studies were conducted about the role of the community to support the ongoing CHWs program scale up and it sustainability, but those conducted on perspective of CHWs program performance and efficiency showed the identical challenges with the above mentioned that could have an important impact to the sustainability of CHWS program. Therefore Our study sought to provide insights about the level at which the district and the community own the CHWs program for it sustainability.

Therefore this study has the following research questions:

- How is the community involved in supporting CHWs program?
- What is done at the district level to sustain CHWs program?
- At which level the CHWs program is owned by the beneficiary community for ensuring its sustainability?

I.3 Study justification

Despite the Rwanda substantial evidences about the positive impact of CHWs on Health outcomes especially the reduction of maternal and infant mortality rate, due to several efforts made by the Rwandan Government since 2007, less is known about how the decentralized level and the local level are prepared and involved to own the CHWs program for its successful continuation as the first stage of initiation was strongly supported by different government partners and funders in all steps of its implementation (Financial, Technical and Monitoring & Evaluation). Therefore, we sought to assess the level at which the district and the community own the CHWs program for it sustainability, to provide key information that could serve to decision makers, policy makers, practitioners and researchers to develop keys strategies to maintain positive impacts of the health outcomes, achieved by the Rwandan Government through Community Health Workers Program especially in case the financial and technical support of Government partners and funders ceases.

I.4 Literature review

Few evidences have been published about the Community Health Program ownership and sustainability, following literature review could help to have a global view of what is happening around the continuation of such program after its initiation:

Charlotte. A & al, in their article mentioned that key element that community ownership could be evaluate is the participation of the community in the planning, implementation and in the evaluation of a community health program**(11).**

Brazil has been able to integrate CHWs into its primary health care services and has institutionalized Community Health Committees as part of the municipal health services to sustain social participation, meaning that community participation does not become an alternative but an integral part of the state's responsibility for health care delivery. With

decentralization, municipalities are now responsible for delivery of health services at primary level. Municipalities are also in charge of actively ensuring the existence of Community Health Committees, incorporating in this way the voice of community members.The Ministry of Health pays them, but there is a co-financing between federal government, state, and municipal government levels **(10**).

For Nepal, 47 (out of 75) districts have established a district level endowment fund for supporting CHWs activities. This Fund is activated and transferred into Village Development Committee (VDC) level endowment fund. There is a lot of interest and encouragement to the districts to sustain the CHWs program. Approximately 400 VDCs of 18 districts have already established endowment funds **(10)**.

A desk review conducted by UNICEF on Community Health Workers programs in South Asia documented below evidences from different countries:

CHWs program in India had encountered a number of difficulties stemming from inadequate support from their communities and the health system alike. One of the main issues enveloping the CHWS was their medicalization. Because of the failure of taking ownership of the program by the state governments and discontinuation of financial support from the central government, the CHWS scheme ultimately came to an end after 25 years of running. There is a great lesson to be learned from this case about whether the honorarium to be given or not to CHWs if it cannot be sustained as well as the importance of involvement and buy-in of the local governments (state governments in this case) and community support from the very beginning of the program **(12).**

For the Bangladesh case, Khan et al reported on the dropout rate for CHWs ranged from 31 percent to 44 percent. Some dropped out after only a few months and there were others who did so after a few years of service. There were multiple reasons for discontinuing the work: lack of time due to more time spent looking after little children and doing household chores, not much profit earned from selling medicine, more profit earned from other activities, too much effort spent for too little profit **(12).**

In Bhutan there is no direct input from the Government into the CHWs program except the supervision and support given to the CHWs through the decentralized health system. There is a very high attrition rate and there is no specific mechanism in place to prevent or decrease the high attrition rate. It was observed that the five year attrition rate for VHW in Bhutan was

50 to 55%. Individual districts had attrition rates ranging from 21% to 63%. The most common reasons given for the high attrition was that the work interfered with their personal work (70%), family pressure (12%), and too hard job (9%) and there was nothing to be gained from it (6%). Except UNICEF, there has been a gradual reduction of support for VHWs from development partners. The probable reason is that they are being perceived as "just another pair of hands" in providing health services. Without a very specific support from the Government or community and a shift in strategy, it may be very difficult to sustain the existing VHW network.

A basic lesson from the review done by UNICEF review is that CHWs must be adequately supported and such adequate support requires more resources from the government or communities than what are spent now on CHW programs. CHWs cannot be seen as a marginal addition to existing services funded by limited one-time special expenditures **(12).**

Evidence from Bangladesh suggests that the level of institutional support in training and retraining, program management and supportive supervision by health workers greatly determine the sustainability of the CHW scheme. By developing strong better educated and empowered women and village groups, sustainable improvements can be achieved and a higher quality of preventive health measures will be practiced in the community **(13).**

Another recent literature review done by the health care improvement project on CHWS programs demonstrated that many countries had difficult to sustain the CHWs program after its running due to several factors documented:

Poor initial planning (disconnect between program developers, program managers and volunteers, failure to consider true costs of program – training, supervision, etc.), unrealistic expectations or undefined job descriptions, lack of community involvement in design, recruitment and implementation, inadequate training (too complex, not tailored to volunteers' educational level, lack of refresher training, etc.) , difficult to scale up due to tailoring required for CHW programs, lack of resources or inconsistency of resources (funding, supplies, etc.), lack of incentives (monetary or others), poor supervision and support.

The typical example given in the same study is for Madagascar which registered high attrition of CHWs (50%) after 12-18 months.

Program planners interviewed in the study, working on CHWs programs noted that the lack of sustainability was directly related to termination of funding. As solution to sustain the CHWs program participants from the community described collaborating with other organizations and the development of a community action plan for health program sustainability. Also several communities relied on program champions, community members or professionals who took responsibility for identifying potential funding sources and networked with other community partners and local leaders to lobby for space, funding, and other resources **(14).**

Briefly, an attrition of CHWs was showed in several countries after the technical and financial support from development partners. Another basic lesson from this review is that the financial mechanisms come at the top among the factors that warranty the continuation of community health services and community participation comes at the second range. Also for many countries the key challenges for assuring the sustainability of CHWs program lies in institutionalizing and mainstreaming community participation.

In Rwanda the situation is not enough documented. In a qualitative study done on evolving CHWs system in Rwanda some evidences have been demonstrated: In terms of their workload, the CHWs considered their general range of duties to be overwhelming, and subsequently a barrier to the sustainability of the CHW system. The variable hours necessary for their work, and the unexpected crises that arose (such as epidemics), conflicted with CHW family life and their other jobs. The intensity of the work was explained as varied and unpredictable, and detracting from time necessary for families. Despite an overwhelming workload, the CHWs experienced a sense of pride in their work. Many stated that they felt they were an important part of the whole health system improvement that aimed to reduce the burden of disease in the population. They recognized that under a decentralized system, their roles were increasingly becoming critical in reducing key health indicators, such as the infant and maternal mortality rates. By playing a direct role in improving indicators, CHWs felt valued and respected in their communities **(15)**.

The study done on the level and determinants of CHWs satisfaction in Rwanda demonstrate that 70.75% of respondents were dissatisfied due to the insufficient medicines and equipment and 87.4% of responds reported being dissatisfied with the level of compensation **(16).** Therefore this study will provide information on how the community is supporting the CHWs

to search solutions that could improve the motivation of CHWs for the program sustainability.

I.5 Study objectives

Overall objective

This study aims to investigate CHWs program ownership by the decentralized level and beneficiary community for its sustainability.

Specific objectives

- To assess the community involvement in supporting CHWs program.
- To analyze the extent to which the CHWs Program is owned by the beneficiary community.
- To explore strategies undertaken by the decentralized level to ensure the CHWs sustainability.

II. METHODS

II.1 Study design

This research is a case study which explored the CHWs program ownership of the decentralized level and of the community beneficiary using qualitative methods. It searched for the views and perceptions of community beneficiary and professionals of how the CHWs program is supported and owned by the centralized level for its sustainability. As Hancock **(17)** stated, any research that attempts to increase our understanding of why things are the way they are in our social world and why people act the way they do, is "qualitative" research.

II.2 Study area description

This qualitative study is about CHWS program Ownership by the beneficiary community. It was conducted in Gisagara District which counts two district hospitals and 14 health centers. Six of the district's health centers are public facilities managed by MOH, while eight others are co-managed by Catholic Church and MOH as not-for-profit facilities operating under Caritas Rwanda. The District ends up 524 Villages across Gisagara District (with an estimated 50-100 households in each Village), covered by 14 health centers. According to the

national policy, three CHWs serve each Village with distinct roles. Kigembe Health Center located in Nyanza Sector, a public Health facility with a population of 21216 and 99 CHWs in total, was selected randomly as our study site.

II.3 Specific objective achievements

- Community involvement to support CHWs program was discussed during the FGD of community members, local leaders and CHWs services who provided clear information about how activities are organized at the community level to support CHWs Program.Information about strengths and weakness was discussed and collected during the same FGDs.
- To analyze the extent to which the CHWs Program is owned by the beneficiary community, questions related to the ownership of the program were asked and discussed during the FGDs and during interviews; participants gave their point of views that justify the.
- To explore strategies undertaken by the decentralized level to ensure the CHWs sustainability, it was asked about technical and financial activities that have been undertaken at the decentralized level, resource persons of the CHWs program were heard through in depth interviews.Community members, community local leaders and CHWs during the FGD gave also their opinions about their understanding of a sustainable program and discussed about what have been already done in their community to sustain the CHWs program. Suggestions of solutions of a sustainable Program were also collected both in the FGD and in the interviews.

II.4. Study population

The study participants include: CHWs of one selected health facility (Binomes and ASM), community members of Kigembe health centers, local authorities, in charge of Community Health Workers at the health center, head of the selected HC, district supervisor, MOH partners that support Gisagara district in CHWs program.

II.4. 1 Sampling strategies and sample size

Before we proceed to the sampling of our study participants we determined criteria of participants to be selected and their categories. A purposive sampling was used to select the health professional participants because they were willing to give the information needed

based on their skills and the role they played in CHWs program. Community members and opinion leaders were identified by convenience, based on their availability and facility to communicate. They were appropriate to provide contribution in the FGD questions. CHWs were chosen at random by the in charge of CHWs of Kigembe HC.

