

**Research/Technical Note**

# Village Health Team Functionality in Uganda: Implications for Community System Effectiveness

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**Abstract:** Community health workers have long been recognized as a critical cadre for the timely delivery of basic primary health care packages in low resource settings. In most countries, community health workers are semi-skilled workers who receive in-service training without structured curricula, mentorship approaches and clear opportunities for career advancement which affects their functionality. Several other external issues may affect community health worker functionality including availability of equipment and supplies, community involvement, country ownership and health system performance. Assessment of village health team (VHT) functionality was conducted in 24 districts in Uganda and involved 2369 village health workers. The study utilized guided self-assessments and participatory performance improvement processes based on the Community Health Worker Assessment and Improvement Matrix (CHWAIM) toolkit. Functionality assessment focused on 15 programmatic components regarded as essential for effective CHW programs. Data collection and functionality scoring was done at district level with the involvement of district leaders and VHTs themselves. Data from study districts was pooled into one national data set and aggregated to provide an aggregate representation of the national VHT functionality situation in Uganda. VHT functionality is affected by various programmatic components interacting at various levels. Our findings indicate that the four operational regions of the country are at different levels of VHT functionality with Karamoja region having the highest functionality level (52%) and Central region having the lowest functionality (38%). At an aggregate level, the national VHT functionality stood at 46%. In all the regions; supervision, individual performance evaluation and referral linkages registered a functionality score of 1 or 0 indicating either partial or non-functionality. This was the same finding for reporting and availability of equipment and supplies which obtained a score of 1 in all the regions except Karamoja. Overall program evaluation and country ownership scores were both 1 which has implications for achieving optimum VHT functionality levels in Uganda. As Uganda looks towards re-engineering its health system to meet the sustainable development goals, sufficient attention must be paid to strategies that support routine monitoring of the functionality of village health teams for overall program excellence.

**Keywords:** Community Health Worker, Village Health Team, Functionality, Uganda

## 1. Introduction

Developing countries continue to struggle under the burden of human resource for health constraints and limited health facility infrastructure. Primary health care systems in these settings depend on a community health worker cadre whose key role lies in extending services from static health facilities to community and household levels. A recommendation by the Technical Taskforce of the Earth

Institute at Columbia University linked the training and deployment of 1 million CHWs across Sub Saharan Africa to meeting the MDGs by 2015 [1]. The potential of community health workers to contribute to stronger and more effective health systems has been comprehensively documented [2], [3], [4], [5], [6].

In Uganda community empowerment and mobilization for health has been enshrined in national health policies and strategies since 1999. The national village health team (VHT)

strategy and guidelines in Uganda were developed in 2000 and by 2003 country-wide roll out of the VHT strategy had commenced. Village health team capacity development is guided by a clear national curriculum and the country has been using harmonized reporting tools since 2010. The village health worker in Uganda is equivalent to a community health worker cadre defined by WHO as a member of the community who is selected by, and accountable to the communities where they work; is supported by the health system; and receives less training than formally trained health workers [4], [7]. The country-wide network of Government-mandated village health teams is currently responsible for health promotion, community mobilization and engagement of communities in accessing and utilizing health services. The village health teams thus constitute a virtual Health Centre Level 1 organized on the basis of a CHW: Household ratio of 1:30. The village health team members are voluntary workers with no salaries, no written contracts with the government and no formal mechanism for transfer or career progression [8]. Currently, 75% of Uganda's 112 districts have 100% coverage with VHTs while the remaining 25% have a VHT

coverage ranging from 0% (Kampala) to 99% (Kalangala) [9]. However, little attention has been paid to the balance between numbers and performance for Community health workers in Uganda.

The increasing investment in community health workers combined with their significant role in delivery of health services has galvanized global interest in measurement of functionality and productivity of this cadre [10]. Various studies on CHW performance and functionality have been documented [6], [11], [12]. Approaches to measurement of CHW performance and functionality are varied with some focusing on individual level parameters such as self-esteem, motivation, attitudes, competencies, guideline adherence, job satisfaction and capacity to facilitate empowerment of communities while others focus on the health consumer level using parameters such as utilization of services, health seeking behaviour, adoption of practices promoting health, and community empowerment [13], [14], [15]. Other studies have consistently assessed tasks and time spent on delivery, human resource management, quality assurance, community and health system links and resources and logistics as predictors of functionality [16], [17], [18], [19], [20]