To recruit participants of three focus groups discussions the in charge of CHWs of Kigembe Health Center interested available people of the catchment area of Kigembe Health Center that fulfilled fixed criteria. A list of those who have accepted to participate in the study was done. One week before the field work those one were contacted to participate in the FGD. Keys informants were interested individually by the principal investigator, and they provided their availability for the interview.

The following criteria were followed to identify participants of the study:

The first FGD grouped CHWs who fulfilled the applied following criteria:

- To have been trained to offer health services to the community.
- To have been providing health services to the community about the past two years.
- To have been accepted to be part of the study.

The second FGD gathered beneficiaries of CHWs services and community members with following criteria:

- To have been living in Kigembe HC catchment area about the last two years.
- To have been in need/ beneficiary or asked CHWs services at least once in the last two years.
- To have will to take part in the study.

The third Focus group discussion concerned the community representative and beneficiaries of CHWs services who fulfilled the following criteria:

- To be recognized as an opinion leader of the community of Kigembe Health Center catchment area (teachers, association representative…).
- To have occupied a position in Kigembe Health Center catchment area that allowed to be involved in the CHWs program (local authorities, community program managers).

In depth interviews were conducted with technicians of the different levels as described in Table 1 who had in their scope of work CHWs program and who have accepted to take part in the study.

Table 1: Participants of FGD

Respondent type	Number	Data collection method
CHWS	3 Binome Male	First FGD
	3 Binome Female	
	2 ASM	
Community members	4 Clients of CHWs services	Second FGD
	4 persons living in Kigembe HC catchment area	
Community local leaders from Cell and Sector level	4 opinion local leaders	Third FGD
	4 local authorities	
Total	**24 participants**	

Table 2: Key informants for the interview

Level in the Health system	Number of respondent	Data collection method
Health center level	In charge of CHWs activities	In depth interview
	Head of the HC	In depth interview
Hospital level	Supervisor of CHWs	In depth interview
District level	Health Officer	In depth interview
National level	One MOH partner of CHWs program of Gisagara district.	In depth interview
Total	**5 Key informants**	

II.5 Data collection

A team of four researches assistant was hired and trained to collect data at the field. Before field work data collectors received an orientation about the procedures of conducting FGD and in depth interviews. The participants in the study were contacted by the phone one week before to have their verbal consent for participating in the study. The written consent was signed before commencing the FGD or the interview.Data collectors were directly supervised by the principal investigator

- **In depth interviews** were conducted with the program manager, health technicians of the district level and at the health facility level who had in their role the CHWS program: Health Director of Gisagara District, a supervisor of CHWs activity at the district hospital level, Head of Kigembe Health Center, a person in charge of CHWs activity of Kigembe Health Center. In additional one partner of the district in CHWs activities was interviewed.
- **Three focus group discussions** were also conducted also with community members of Kigembe Health center to have their views on community ownership in CHWs program. Opinion local leaders of the community, and CHWs gave opinion through different FGD.

II.6 Data analysis

Data were analyzed using qualitative content analysis methods. The analysis was proceded through an iterative process that includes the steps of reading, coding, data display, and data reduction. All focus groups and interviews were recorded and transcribed in Kinyarwanda, and then main ideas from the transcripts were translated into English. A codebook has been developed along with the usage of memos for retrieving text for key concepts related to the overall objectives. This analytical process was followed by creating primary themes and subthemes from different codes identified. Main ideas from each FGD and IDI were merged under each themes and sub themes. References to the literature review supported interpretation of thematic relationships and help to provide additional explanation to patterns observed.

II.7 Ethical consideration

At the onset of this study, ethical clearance was sought and obtained from the College of Medicine and Health science – Institutional Review Board.

An authorization to conduct the study was also requested from the administration of Kibilizi Hospital and from Kigembe Health Center. The participants accepted to take part of this study voluntarily. They provided a written and signed consent.

Privacy, confidentiality and anonymity also were assured by using codes instead of participant's names.Completed data collection tools have been stored in a safe, locked place. Participants were also ensured that they could withdraw anytime with any further consequences. No incentives were given to the participants during the recruitment.

III. RESULTS

III.1. Characteristics of the participants

Table 3 shows that for community members FGD 50% of participants were women and 50% were men. The participants' average age was 33 years old, 75% were married while 25 % were single, and their occupation was diversified.

Table 3: Characteristics of participants of community members FGD

N◦	Residence	Gender	Age (in years)	Marital status	Occupation
1	Kigembe	Female	37	Married	Teacher
2	Kigembe	Female	28	Married	Farmer
3	Kigembe	Male	35	Married	Farmer
4	Kigembe	Female	40	Married	Farmer
5	Kigembe	Female	22	single	Tailor
6	Kigembe	Male	45	Married	Driver
7	Kigembe	Male	26	single	Bricklayer
8	Kigembe	Male	32	Married	Farmer

Table 4 shows that for the FGD of local leaders 50% were men and 50% of participants were women.The participants' average age was 40 years old, 75% were married, 12.5% were widow while 12.5% were single. All participants occupied a position that had CHWs in their responsibilities at the Cell or at the Sector level.

Table 4: Characteristics of participants of local leaders FGD

N◦	Residence	Gender	Age (in years)	Marital status	Occupation
1	Kigembe	Female	41	Widow	SED of cell
2	Kigembe	Male	38	Married	SED of Cell
3	Kigembe	Male	27	single	Security man
4	Kigembe	Male	47	Married	Civil society in charge /sector level
5	Kigembe	Female	42	Married	Chief of the village
6	Kigembe	Female	35	Married	SED of Cell
7	Kigembe	Male	40	Married	SED officer/sector level
8	Kigembe	Male	50	Married	Chief of the village

Table 5 for the FGD of CHWs shows that 50% of participants were men and 50% were women, the participants average age was 35 years. All respondents were married and 25 % among them were ASM (in charge of infant and mother health at the village level) and 75% were BINOME (in charge of FP service, under-five disease treatment, Tuberculosis cases follow up, Malaria case management and nutritional service).

Table 5: Characteristics of participants of Community Health Workers FGD

N◦	Residence	Gender	Age (in years)	Marital status	Occupation
1	Kigembe	Female	31	Married	CHW/ASM
2	Kigembe	Female	42	Married	CHW/ASM
3	Kigembe	Male	33	Married	CHW/Binome
4	Kigembe	Male	29	Married	CHW/Binome
5	Kigembe	Female	29	Married	CHW/Binome
6	Kigembe	Female	45	Married	CHW/Binome
7	Kigembe	Male	43	Married	CHW/Binome
8	Kigembe	Male	27	Married	CHW/Binome

Table 6 for key informants for the interviews shows that only 16.6% of key informants were women and 83, 33% were men, the participant's average age was 44.1 years old; their position had relation with CHWs program and was from different levels of the Rwandan health system structure.

Table 6: Characteristics of key informants of interviews

N◦	Residence	Gender	Age (in years)	Institution	Position
1	Kigembe	Male	37	Kigembe HC	In charge of CHWs program
2	Kigembe	Male	45	Kigembe HC	Head of the HC
3	Gisagara	Male	51	Gisagara district	CHWs activities supervisor
4	Gisagara	Female	39	Gisagara district	Health activies in charge/ District level
5	Kigali	Male	52	IRH/FACT Project	Field coordinator

III.2Community involvement to support CHWs Program

To measure the community involvement in supporting the CHWs Program, participants were invited to describe all activities done to support the CHWs program.

III.2.1Support from the community to CHWs Program

Participants in the community members FGD thought that the main support they provide to CHWs is to respect all pieces of advice and recommendations given by CHWs. Not only did participants in the FGD of community members reveal this but also local leaders during the FGD informed that the role of the community to support CHWs is to execute recommendations from CHWs in addition to the action of electing them. A community member during the FGD expressed: *"As for me, I see that we support them. We respect their advice like keeping our houses clean, telling them the truth about whether we use mosquito nets or not".*

All key informants in the IDI thought, in the same line of community members and local leaders, that what they expected from the population as support to the program is to put into action CHWs recommendations and they confirmed that in general community members do so. A technician at the HC level explained: *"Oh, thank you! I thank all the people in general for helping Community Health Workers to fulfill their responsibilities. When Community Health Workers provide some advice, people try their best to do as they are told".*

Some participants in the study mentioned that the support from the community is still insufficient because resistances to execute CHWs advice and recommendations are frequent in the community. An old man of 50 years during community members FGD informed: *"Reasons that I can give are not enough. More still needs to be done because people have a low level of understanding. Teaching them should be an ongoing activity. We always tell our fellows ' Take your children to health centres for medical checkup and vaccination but because they do not understand well its importance, they delay to do so. People do not have the same level of understanding because some of them do not immediately understand pieces of advice that are given to them".*

CHWs support should not be limited to the execution of CHWs recommendations, other support can be provided to CHWs for their motivation. A key informant at the HC level revealed other support that the community provided to CHWs in recognition of their heavy responsibilities: *"Yes, people love them because they are the ones who choose them. As they choose them at the village level, they really respect them. For this reason, they are not concerned with some activities like working as night security guards because they think that these people are expected to treat sick children and those with diarrhea at any time during the night. People give them freedom regarding such activities because they know that they have other responsibilities".*

Confusion about whether CHWs have a regular salary was raised during the community members FGD, but most of participants in the same group pointed the Ministry of Health to ensure other kind of support needed by CHWs program especially their salary. A woman during the FGD expressed*:" As for me, I think they are paid for their work. But when you ask a community health worker if they are paid, he/she neither accepts nor refuses. In my opinion, the Ministry of Health should pay them for their hard work".*

III.2.2 Support from the local leaders to CHWs Program

To link the community with CHWs by sensitizing the population on the importance of executing what have been recommended by the CHWs and to provide to CHWs opportunities for sensitization during their meetings is the main support that local leaders provided to CHWs .A leader at the cell level explained*: "As local leaders, we help them when there is something they need to tell people. We give announcements for them to make people aware of it. In case there is a village meeting, Community Health Workers are given speeches. They talk to people and inform them freely''.*

CHWs on their side confirmed that local leaders help them to provide health information to the population. An ASM during the FGD informed*:" Community local leadership has set up a structural organization of choosing days on which local leaders get close to people. Every Tuesday of the last week of the month, local leaders meet people".*

Other support from local leaders is to deal with community members who have resilience to execute CHWs recommendations: A women leader at the village level voiced*:" We support and help them to overcome some challenges they face depending on the nature of the problem like people with poor mindset. If people are not doing what they are told, you intervene as a leader and oblige them to do it''.*

Local leaders in the FGD attested that CHWs should be supported financially in addition to other support they gain from the community due to many tasks they perform for the community. This has been expressed by several local leaders during the FGD. A leader at the Sector level said*: "Regarding the way Community Health Workers work, it is noticeable that they really work hard and that they are happy with their job".*

III.2.3 CHWs support from other levels

Health Center and hospital provide a technical support to CHWs to train them in all aspects of the program to ensure the supervision of CHWs at their sites of work in the village. The HC also contributes to the follow up of the management of CHWs cooperative. Financial support and equipment are delivered by partners through MOH.

Supervision is still a big challenge to support CHWs program due to the lack of transport means for supervisors. A key informant at the HC level revealed: *"Although we don't find ways to reach them as I said above, they also do not find ways to come to see us at our*

workplace. It is difficult for us to reach them because we have a small number of employees. In addition to that, the means of transport are limited. It is not easy to reach there unless you take a motorcycle because the landscape is bad. This becomes really a big challenge".

Partners play a key role in implementing CHWs program in all aspects; financially, technically and in the follow up of CHWs. This has been confirmed by a key informant at the district level in following words: *"Their contribution is remarkable but I cannot tell how many marks I can give as well as the impact it can have. All I want is to talk about the impact of that program in general. But sincerely speaking, in few days we have been together I confirm that they help us a lot. For instance the program of family planning was not implemented in Gisagara for years. It is in collaboration with them that we started that program last year and now we are still together. They helped us in training Community Health Workers, distributing materials and making a follow-up of how the program is running. Their contribution is therefore worth considering"*

The district level support is still needed to support more CHWs by having time for them and to advocate for them. A key informant from partners in the interview requested*:"First, I request the district local leaders to sensitize people on the program and ask them to be close to them, talk to them, understand their program and thank them every day as a motivation. Second, we need advocacy in order to find sponsors or stakeholders".*

A technician at the district level concurred with the above opinion from a partner. He pointed: *"Another challenge is perhaps that local leaders at higher level of the government have never come to visit the people or to see how health workers do their jobs".*

CHWS should be motivated more in addition to the support they actually gain. Three participants in FGD and interviews claimed to be aware of this issue. A key informant at the HC level stated*: "Yes, it would be better if health centres are capable of helping Community Health Workers to satisfy their basic needs at home because today they have a lot of work. In fact, those program require Community Health Workers to work hard almost every day to the extent they have daily workloads. In that perspective, Community Health Workers do not get time to work on their lands or carry out any activity that generates income for their home because of government program. It would therefore be better if health centres in collaboration with diverse sponsors try to provide them with some financial support every month, no matter how small it may be. Even 2000 RWF, 5000 RWF or 10.000 RWF can help a community health worker since they can buy soaps or other basic needs at home as he/she*

does not get time to do something else that can help them to earn a living".

CHWs on their side are not grateful for the support they gain from the community. Four CHWs expressed this during FGD. A man of 43 years in CHWs FGD claimed*: "For instance, a container for washing hands costs 10000F. If a community health worker buys it, he/she cannot get money to buy soap because it requires much money. We use washing soaps instead of skin-cleaning soaps. It is not easy to work for our families because of the time we spend in meetings and other trainings. We are no longer given loin clothes (ibitenge). Today a community health worker is like anyone else because there is no difference between a community health worker and other people"*.

A key informant in IDI advocates for more support to CHWs in the following statement: *"Well, another thing is that local leaders should highlight that Community Health Workers need something special in their daily lives because of several program concerning them which are put in place as days goes by. This should be done in order to avoid that they would appear as people who are left behind in poverty while they work every day"*.

Participants in the community members FGD revealed that the main support they provide to CHWs is to implement all advice and recommendations given by CHWs. To link the community with CHWs by sensitizing the population on the execution of what have been recommended by the CHWs and to provide to CHWs opportunities for sensitization during their meetings are particular support that local leaders give to CHWs. Health Center and hospital provide a technical support to CHWs by training them in all aspects of the program by ensuring the supervision of CHWs at their sites of work in the village. The HC also contributes to the follow up of the management of CHWs cooperative. Financial support and equipment are delivered by partners through MOH.

III.3 CHWs program ownership by the community

III.3.1 Meaning of CHWs program ownership

Eight participants in the FGD of community members understand in the same way that to own a CHWs program is to execute what the program requires so as help achieve contract of performance. Three to four participants of interviews concurred to the above assertion from community members FDG that what testify the ownership of the CHWs program is to use correctly services and to do what CHWs recommend. The following is the assertion of a key informant who said: *"Yes, if people take the program as their own, it is easier for the Community Health Workers or anyone else in charge of sensitizing people on that program because the citizen is already aware of what he/she should do. The more people understand the program, the more they participate in it even when there is no one to tell them to do so. This becomes a habit because the citizen feels that he/she should always respect the program as it is'".*

About five of participants in FGD of local leaders also thought that to own CHWs program is to use services which lead to good results. In the same line with the above assertion, a leader in FGD voiced: *"For instance, if people in the village produce to a high level because they do not respect family planning program but after some time you see that they are not giving birth as before, you are then sure that they have understood well the importance of family planning"*

Others in the study defined the ownership of a program as to know well what is done in the program, to identify weakness of the program and to try to find solutions. The following are explanations from one key informant*:" If you say that people have taken the program as their own, I understand that those people fully participate in it, first because they are well informed about it and they are aware that the program is there or when they are the first ones who suggest that improvement should be made where necessary".*

III.3.2 CHWs program ownership by the beneficiary community

The neutrality to rate the ownership of the CHWs Program by the community was expressed during both the community members group and the CHWs FGD.

The participants in the group attested that the journey for owning the CHWs program remains long for the community. A woman aged 40 years in community members FGD said*:" In our*

opinion I also say the ownership is 3/5, because there are still people who live with their livestock in the same house and others who do not have kitchen gardens. This implies that there is still a long way". Furthermore, a man in the some FGD voiced*: "We have not yet reached a desired rate of 5/5, we still need trainings"*

Most of the participants in the FGD of community members thought that to attain the high level of the CHWs Program ownership, people need to be approached and to be sensitized as much as possible. A woman said*:"Another thing that can help us to take the program as our own is that there should be regular visits by Community Health Workers. Local leaders at local level should ensure that program are fully implemented by their people as they were told"*

CHWs are notsatisfied due to resilience and indifference of some community members. A BINOME during the FGD reported*: "It would be more helpful if people understand us immediately because they do not understand easily. It requires advising them on a regular basis. We were more challenged about family planning. At the beginning they could not easily understand that a community health worker can syringe the sick person. They would sometimes say that cleanliness is only at the health centre. Some people used to say that they can never consult a community health worker. 'How come that Binome is going to be treating grown-ups? I don't think they will cultivate again. He will behave as if he works in an office', someone said".*

For local leaders, the CHWs program is correctly owned by the community. Five participants in FGD of local leaders confirmed that actually CHWs Program is owned by the community because they often use their services while this was not the case in the past. Eight participants of the local leaders FGD rate the community ownership of the CHWs program at 80 %. In charge of social affairs at the cell level during the FGD explained:*"They have already taken the program as their own. We observe that they fully participate and we approve it. People understand program of Community Health Workers and they participate a lot in those program, that is why we assert that they have already taken those program as their own".*

A participant in IDI also argued that the CHWs Program is owned by the community first because they are the ones who elected them to assume such responsibilities and that they often need their services. Key informant at the HC level pointed*:"Yeah, as I started saying let's for instance talk about Community Health Workers program. It is understandable that you cannot be appointed a community health worker unless they choose you. It is announced*

in a meeting that a given number such as 2 Community Health Workers are needed. They therefore choose the person with good conduct because they cannot choose someone that all people in the village do not respect, who is ill-behaved, and allow him/her to start the job. The first reason for saying that they take the program as their own is that they are responsible for choosing him/her, which means that they also have power to deprive him/her of the responsibilities once he/she shows bad conduct. This is the reason for confirming that they take the program as their own".

Weakness to own CHWs program at the district level was also raised by three key informants in different interviews because the district level doesn't ensure the close follow up of the program and because they do not often have updated information of the program. One key informant revealed this in following words:

"The district has not yet made the program their own because they do not consider it as other program. The district takes part in it once a problem arises. For instance when the epidemic of malaria increases, at that time they get to know how the situation is. But regarding the program of Community Health Workers, something is lacking and sometimes they seem to be unaware. What I want to say is that the district local leaders should account for any case of a community health worker who stopped working and train another to bridge the gap. Once this is done, you can therefore say that they take part in the program. However, we are the ones to know whether some Community Health Workers are no longer working because we are aware of it. In that case we inform them but they do not take time and go to the field to collect that information to ensure whether the program in place is running well and the number of those who participate".

Another key informant also confirmed that the district level weakness to own the CHWs program is that the program is only known by a technician at the hospital level while other staff members at the district are not aware of the program. She pointed: *"They actually have a superficial knowledge of the program. As for me, it would be better if they try to have enough updated information though they might be challenged with the fact that they have too much work. I don't say that they can do that every day but the one who is in charge of Community Health Workers at the health centre or M&E team are responsible for managing all these issues, the functioning of the program and many more others. The administration should make an effort to get more involved in different activities of that program".*

The HC level has not yet integrated completely the CHWs program in the HC because there is only one person to look after the program. All staff members of the HC are not involved in CHWs activity. A key informant from partners in the IDI rose*: "Currently HCs seem to own the CHWs program but the challenge is that the program is managed by one person (in charge of CHWs program). If he/she is not around we cannot do anything related to CHWs program. They should integrate it in a way that allows many technicians at HC to respond for it but not only the one in charge of this Program".*

The financial means is a challenges recognized by few participants in the study to be a barrier of the CHWs program ownership. A technician at the HC during the interview voiced*:*

"Thank you! As you know, Community Health Workers are volunteers but they need something to help them make progress in their everyday life. This means that health centres should for instance help Community Health Workers to satisfy their basic needs by providing them with some necessities such as soaps at a given time to compensate the time they spend elsewhere. However, this is now impossible because health centres do not have capacity to do so".