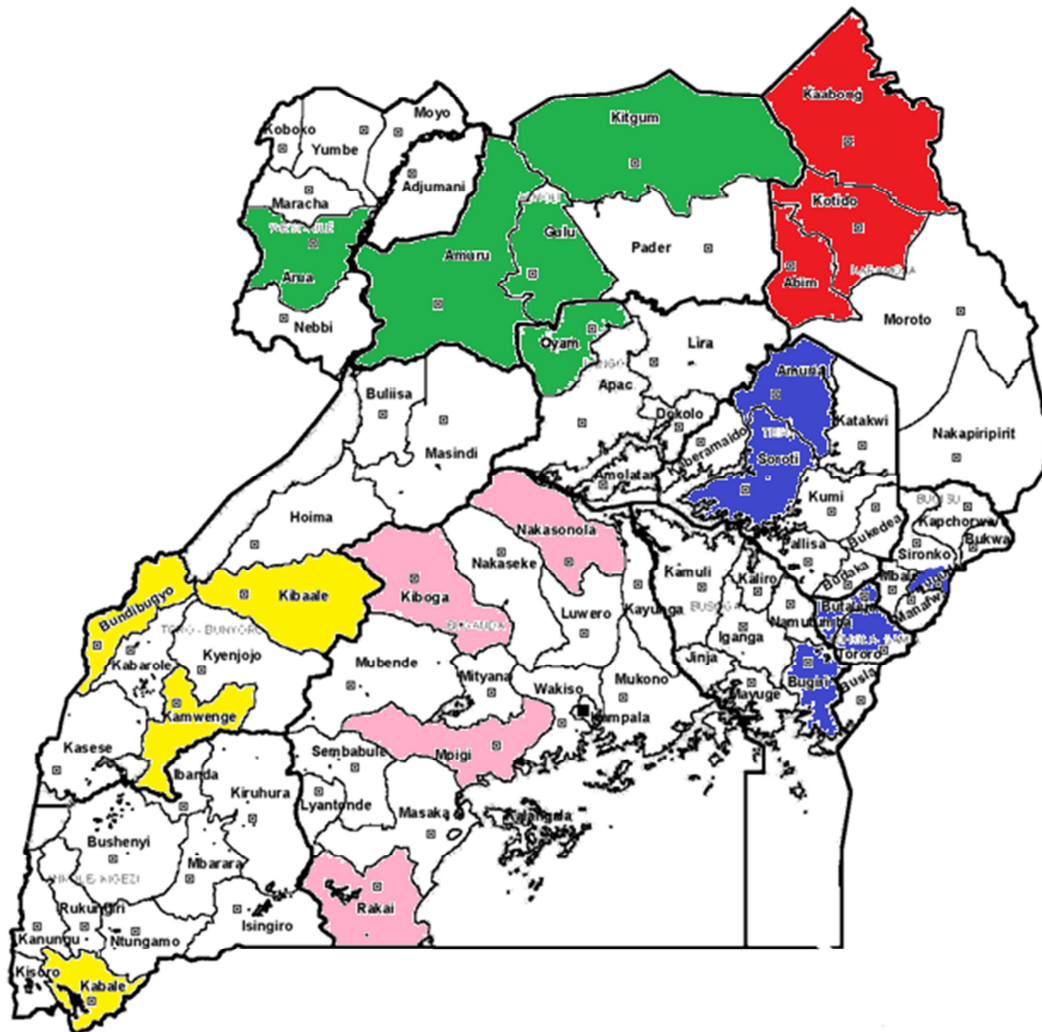


Figure 1. Coverage of the VHT functionality assessment 2014.

Between 2013 and 2015, World Vision Uganda supported 11,966 village health workers in 24 districts with capacity building in the Ministry of Health approved basic training program for VHTs, training in technical health promotion models including timed and targeted counseling, integrated community case management, community based prevention, management of acute malnutrition and Community PMTCT. World Vision Uganda also supported performance appraisal meetings, support supervision and mentoring sessions as well as information management & reporting systems for VHTs. This paper provides the findings of VHT functionality measurement focusing on multiple programmatic components clustered under the broad categories of human resource management, capacity building, support and linkages. The assessment took place over the period May 2013 to May 2014. The findings provide an opportunity for our increased understanding of the complex interactions that occur at various levels to influence community system effectiveness.

## 2. Methods

### 2.1. Study Area

The Village Health Team functionality assessment was conducted in 24 districts spread across 5 administrative regions of Uganda where World Vision Uganda is implementing maternal, newborn and child health programs with village health teams as the main interface between the health system and the community reached by the interventions.

### 2.2. Study Design

The assessment was a cross-sectional, mixed methods study which utilized guided self-assessments and participatory performance improvement processes based on the Community Health Worker Assessment and Improvement Matrix (CHWAIM) toolkit [21]. The CHWAIM was developed by the USAID Health Care Improvement Project (HCI) as a toolkit to help organizations assess CHW programs, improve CHW functionality and strengthen performance programs.

### 2.3. Data Collection and Analysis

The data collection was a participatory process led the district health teams (DHT), VHT representatives and VHT supervisors with technical facilitation from World Vision Uganda. For each district the data collection was a five-day exercise that engaged the district health teams, sub-county health officials and VHT representatives in mapping VHT coverage, VHT functionality assessment, VHT functionality scoring, gap analysis and action planning.

**Table 1.** Regional distribution of districts covered by the assessment.

Region	Districts
Karamoja	Abim, Kotido, Kaabong
Northern	Kole, Oyam, Gulu, Kitgum, Amuru, Arua
Eastern	Busia, Tororo, Amuria, Bugiri, Butaleja, Soroti
Western	Kibale, Kabale, Kamwenge, Bundibugyo
Central	Mpigi, Nakasongola, Rakai, Kyankwanzi, Kiboga

**Table 2.** The 15 programmatic components of CHW functionality according to the Community Health worker Assessment and Improvement Matrix Toolkit [7].