Community members and CHWs expressed their neutrality about the community ownership of CHWs program. This was also confirmed by all four key informants from the interviews by highlighting existing weakness at the health center level and at the district level to own the program, while local leaders confirmed that the CHWs Program ownership is at high level because they consider that participation in the program by the community justifies the ownership of the CHWs program.

III.4 Strategies undertaken by the decentralized level to ensure the CHWs Program sustainability.

III.4.1 Meaning of CHWs Program sustainability from the participants views

Different views of study participants have been collected to get information regarding their understanding about a sustainable program.

Participants explained that a program can be sustainable when the community accepts its continuation and avoids its cut-off. A woman of 37 years old in community members FGD explained: *"People would be happy with the program. They would love it and participate in it. They would respect and run it smoothly until it reaches its completion without stopping*

halfway". Another community member during the FGD added: *On our opinion I can say that we have sponsors. But when those sponsors are not there, we should be self-reliant. All sectors should understand this. There should be a budget for this program in case we do not get sponsors program".*

The community willingness, the capability, the knowledge of the program by the community, the community appropriateness of the program defined a sustainable program. This was expressed by other community participants during local leaders FGD. Below is a view of a leader from the FGD*: "If you talk about the sustainability of the program, it also involves the willingness and power of those who are running the program. People should be aware of that program. It is our duty to make it sustainable so that anybody may do it with confidence".*

CHWs understood that sustainable program as a continuation of the program after partner's funds ceases. An ASM during the CHWs FGD said*:"In my point of view I can say that we have sponsors. But when those sponsors are not there, we should be self-reliant. All sectors should understand this program. There should be a budget for this program in case we do not get sponsors".*

Three key informants in the interviews added that the continuation of the program depends on the structure of the health system as well as on the government support. An old man of 51 years in IDI voiced: *"The durability of the program can also be understood in another way. I wonder whether these program are well prepared so that they can still work in long term like some years from now. Before talking about durability, I can first ensure whether there are stakeholders and how we can proceed in case those stakeholders are no longer there. It is important to know whether the program in place is supported by the government and how it is structured so that it may continue to run".*

In addition to the views of study participants concerning the meaning of a sustainable program, participants informed that pillars of a sustainable program are permanent motivation of CHWs, the follow up of CHWs, the involvement of the local administration and the decentralization of CHWs program as other health structure like the HC. One key informant at the district level pointed:

"*Thank you so much! [He paused for a moment, about 30 seconds]. On our opinion as someone who is part of this program, there are important things that can lead to the durability of this program. First, there should be a motivation for Community Health Workers. This motivation cannot only be in terms of money, though it is also important. Local*

leaders should make the program their own. Second, community health worker should be financially motivated. If PBF is available, it should be improved and this can be a pillar that strengthens the program. Thirdly, I want to talk about health system and other sectors of the Ministry of Health in general. They should understand deeply the policy of decentralization of health community in a broad way and participate so as to make it more sustainable. They should understand how the lack of a health centre in a given area is a big challenge because they cannot find Community Health Workers. The three pillars mentioned above can greatly contribute to the sustainability of the"

Briefly, participants pointed that the appropriation of the program by the community, the capacity and willingness of the community, the continuation of the program without the support from outside and the health system structure are key elements that determine a sustainable CHWs program.

III.4.2 What has been undertaken for CHWs program sustainability?

Referring to the views of participants about a sustainable CHWs program, participants were invited in the same study to identify and explain activities already undertaken at different levels to sustain CHWs program.

Technical activities undertaken

The HC planned activities to reinforce capacity building of CHWs for a long term; CHWs trainings are now in their annual and in their multi-years work plan. A technician at the HC level revealed: *"Yes, thank you! What is being done is probably what I told you. Today health centres have put in place the program of training Community Health Workers as part of their duties and they designed an organizational plan of how it will be implemented in a period of one year or five years".*

Formative supervision for technicians in charge of CHWs activities started to be conducted from the district level. Key informant at the district level informed*: "We have our work as technicians including technical supervision while we still have stakeholders. We are planning to send delegates from the district level so as to train those in charge of Community Health Workers. This will enable them to train others in case they hold meetings. That is what we are planning to do in absence of partners".*

CHWs cooperatives organize activities which respond to cooperatives members needs in terms of knowledge. The HC provides them with technical support. A participant during the IDI pointed this: *"As far as technical support is concerned, there are structural organs. There are two Community Health Workers from each sector who are in charge of providing information to the health centre in case a problem of weakness or discouragement arises. They therefore request for a meeting with those who feel discouraged and organize special trainings for them. This is also part of technical structure since it is organized by the members of their committees who choose someone to train those people".*

The flow of the medicine supply chain of CHWs has been revised to facilitate CHWs and to avoid the stock out. One key informant from partners revealed the following during the interview*:"At the district level a coordination meeting was held and a pharmacist was invited. In that meeting they talk about the requisition system which is usually used. It has been suggested that the community should help to know what is available so that nobody may miss a product. The requisition system should be organized at the district level. It should never happen that a community health worker misses products. It should always be like that in order to make the program more sustainable"*

CHWs during the FGD recognized that they are enough empowered to ensure their function. A man of 33 years pointed this during CHWs the FGD, he voiced*: "Thank you! I have realized that people believe in Community Health Workers because of what we do for citizens in villages'".*

Some technical activities mainly supervision of CHWs started to be undertaken to ensure the continuation of CHWs capacity building. Cooperative of CHWs plays a role of identifying needs of CHWs to inform the HC for searching solutions. The HC at its side ensures CHWs training. The district in turn started to ensure capacity building of technicians of the HC through formative supervision.

Financial activities

Findings of our study revealed that few activities were done yet now to ensure the sustainable CHWs program.

Firstly, CHWs cooperative savings is one strategy that most of the participants during the FGD and during IDIs pointed to be used for CHWs activities in case funds of partners cease. A key informant at the HC informed: *"As a matter of fact, the measures we have taken are to*

manage well little resources got from sponsors and utilize them appropriately so that they may generate profit when the funding is suspended. Today they have built a house of the value of twenty eight million. Only five million remain to pay for the entire loan. After disbursing the loan, they expect to get more profit and to invest the money they get into business. Good management of the resources available is needed".

CHWs internally also have a basket in which they put their personal contribution. Those contributions can serve to equip them in terms of training tools or for other needs. During the FGD a leader at the Cell level informed: *"CHWs make regular contributions which can help them to buy materials in case the sponsors stop funding their cooperatives. Those materials include notebooks and pens which are bought through the cooperative. This is a usual and ongoing activity that is also known at the Sector level, and this is supposed to be done in order to make a follow-up of their daily activities''.*

Thirdly, the fees of charge paid for under-five treatment is another strategy in place because this money is saved for the future usage.
A key informant at the hospital level pointed: *"That's what I can say as far as financial department is concerned. We are not the only ones concerned with it but it is done at the health centre. They give 200F for each child, the amount which is deposited on the selected account of Community Health Workers. Those savings are supposed to help them to buy medicines in case the program is no longer sponsored. That is what we are planning to do but we still need support from stakeholders".*

Village kitchens were mentioned during the FGD of local leaders as an initiative of community local leaders. Community members built themselves those kitchens to be used by the community for nutritional activities. A leader of 45 years old informed: *"Now we are building kitchens in villages. We would use a kitchen of one of the citizens but in collaboration with people kitchen are being built in order to get a place where our activities can take place".*

Most of the participants from FGD and from interviews recognized that the financial means are a challenge to guarantee the sustainable CHWs program because till now CHWs activities have no budget line at the HC even at the district level. A participant in IDI at the district level mentioned: *"Financially it is not easy because we do not have budgetary plan for*

supporting Community Health Workers. This can be done through the advocacy by requesting the support from stakeholders. We have no budget for supporting Community Health Workers but it can be done in collaboration with all the people working in the health Sector to implement the program of the Ministry of Health in general"

CHWs cooperatives savings, fees of charges of under-five services are the main strategies that are currently undertaken at the decentralized level for sustaining financially the CHWs program. Most of the participants are aware of the insufficient financial solutions in place to guarantee the sustainable program.

Table 7: Key findings

Objective 1	Objective 2	Objective 3
Community members support CHWs by implementing all advice and recommendations given by CHWs.	The concept of ownership is partially conceived by the most of community members.	Training plans for CHWs and supervision are technical strategies undertaken by the decentralized level to sustain CHWs the program.
Community leaders provide support to CHWs by providing to them opportunities to deliver health information to the community.	Community members are not involved in the CHWs program. No structure representing community members in the management of CHWs program.	CHWS cooperative savings, fees of charge of under-five services are the main financial strategies in place to sustain financially CHWs program.
Technical support in training and supervision are the support provided to CHWs by the HC level.	To elect CHWs is one activity that involves Community members in the CHWs program.	No budget and financial plans for CHWs program available at the decentralized level.
CHWs claimed for more incentives to motivate them to fulfill their responsibilities.		

III.4.3 Challenges mentioned for the CHWs program sustainability.

Incentives of CHWs is a concern that most of the participants raised, CHWs themselves pointed out that the PBF they gain doesn't come on regularly. They informed also that the quality of equipment they receive is not durable. About seven CHWs talked about it.For example a BINOME in the FGD mentioned*: "What I can add to the opinion of our colleague is about the bonus we get. Sometimes PBF comes late, which is actually a hindrance. They order for materials but suppliers do not prove us with original equipment. You can wear a sweatshirt for a short period and it gets old. A bag is torn soon after a very short time".*

All CHWs do not work in the same conditions, which affects the need for their services by the community. Three CHWs in the FGD pointed out the electricity power as a problem which is not shared by all CHWs. A woman in CHWs FGD explained*: "They don't come to us the same way because some have electric power in their houses while others do not have (households are not the same). They can consult someone very much without fear of going there at any time because there is electric power while his/her colleague has no power in the house. When there is electric power it is easy for a community health worker to take blood sample as well as to use syringe".*

The workload of CHWs is known by the community to be actually very heavy. Local leaders and community members in the study advocate for them to stop to add other tasks. For example a leader at the sector level during the FGD voiced: *"What I can add to services they provide is that they should not be given more work because it seems they are given heavy responsibilities. For instance one of them says ' when I start cultivating our field and a woman with a sick child calls me, in that case I cannot continue to work on our land. Every citizen is worried about his/her home. So if they are given too much work, there some tasks they may fail to accomplish. When you talk to a community health worker, he/she sometimes tells you that they have many responsibilities".*

One key informant at the district level concurred to what has been said above by a local leader: *"I dare say that Community Health Workers have a lot of responsibilities. But as days go by they are given more others. If you take their capacity into consideration, you see that the program are too many for them".*

The stock out of medicine especially for malaria treatment (Primo Hondo), Zinc and FP pills is an issue pointed out by two participants from CHWs FGD.

Another weakness raised during the study is that all CHWs do not have the same level of knowledge to provide a quality service. A local leader during the FGD said: *"More training sessions are needed because there are skills gained. It is good to study every time. They are not at the same level and they do not understand things the same way. For us, we see that more training sessions are needed to help them acquire more skills".*

There are not enough resources to guarantee the availability of all materials to be used by CHWs. To increase the charged fees paid for under-five, care could be another strategy for the financial sustainability. A technician at the district level during the interview expressed*:" They can keep offering services but the challenge would be the lack of enough materials.*

Normally if you have a health insurance card you pay 200 frw but if you are not insured you pay 500 frw. Here you understand that the amount can increase when sponsors stop funding the program".

Any financial plan for CHWs program has been done at the decentralized level. Local leaders expressed it during their FGD. A woman local leader voiced*: "Financially we do not have a special plan for that program but we all think about it from the higher level of the Ministry of Health. If the regular contribution of 200 frw is made Community Health Workers can afford to buy medicines so that their activities may go on".*

Till now no budget line for CHWs program at the decentralized level, four key informants in the IDI advocate for a budget line of CHWs program in the macro planning of the country as a financial strategy. A technician at the district level requested: *"We need advocacy from different levels of the administration such as sector level, district level and the level of the Ministry of Health. They should advocate for Community Health Workers so that the government can think about that program and integrate it in its long-term plan. If that is done, the program will be more sustainable as well as beneficial to people. As there is a budget plan for a health centre, there should also be a budget plan for Community Health Workers to help them carry out their activities and make progress".*

Three local leaders and two key informants revealed that community members have no voice in the management of CHWs program. One key informant highlighted the lack of associations or clubs for health at the village level in which CHWs program management can be discussed by the community. A technician at the district level expressed that in following words: *"There should be organized meetings at the village level where health issues are discussed. This should be done in order to know how the health program was established, how they are running and those who work in this program. At that time, they start thinking about their contribution and what can be done to help and support them. After understanding what Community Health Workers are supposed to do, they can therefore think about the contribution they can give so that the Community Health Workers can be rewarded and even be given a monthly payment'".*

A close follow up of CHWs is also one way to support CHWs program sustainability as highlighted by some participants during interviews. A key informant from partners said: *"If Community Health Workers are chosen and left out without any follow-up of the program they are responsible for, the program will not be sustainable because nothing is done to*

overcome those challenges. But if they make a follow-up, it will help to know those who need to be encouraged. As a matter of fact, what is more important is to sensitize people on that program and make them aware of the importance of services they offered''.

Challenges revealed by our study about the sustainability of CHWs program were based on the following elements: the lack of local leaders and community member'sinvolvement in the management of CHWs program,incentives and motivation of CHWs, insufficient financial mechanisms of CHWs program, decentralization of the CHWs program budget and continuous capacity building of CHWs.

Table 8: Key challenges revealed by this study

Objective 1	Objective 2	Objective 3
Insufficient of incentives provided to CHWs compared to their heavy workload.	Community members are not involved in the management of CHWs.	Few strategies in place at the decentralized level to warranty a sustainable CHWs program.
Lack of in kind support from the Community to CHWs	Community members are not sensitized to own CHWs program.	No financial plan and budget available at the district level for CHWs program.
Resilience of some community members to implement CHWs recommendations.	The weak close follow up of CHWs by the district level and lack of update information of CHWs program at the district level.	

The drop out from the program by CHWs is also another challenge of the program and this one is a measure of sustainable program. Our study sought to know the actual situation of this determinant.

About 6% of CHWs leave the program annually. The main reason of their drop out is occupational reason. A technician at the HC level informed: *"Thank you! Over the course of the last two years, perhaps during the year before the last year, about 6 Community Health Workers stopped working. In 2015, 7 Community Health Workers left. If we try to analyse what made all these people stop working as they are 15 in total, we may probably find that it was not because they did not want to continue but the reasons are that they went to find other means to earn a living".*

Many occupational tasks, the advanced age, difficulties in reporting skills of some CHWs are other reasons for the drop out of the program reported during the study. An experienced staff at the district level explained: *"There might be another reason like that of illness. There are even other reasons perhaps I cannot know because you suddenly hear that an individual is no longer part of the team. Some people say that we have too many program that they cannot manage while they are old. This is also another reason because at the beginning the package of the Community Health Workers' program was not heavy but the number of activities increases as years go by. In that case, they require someone who is literate and strong enough. So as people get old, you understand that some of them leave because the workload has become too heavy for them. The program requires togive reports every month as other jobs of the government and they really do it well, so you understand that they work hard".*

Most of the CHWs in the FGD concurred with the same reasons pointed by other key informants from IDIs. A BINOME voiced: *"Although I do not remember quite well, there are those who personally resigned because they had reached an advanced age. As the program requires reading and writing and that these people were no longer able, they decided to leave. There are others who resigned because they were leaving the area to dwell elsewhere. Here you understand that they did not leave because they were tired of those activities. But most of the time people leave the program for reasons other than that of having heavy".*

The advanced age of CHWs, moving for another region, many occupations and difficulties in writing skills were highlighted by most of the participants to be the reasons for CHWs to drop out the program.

IV. DISCUSSION

The Alma-Ata Declaration of 1978 states that health is a fundamental human right and encourages active participation of recipients of health services and communities in the planning, organization, operation, and management of health care systems**(18)**.

A successful CHWs program requires the support and ownership of the community as well as a supportive social and policy environment for community participation at national, district, and local levels **(19)**. This study aims to investigate CHWs program ownership by beneficiary community. Thus, the study tried to analyse how the community is involved and its readiness in supporting CHWs program. Finally, the study explored strategies adopted at the district level to ensure CHWs program sustainability and ownership by the beneficiary community. The responses to our research questions are aligned with the three objectives of the study as described below.

The findings of this study revealed that community is not fully involved in all steps of the CHWs program development, implementation and evaluation. The community members play only their role in electing CHWs. Other steps are under the control of the HC and the district. The World Health Organization recommends the following: "Community members should support the work of CHWs in all six building blocks of the health system" **(20).** In other words, the community support refers to the process of getting community members involved in decision making process that affects them including planning, development, management, and evaluation of health services, as well as activities which aim to improve health or reduce health inequalities. Community involvement in CHW selection is a public recognition **(21).**

This study shows that the community trusts CHWs. This was confirmed several times by the participants either in FGDs or in interviews. The participants justified this trust by the higher level of the services required from CHWS. CHWs reported that the community trust is a kind of motivation they gain from the community. The findings demonstrate also that CHWs get support of Community local leaders. They explained that the latter help them to provide health information to the community through meetings and other opportunities during community activities. This finding is in concurrence with WHO and the Global Health Workforce Alliance in their Systematic Review, Country Case Studies, and Recommendations for Integration into National Health System. This review points out that the community trust for CHWs is a powerful driving force of motivation. It recommends that

Community members need to trust the CHWs in that support from community local leaders provides CHWs with legitimacy **(22).**

Any material support from the community provided to CHWs was documented in our study as it is done in other countries where donations are given to CHWs. Only exemption for community patrol was mentioned by one key informant in our study. A recent literature review done by the Health Care Improvement Project on CHWs Community management structures showed that material support can be provided either formally or informally. The In Jamkhed, India, farmer clubs is an example which supported CHWs and helped them to solve community problems **(14)** like exemption from duties in the community (e.g., community patrol and cleaning day responsibilities), donation of farm labor to help with the CHWs' own farming or donations (e.g, chickens or vegetables).

The findings of this study indicate that formative supervision of CHWs is a task limited to the HC level. The participants affirmed that the community level is not involved for conducting such activities. They explained that there was no structure in place at the community level that could allow the community to discuss about CHWs activities or to provide feedback. However, Bhutta Z & al., in the Global Experience of Community Health Workers done in 2012, argue thatwhile a CHW needs a trained health supervisor, she also needs supportive supervision from community members. Many communities already have village health committees (VHCs) or other existing community management structures that are established as part of national health or democracy initiatives. These groups provide feedback to the CHWs if any complaints regarding their performance are received. They help them with problem-solving, especially if it relates to water and sanitation or other determinants. They provide incentives, especially in form of recognition. They resolve conflicts that may arise and they have the ability to influence termination of work which should be discarded between the CHW and the community **(23).**

Even if the role of community members in the monitoring and evaluation is vital to improve the health of the population, the findings of our study reveals any evidence related to the support of the community members offered through monitoring and evaluation. The participants assert that supervision is a task ensured by the Health Center level. As stipulated by WHO in A Systematic Review, Country Case Studies, and Recommendations for Integration into National Health Systems, community members can play an important role in monitoring and evaluation of CHWs program. When community members discuss and

understand household data and vital events collected by CHWs, they can easily analyse the impact of what is happening in their community over time. They also scrutinize the influence of CHWs in the community which will become increasingly evident systems, birth registries and community scoreboards collected by CHWs. Feedback from the community enables community members to understand the epidemiology rate that is likely to affect their setting and therefore to prioritize solutions **(22).**

Our study found that the community support provided to CHWs is just the consumption of their services and to put into practice what is recommended by CHWs. Local leaders on their side try to facilitate CHWs to deliver health information to the population. The community local leaders' support can go beyond what they do for CHWs because they are considered as very important agents to the organization of community initiatives for more support to CHWs program. The support from the community can be more helpful than what is done currently. This was suggested in a review done by UNICEF in 2004 about what works for children in south Asia Community Health Workers and its basic lesson was that CHWs must be adequately supported and such adequate support requires more resources from the government and communities than what are spent now on CHW programs. Nepal is an example that has instituted a CHWs day on which they celebrate the achievements of CHWs.

The findings of our study have revealed that most participants both in FGDs and in the interviews defined and understood partially the ownership of the CHWs. For them, to own the CHWs is to use CHWs services and to put into practice CHWs recommendations. Community members do not provide their contribution to build the program. Community members would be part of the program than only benefiting from its services. According to Ontario Healthy Communities coalition, the community ownership relates to the capacity of communities to develop their own assets and to solve their problems and issues. When communities accept that it is their problem, then they are more likely to work together and develop a solution. This solution will be better than one provided solely by an external expert **(2).** Briefly, community ownership reflects people working together voluntarily to achieve their own initiatives using available resources to shape their own destiny **(3).**

Few responses from two key informants out of five highlighted the importance of community participation in the planning, financing, implementation and the follow up of the program. The Ministry of Health was pointed in the study to be responsible for all those functions. Savaya et al, in Building Sustainable Programs show that by their very nature CHW

programs are vulnerable unless they are driven, owned and firmly embedded in communities themselves. The concept of community ownership and participation is often ill-conceived and poorly understood as a product of programs initiated from the Centre level **(10).**

According to our findings, few specific activities were yet now organized in the community to explain and to sensitize the community on the ownership of the CHWs program. It was revealed that meetings to introduce new CHWs activities are organized at the community level on how to use new services. The participants reported that village kitchens were built by the community as a local leaders' initiative. Still this tried to respond to William Brieger recommendation, a professor in International Health at the Johns Hopkins Bloomberg School of Public Health: "Time and energy should be spent to ensure that communities have realistic expectations of the CHW program. When CHW responsibilities are not accurately portrayed to the community, false expectations may be set up resulting in CHW attrition or program stagnation'' **(22).**

In our study, there is no evidence about the existing of community structure that can represent community members in the CHWs program management as highlighted by WHO that an effective CHW program should have the support of a group composed of community members who have active links with the health sector and who can improve governance at the local level. These groups as community management structures are known by different names, such as village health committees, community health committees, ward health committees, community advisory boards, and health management committees. In most countries, these management structures provide support to the CHW at the community level and a bridge to the health system, and may also be linked with the local political system **(14).** Brazil is a typical example that has institutionalized Community Health Committees as part of the municipal health services to sustain social ownership, meaning that community participation does not become an alternative but an integral part of the state's responsibility for health care delivery **(22).**

Findings of our study pointed out the district level weakness in owning the program is functional to the fact that they do not often have updated information of the ongoing of CHWs program at the community level. The study shows also that there is not sufficient time secured to conduct field visit in order to encourage CHWs and to organize the community for more support to the CHWs program.

The full integration of the CHWs program at the HC level was also commented by a key informants as only the in charge of the CHWs activities can respond for the program, the CHWs is seen as a program alone, other HC staff are not yet involved in the program. The Brazilian experience bellow documented by Bhutta Z & al in the Global Experience of Community Health Workers, which showed that to date, the largest and most successful program in this regard is the CHWs Program which has integrated CHWs into its health services**(23).**

In our study both CHWs and the community members express their neutrality about the ownershiplevel of the CHWs program of the CHWs by the community because they affirmed that many things remain to be undertaken by the community. While local leaders confirm that the community own correctly the CHWs program.

To explore strategies undertaken by the decentralized level to ensure the CHWs sustainability is the third objective of our study**.** The findings of our study describe activities which have been undertaken. In fact, few technical activities were undertaken. Participants commented that the financial aspect is still a big challenge to sustain the CHWs program.

Our study findings demonstrate that the Health center level started already to conduct formative supervision for CHWs and refresher training at the sites. Two key informants out of five at the HC level confirmed that supervision and training of CHWs are now integrated in the multi-year work plan of the Health center and that the budget to realize this was the only remaining problem. This shows that on the technical side what has been undertaken by the health center is not something to neglect referred to the Bangladesh study that stipulated that the level of institutional support in training and retraining, program management and supportive supervision by health workers greatly determine the sustainability of the CHW scheme. **(12).**

Our findings indicate that the participants raised the issue of funding in case partners cease to support financially the CHWs. They revealed that the community members were not aware of the source of funding used in the CHWs program and most of them thought that CHWs had a regular remuneration from the MOH because there was no community structure that could allow them to be involved in the management of the CHWs program. This ignorance could be a barrier for community initiatives to financial contribution to sustain CHWs program.

This study shows also that community local leaders, key informants at the health center level

and at the district level argue that they rely on savings of CHWs cooperatives to be used in case funds from partners cease. In addition, participants recognized that those savings are not yet enough to guarantee the financial sustainability as they are still paying bank loans.

This study indicates that the fees charged for under five services saved are also other measures taken to prepare financial sustainability of CHWs program.

Most participants in the study affirmed that the CHWs program still needs the support from partners. They argued that they were not yet ready to support financially the program at their level. Attention to the financial aspect has to be taken as soon as possible because Savaya et al**. (10)** estimate that up to 40% of all new community health programs do not last beyond the first few years after the end of initial funding. This was also shown by a study conducted in Johns Hopkins Bloomberg School of Public Health by Henry. P, Rose on the effectiveness of Community Health Workers, in which Program planners interviewed working on CHWs programs noted that the lack of sustainability was directly related to termination of funding **(13).**

In our study, three key informants working at the district level revealed that there is neither fund nor budget line for CHWs program that are planned at this level yet now. They advocated for decision making process to give the CHWs program a priority as it is considered at the Health Center level.Evidence of Nepal shows that district can fund the CHWs for its running because 47 (out of 75) districts established a district level endowment fund for supporting CHWs activities. This Fund is activated and transferred into Village Development Committee (VDC) level endowment fund. There is a lot of interest to the districts to sustain the CHWs program. Approximately 400 VDCs of 18 districts have already established endowment funds **(10)**.

The institutionalization of the CHWs is an alternative way to guarantee the sustainable program. In our study no funding has been allocated to ensure the institutionalization of CHWs program but two key informants have recommended this. The Community Health committees also seemed to not exist because any participants have mentioned them during our study. However, Brazil has been able to integrate CHWs into its primary health care services and has institutionalized Community Health Committees as part of the municipal health services to sustain social ownership. With decentralization, municipalities are also in charge of actively ensuring the existence of Community Health Committees and

incorporating in this way the voice of community members. The Ministry of Health pays them, but there is a co-financing between federal government, state and municipal government levels (**10**).

In our study, some community members think that CHWs have a regular remuneration from the MOH. However, the study shows that some other community members ignore the source of this remuneration. This could be an explanation of a few initiatives to support CHWs as some community members think that the CHWs are just remunerated. But other participants in the study are aware that CHWs work voluntarily without any remuneration. They know that CHW have a heavy workload and that they spend much time for health services. This is why some participants advocated for the provision of more incentives to CHWs in addition to the PBF they gain. This literature review proved that the question of volunteerism character of CHWs remains controversial. There exists virtually no evidence that volunteerism can be sustained for long periods as a rule. Community Health Workers are poor. They expect and require an income.

Findings of our study showed that CHWs are not satisfied by the incentives they receive through the PBF. They reported that the PBF comes at irregular frequencies. CHWs revealed also inequities in their ordinary lives among them which reduce the use of their services. The nearest example is the electricity power which is not available to all CHWs while they have to receive clients during the night especially for malaria case management.This concurs with a study done on that level and determinants of CHWs satisfaction in Rwanda which demonstrate that 70.75% of respondents were dissatisfied due to the insufficient medicines and equipment, and 87.4% of responds reported being dissatisfied with the level of compensation **(15).**

Even if the problem of insufficient incentives provided to CHWs is recognized by most participants of our study compared to their workload, initiatives to support them remain very poor to guarantee the financial mechanism for the sustainable program of CHWs. Initiatives of other countries documented by UNICEF can inspire Rwandan communities for a sustainable CHWs program. A desk review conducted by UNICEF on Community Health Workers programs in South Asia documented that several communities relied on program champions, community members or professionals who took responsibility for identifying potential funding sources and networked with other community partners and local leaders to lobby for space, funding, and other resources **(12).**

Our study findings show that 6% of CHWs dropped out the program in 2015 in Kigembe Health Centre. The main reasons for discontinuing CHWs services mentioned by participants were the advanced age of CHWs, to move for another region, difficulties in writing skills and more profit earned from other activities. The same reasons of the drop out of the CHWs program were reported by Khan et al for Bangladesh case **(11).**

Limitation of the study

The sample size could be larger than what have been used for the study to guarantee the internal and the external validity. Sites of the study could be more than one to allow the comparison of results for better conclusion of the study findings. This limitation of our study is due to the constraint of time and of financial means.

CONCLUSION AND RECOMMENDATIONS

Conclusion:

Findings of this study show that CHWs program in Nyanza Sector/Kigembe Health Center is known by the community as an important program that contributes to the wellbeing of the population. Our findings notified that community members use often CHWs due to many reasons that could be summarized in good customer care, the reduced cost of services and the quick service they receive from CHWs. Despite the appreciation of CHWs program by the community, findings of our study demonstrated that community provides a limited support to CHWs program. The main support community members provide to CHWs is to implement all pieces of advice and recommendations given by CHWs. To link the community with CHWs by sensitizing the population on the execution of what has been recommended by the CHWs and to provide to CHWs opportunities for sensitization during their meetings are particular support that local leaders give to CHWs. On the other hand, Health Centre and Hospital provide a technical support to CHWs by training them in all aspects of the program by ensuring the supervision of CHWs. Financial support and equipment are delivered by partners through MOH.

Community members and CHWs expressed their neutrality about the community ownership of CHWs Program. This was also confirmed by all four key informants from the interviews by highlighting existing several weaknesses to own the program at different levels, while local leaders affirmed that the community own the program correctly because for them the use of the program by the community justifies the ownership of the CHWs program.

This study revealed the ill conception of the ownership of the CHWs program by the community as for most of the participants from FGDs think that to own CHWs program is limited to the execution of CHWs recommendations. Only technicians of the program who were interviewed during our study had extended views of the concept and went beyond the use of CHWs services and implied the community in the management of the program.

Some technical activities started to be undertaken to ensure the continuation of CHWs like capacity building and Cooperative of CHWs plays a role of identifying needs of CHWs to inform the HC. The HC on its side ensures CHWs training. The district in turn started to ensure capacity building of technicians at the HC through formative supervision.

CHWs cooperatives savings, fees of charges of under-five services are the main strategies that are currently put in place at the decentralized level for sustaining financially the CHWs program. Most of the participants are aware of the insufficient financial solutions in place to guarantee the sustainable program.

Challenges related to the ownership of the CHWs program by the beneficiary community for its sustainability revealed by our study are based on the ill conception of community ownership for the CHWs program which limited the involvement of local leaders and community members in the CHWs program management, incentives and motivation of CHWs, insufficient financial mechanisms of CHWs program, decentralization of CHWs program budget.

Findings of this study allows us to conclude that beneficiary community of CHWs program of Kigembe Health Center has not yet owned the CHWs program, efforts from all levels need to be joined for a sustainable CHWs program.

Positive and negative aspects revealed by this study

Following are positive elements revealed by this study that we recommend that maintain for a sustainable CHWs program:

- CHWs service is used by the community and CHWs are trusted by the community.
- The participants of the study are aware of the service offered by CHWs and recognized their importance for the community.
- Quick services and the quality of malaria test used by CHWs were appreciated by community members and local leaders during the study.
- The heavy workload of CHWs is known by the community beneficiaries, by local leaders and health care providers as well.
- Supervision and training on sites for CHWs are sustainable technical strategies undertaken by the Health Center for CHWs capacity building,
- Cooperative savings and user fees charged for under five services are the main financial strategies in place to prepare financially a sustainable CHWs program.

This study demonstrated also weakness to be improved for a better community ownership to sustain CHWs program:

- Lack of community involvement in CHWs program management and limited support from the community for CHWs program.
- The concept of ownership of a program by the community and local leaders is not well understood; their role and support in the CHWs program are unclear.
- People think that to use CHWs services is a kind of support they provide to CHWs instead of taking it as their advantage, and many participants in the community members FGD are convinced that CHWs have a regular remuneration from the services they perform for the community.
- The ownership of the CHWs program by the community is not enough; CHWs on their side claim for more support from the community.
- Financial strategies in place to prepare a sustainable program are not enough; no initiatives have been taken locally.
- No budget line for CHWs at the district even at the HC level to allow a sustainable planning for the program.
- PBF of CHWs comes at irregular rhythm and still not enough as incentives for CHWs.
- The district level was pointed in the study to not ensure a close follow up of the CHWs program and not to have updated information of the program.
- A complete integration of the CHWs program at the district and at the HC level is still needed because someone in charge of CHWs program is only the one who responds for CHWs activities.
- Stock out of medicine was mentioned in the study especially Primo Hondo and Zinc.

Recommendations

To strengthen the positive elements mentioned above, it is recommended to:

- Create health committees at the village level for CHWs program to allow community members to participate in the management of the CHWs.
- Sensitize community members to understand more the concept of ownership of the CHWs program, to inform the voluntarism character of CHWs and to guide the community for more initiatives to support CHWs program.
- Mobilize and organize community members to compensate efforts and time spent by CHWs to deliver health services to the community by providing in-kind material support to CHWs.
- Ensure a complete decentralization of the CHWs program including the budget to allow districts, HCs and communities to own the CHWs program, to conceive a sustainable plan and to put in place more initiatives.
- Advocate for instauration of a budget line of CHWs program in the national budget
- Reinforce PBF mechanisms for a regular compensation and to ensure a correct management of CHWs for generating incomes and benefits.
- Involve other staff members of the HC and of the district in the CHWs program to ensure a complete integration of CHWs program.
- Conceive and implement a particular follow up mechanism of the supply chain for CHWs program commodities.
- At the district level, to ensure a close follow up of the CHWs program for having accurate information of the program that will allow advocating for it.

Further's researchers could:

- ➢ Conduct a comparison study of several sites about the community ownership level of CHWs program to understand more what is happening around the CHWs program after its initiation by the national level.
- ➢ Conduct quantitative research to measure the capacity in place at the different levels of the health system in Rwanda to prepare a sustainable CHWs program.

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APPENDIX

Data collection tools

Assessing Community Health Workers Program ownership by the beneficiary community

Guide for Focus Group Discussion/Community members

Objectives:

- *Assess the community involvement in supporting CHWs program,*
- *To measure the extent to which the level CHWs Program is owned by the beneficiary community.*

General information about the focus group

Date:____________________

Location:____

Number of participants:__________women/men

Facilitator:____

Assistant:____

Opening:

Hello, ourname is ______________________________. (Introduce the facilitator, assistant etc.) Welcome. Thank you for your time to speak with us today. We would like to discuss with you today about the community ownership of Community Health Workers program. We appreciate your opinions.

All that is said and discussed today will be confidential. Your name will not appear on any reports, and no one will know about the conversation unless you discuss it with someone. Please do not tell anyone what other participants say, to keep what we talk about private between us. To avoid risk of losing information we are going to record the conversation. Is there anyone who does not want us to tape record the conversation? Remember that you don't need to respond to any question that makes you feel uncomfortable.

Introduction:

Let's get to know each other a little before we start our discussion. I'm going to say ourname and one thing about ourfamily that makes me happy. I'll start… ourname is ___ and I feel happy after having a big meal with ourfamily. Then I'll throw this ball to someone- and that person will say their name and one thing that make them happy.

Community knowledge of CHWs program:

1. What do you know about CHWs program?
2. Who are CHWs?
3. What are their responsibilities?
4. Its happen for the people of your community to be in need of their services? At which occasion are they in need?
5. Why do some people choose to ask CHWs services?
6. What about the service they offer to your community? Can you tell us something about their service?
7. What did people appreciate in their service?
8. What might be improved in the service they offer to people?
9. Are you ready to use CHWs service? Why?

Community support to CHWs program:

I would like to learn some basic things about the support your community provides to CHWs program for its sustainability.

1. Do you think that CHWs of your community gain the support from where and from whom to be functional? Do you thing that CHWs of your community need support from your community? Why?
2. Which kind of support do need CHWs need from the community to be functional normally and to be able to provide to the community a quality service?
3. Among all support needed by CHWs you have mentioned above, what kind of the support have you provided to your CHWs since they start to offer service to your community?
4. Do you thing that the support that community offers to CHWs is enough?
5. What is the role that the local authority attribute to you to support CHWs program?
6. What must be done or improved to provide support to CHWs of your community?
7. Among members or institution of your community who comes at the top to provide support to CHWs? Why?

Ownership level of community for CHWS program

1. What do you understand when we say to own a program by a communityWhat shows that a community owns a program?
2. Which benefits gained by the community when they appropriate a program? Let talk about our CHWs program, do you think that our community have already appropriate the program?
3. What show that your community have own the CHWs program?
4. If they have not owned the program, what can be the raison?
5. Do exist in your community activities or program that mobilizes people to own CHWs program?
6. At which level you think that your community owns the program of CHWs? Choose the number you think it could correspond to the level of your choice: 0/5; 1/5 ; 2/5; 3/5; 4/5; 5/5.
7. What do you suggest that could help your community to own CHWs program?/ What do you want to mean when we say: “the sustainability of the program particular CHWs program”?
8. Do you think that Community can influence the sustainability of CHWS program? How?
9. What can be the pillars of CHWs program sustainability?

10. What have been done now among your community to support the sustainability of CHWs program?
11. What is not done by the community to support the sustainability of CHWs program?

Wrap-Up

Are there other ideas about the CHWs program and any of the topics we have discussed today that you would like to share? This has been a really interesting discussion. Thank you all so much for you time.

Assessing Community Health Workers Program ownership by the beneficiary community

Guide for Focus Group Discussions/ Community local leaders

Objectives:

- *Assess the community involvement in supporting CHWs program,*
- *To measure the extent to which the level CHWs Program is owned by the beneficiary community.*
- *To identify key components that testimony the community support for CHWs program for its sustainability*

General information about the focus group

Date:____________________

Location:____

Number of participants:__________women/men

Facilitator:____

Assistant:____

Opening:

Hello, ourname is _______________________________. (Introduce the facilitator, assistant etc.) Welcome. Thank you for your time to speak with us today. We would like to discuss with you today about the community ownership of Community Health Workers program. We appreciate your opinions.

All that is said and discussed today will be confidential. Your name will not appear on any reports, and no one will know about the conversation unless you discuss it with someone. Please do not tell anyone what other participants say, to keep what we talk about private between us. To avoid risk of losing information we are going to record the conversation. Is there anyone who does not want us to tape record the conversation? Remember that you don't need to respond to any question that makes you feel uncomfortable.

Introduction:

Let's get to know each other a little before we start our discussion. I'm going to say ourname and one thing about ourfamily that makes me happy. I'll start… ourname is ___ and I feel happy after having a big meal with our family. Then I'll throw this ball to someone- and that person will say their name and one thing that make them happy.

Community knowledge of CHWs program:

1. What do you know about community health program?
2. Do you think that CHWs program is known by your community?Why?
3. Its happen for the people of your community to be in need of your services? At which occasion are they in need? Why do some people choose to ask CHWs services?
4. Can you tell us something about the service they offer to your community?
5. What do you appreciate in the service they provide to your community?
6. What might be improved in the service offered by CHWs to your community?

Community support to CHWs:

1. What is your role in the CHWs program as a community leader?
2. How do you think that the community have to provide support to CHWs program?
3. Which kind of support do you think that a community leader might provide to CHWs program of his or her community to continue to be functional normally and to be able to provide to the community a quality service?
4. Do you think that there are other persons or institution that might support CHWs even if they do not do so?
5. Among all support needed by CHWs you have mentioned above, what kind of support have you provide to the CHWs since you were elected as local leadership in your community? (Provide example of support) Do you thing that the support you offer to CHWs is enough? Why?
6. What do not do community local leaders to support CHWs program that they were supposed to do?
7. What must be done or improved by community local leaders to provide enough support to CHWs**?**

Community ownership level for CHWS program

1. What do you understand when we say the program to be owned by a community and by local leaders?
2. What show that people of such community owns a program**?**
3. Which benefits gained by the community to appropriate a programCHWs?
4. Let talk about our CHWs program, do you think that your community have already appropriate the program? What shows it?
5. If they have not yet owned the program, what can be the raison?
6. What is the role you attribute to your community in CHWs program?
7. What might be your role to help the community to own CHWs program?

8. Do exist in your community activities or program that mobilize people to own CHWs program?/ What are they?

9. At which level you think that your community own the program of CHWs? Choose the number you think it could correspond to the level of your choice: 0/5; 1/5 ; 2/5; 3/5; 4/5; 5/5.

10. Who do you think that have role to sustain CHWs program in your community?

11. What would be the role of the community (at different level) to sustain CHWs program?

12. What might be the role of community local leaders to sustain the CHWs program?

13. Do you think that the CHWs program in your community can continue to be functional without the financial support of partners? Why?

14. Which kind of contribution are you ready to provide to sustain the program in absence of financial support of partners of your community?

15. Which kind of contribution do you expect from the community to sustain the program in absence of financial support of partners of your community?

Wrap-Up

Are there other ideas about the CHWs program and any of the topics we have discussed today that you would like to share? This has been a really interesting discussion. Thank you all so much for you time.

Assessing Community Health Workers Program ownership by the beneficiary community

Guide for Focus Group Discussions/ CHWS

Objectives:

- *Assess the community involvement in supporting CHWs program,*
- *To measure the extent to which the level CHWs Program is owned by the beneficiary community.*
- *To identify key components that testimony the community support for CHWs program for its sustainability*

General information about the focus group

Date:____________________

Location:____

Number of participants:__________women/men

Facilitator:____

Assistant:____

Opening:

Hello, ourname is ______________________________. (Introduce the facilitator, assistant etc.) Welcome. Thank you for your time to speak with us today. We would like to discuss with you today about the community ownership of Community Health Workers program. We appreciate your opinions.

All that is said and discussed today will be confidential. Your name will not appear on any reports, and no one will know about the conversation unless you discuss it with someone.

Please do not tell anyone what other participants say, to keep what we talk about private between us. To avoid risk of losing information we are going to record the conversation. Is there anyone who does not want us to tape record the conversation? Remember that you don't need to respond to any question that makes you feel uncomfortable.

Introduction:

Let's get to know each other a little before we start our discussion. I'm going to say ourname and one thing about ourfamily that makes me happy. I'll start... ourname is ___ and I feel happy after having a big meal with ourfamily. Then I'll throw this ball to someone- and that person will say their name and one thing that make them happy.

Community knowledge of CHWs program:

1. Do you think that CHWs program is known by your community?Why?
2. What is known by your community about CHWs program? Its happen for the people of your community to be in need of your services? At which occasion are they in need?
3. Why do some people choose to ask CHWs services**?**
4. Can you tell us something about the service you offer to your community?
5. What do people appreciate in the service you provide?
6. What might be improved in the service you offer to people?

Community support to CHWs program:

I would like to learn some basic things about the support your community provides to CHWs program for its sustainability.

1. What might be the role of your community in the CHWs program?
2. Is the community important to provide support to CHWs program? Why?

3. What kind of support do you need from the community to continue to be functional normally and to be able to provide to the community a quality service?

4. Who contribute to support CHWs program till now? Which kind of support he/she provide to?
5. Do you think that there are other persons or institution that might support CHWs even if they do not do so?
6. Among all support needed by CHWs you have mentioned above, what kind of the support have you received from your CHWs since you start to offer service to your community? (Provide example of support)
7. Among members and organizations of your community who comes at the top to provide you the support in your daily activity?
8. Do you think that the support that community offers to you is enough? Why?

9. What must be done or improved to benefit the support from your community?

Community ownership level of the CHWS program

1. What do you understand when we say to own a program by a community.
2. What shows that a community owns a program?
3. Which benefits gained the community when they appropriate a program?
4. Let talk about our CHWs program, do you think that our community have already appropriate the program?
5. What show that your community have own the CHWs program?
6. If they have owned they program what shows the ownership?
7. If they have not owned the program, what can be the raison?
8. Do exist in your community activities or program that mobilize people to own CHWs program?
9. At which level you think that your community owns the program of CHWs? Choose the number you think it could correspond to the level of your choice: 0/5; 1/5 ; 2/5; 3/5; 4/5; 5/5.

10. What do you suggest that could help to your community to own CHWs program.
11. Who do you think that have role to sustain CHWs program in your community for its sustainability?

12. What would be the role of the community(at different level) to sustain CHWs program?

13. What might be the role of CHWs to sustain CHWs program?

14. Do you think that the CHWs program in your community can continue to be functional without the financial support of partners? Why?

15. Who can make possible the continuation of the program in your community?How?

16. Which kind of contribution are you ready to provide to sustain the program in absence of financial support of partners of your community?

17. Which kind of contribution do you expect from the community to sustain the program in absence of financial support of partners of your community?

Wrap-Up

Are there other ideas about the CHWs program and any of the topics we have discussed today that you would like to share? This has been a really interesting discussion. Thank you all so much for you time.

Interview guide for stakeholders of CHWs program at the district level/HC level

Date:

Interviewer:

Respondent ID:

Age:

Sex:

Education:

Institution of work:

Position:

Number of years in this position/type of work:

Introduction:

We would like to speak with you about your experiences and opinions concerning your involvement with Community Health Workers program, particularly the support and the community ownership and sustainability aspects of the program . This information will help us to evaluate such aspects and the to identify the appropriate strategies that will contribute to improve the ownership of the program by the community and to sustain the program.

I would appreciate if you would take a few moments to talk with me about these issues.

Questions

Support to CHWs program

1. What was your role/responsibility in CHWs program in Gisagara district?
2. Do you find that the CHWs program is an important program for the community and for the district? Explain.
3. What do the HC/ District to support (kind of support) CHWs to be functional in their community?
4. What do not do the HC/district to provide the support to CHWs in the service they have to offer to the community?
5. Is the community supportive to the CHWs to accomplish their responsibilities? Explain/ name some examples.
6. What do the CHWs expect to have from the HC and from the District as a support to perform better their service?
7. Who play a big role to support the CHWs program in their daily activities? Why?
8. What can you recommend to the HC/district to more support CHWs?

Ownership of the community CHWs program

1. What does is it mean to you when we say a community own or appropriate a program?
2. What shows that community own/appropriate a program?
3. Why your community has to own CHWs program?
4. What can be the reason that can make the community to not own the CHWs program?
5. Is the CHWs program owned by the community of the HC area/ the district area? Explain.
6. Have you ever organize some activities that had an objective of sensitizing the community to own the CHWs program? Which activities?
7. What need to be done to your community to help them to own Community Health Workers program?
8. Have the HC/ District owned the CHWs program? How?
9. What could be barriers for the HC /District to appropriate the CHWs program? Is it the case of your HC or your district?

Sustainability of CHWs program

1. When we talk about sustainability of a program what do you understand?
2. What could be key pillars of the sustainability of the CHWs program?
3. What can be barriers of CHWs program sustainability of your region?
4. The financial aspects are among pillars of the program sustainability, what has been done by your institution for this aspect to guarantee the sustainability of CHWs program? Explain in details what have been undertaken.
5. What is planned to be done at the level of your institution if partners of your institution stopped to provide technical and financial support for CHWs program?
6. What are strategies in place to ensure the sustainability of CHWs at your institution level?
7. What can be the role of the community to ensure the sustainability of CHWs program? Is it done actually? Explain.

8. What do you propose to be done at your institution level as strategy to make sustainable the CHWs program?

Wrap-Up

Are there other ideas about the CHWs program and any of the topics we have discussed today that you would like to share? This has been a really interesting discussion. Thank you all so much for you time.

Interview guide for stakeholders of CHWs program / Partners

Date:
Interviewer:
Respondent ID:
Age:
Sex:
Education:
Institution of work:
Position:
Number of years in this position/type of work:

Introduction:

We would like to speak with you about your experiences and opinions concerning your involvement with Community Health Workers program, particularly the support and the community ownership and sustainability aspects of this program. This information will help us to evaluate such aspects and they identify the appropriate strategies that will contribute to improve the ownership of the program by the community and to sustain the CHWs program.

I would appreciate if you would take a few moments to talk with me about these issues.

Questions

Support to the CHWs program

9. What are your role/responsibilities in CHWs program?

10. Do you find that the CHWs program is an important program for the community and for the district? Explain.

11. What do your institution to support (kind of support) CHWs to be functional in their community? Why?

12. Do you find that the community plays a key role to support CHWs to fulfill their responsibilities? Explain/ name some examples.

13. What do the CHWs expect to have from your institution as a support to perform better their service?

14. Who play a big role to support the CHWs program in their daily activities? Why?

15. What can you recommend to the HC/district and the community to support CHWs?

Ownership of the community CHWs program

1. What does is it mean to you when we say a community own or appropriate a program?What shows that community own/appropriate a program?

2. Why do you think that the community you serve in partnership with the district has to own CHWs program?

3. What can be the reason that can make the community to not own the CHWs program especially in Gisagara district?

4. Is the CHWs program owned by the community of Gisagara District? Explain.

5. Is the HCs/ GisagaraDistrict owned the CHWs program? How?

6. What need to be done by the community/ HCs/ Gisagara District to better own Community Health Workers program?

10. Have you ever organized some activities that had an objective of sensitizing the community/ HCs/ Gisagara District to own the CHWs program? Which activities?

11. What could be barriers for the HC /District to appropriate the CHWs program?

Sustainability of CHWs program

1. When we talk about sustainability of a program what do you understand?
2. What could be key pillars of the sustainability of the CHWs program?
3. What can be barriers of CHWs program sustainability?
4. Have your institution think about the sustainability of CHWs program of the district you support? Explain.
5. The financial and the technical aspects are among pillars of the program sustainability, what has been done by your institution for this aspect to guarantee the sustainability of CHWs program? Explain in details what have been undertaken**.**
6. Which support does your institution provide to HCs and districts to prepare the sustainability of CHWs program on this aspect?
7. Ideally what need to be done to sustain Community Health Workers program?
8. What can be the role of the community to ensure the sustainability of CHWs program? Is it done actually? Explain. What do you propose to be done at your institution level and at the community level as strategy to make sustainable the CHWs program?

Wrap-Up

Are there other ideas about the CHWs program and any of the topics we have discussed today that you would like to share? This has been a really interesting discussion. Thank you all so much for you time.