Component Definition
1. Recruitment: How and from where a community health worker is identified, selected, and assigned to a community.
2. CHW Role: The alignment, design, and clarity of role from community, CHW, and health system perspectives.
3. Initial Training: Training is provided to the CHW to prepare for his/her role in service delivery and ensure s/he has the necessary skills to provide safe and quality care.
4. Continuing Training: Ongoing training is provided to update CHWs on new skills, to reinforce initial training, and to ensure s/he is practicing skills learned.
5. Equipment and Supplies: The requisite equipment and supplies are available when needed to deliver expected services.
6. Supervision: Supportive supervision is carried out regularly to provide feedback, coaching, problem solving, skill development, and data review.
7. Individual Performance Evaluation: Evaluation to fairly assess work during a set period of time.
8. Incentives: A balanced incentive package includes financial incentives such as salary and bonuses and non-financial incentives such as training, recognition, certification, uniforms, medicines, etc. appropriate to job expectations.
9. Community Involvement: The role that the community plays in supporting a CHW.
10. Referral System: A process for determining when a referral is needed, a logistics plan in place for transport and funds when required, a process to track and document referrals.
11. Opportunity for Advancement: The possibility for growth and advancement for a CHW.
12. Documentation and Information Management: How CHWs document visits, how data flows to the health system and back to the community, and how it is used for service improvement.
13. Linkages to Health Systems: How the CHWs and communities are linked to the larger health system through involvement in recruitment, training, incentives, supervision, evaluation, equipment and supplies, use of data, and referrals.
14. Program Performance Evaluation: General program evaluation of performance against targets, overall program objectives, and indicators carried out on a regular basis.
15. Country Ownership: The extent to which the ministry of health has policies in place that integrate and include CHWs in health system planning and budgeting and provides logistical support to sustain district, regional and/or national CHW programs.
Scoring of programmatic components
0 = non-functional      1 = partially functional      2 = functional      3 = best practice

### 2.3.1. VHT Mapping

Village health team mapping provided a head count of the community health workers in each district so as to plan the assessment. The mapping identified the location and coverage of existing village health teams within the district, obtaining the basic demographic data and basic information about the existing community health workers. VHT mapping was done by health assistants who populated a parish level tool designed to capture information on individual village health workers including assigned village, name, age, sex, level of education, marital status, number of households supported, trainings received and availability of data management tools.



**Figure 2.** Components of the Community Health worker Assessment and Improvement Matrix Toolkit.

### 2.3.2. Orientation of District Health Teams on the Assessment Tool

A one day debriefing meeting was held to orient the district health teams, sub-county health staff (VHT supervisors), development partners in community health and VHT representatives on the VHT AIM tool and preparation for the VHT Community assessment and scoring process. This category of stakeholders was selected based on their high levels of knowledge and interaction with the VHT programs in their respective districts. The meeting participants reviewed documents pertaining to the roles of the VHTs and the process followed to identify and recruit the VHTs, VHT training records, alignment of the scoring matrix to the Ugandan VHT strategy and numbers of VHTs on record. Where these documents did not exist participants shared the information verbally and documented it for reference purposes. Each section of the VHT AIM tool was explained and discussed in plenary to ensure a common understanding of the measurement parameters among the participants.

### 2.3.3. Field Assessment of VHT Functionality

This was a field activity which involved completion of a VHT functionality questionnaire. The questionnaire focused

on interviewing VHTs on the 15 components. In each district the field assessment was conducted by 5 teams each comprising of 2 persons. District assessor teams typically comprised DHT members and VHT supervisors. The VHT supervisors were not allowed to assess VHTs in their catchment area to avoid bias. Working with the District biostatisticians, this data was compiled and graphs were generated in preparation for the scoring exercise. The Field based assessment information was used to triangulate the scoring results.

### 2.3.4. VHT Functionality Scoring

The scoring process was done at sub county level in the District. The teams were grouped depending on the sub county of operation. Teams of assessors (sub county teams) independently assessed the 15 programmatic components identified as essential for effective VHT functionality in the VHT AIM tool by reviewing the characteristics of every component at each stage of development. For each component, each team wrote the number for the stage that they believed best represented the current status of the district VHT program based on the implementation at their sub county. . Once individual assessments were completed, the technical facilitator guided the district assessor teams through a discussion of each component by recording on a flip chart the individual scores and identifying any outliers. Sub county teams whose scores are higher or lower were asked to explain why they rated the component they way they did. A selected facilitator led the triangulation of the average score of the district with information from the VHT assessment results. Evidence was then produced and discussed to either bring the outliers back into the norm or to convince the assessor team that they were correct. Where consensus could not be reached, the lower of the two scores was selected. Once this process was completed reached, an overall matrix was computed with scores and evidence for each component listed. The district score was reached at as an average score for all the sub counties in that particular district.

### 2.3.5. Data Analysis

Using the manual data sets obtained during the district VHT AIM assessments; the data from the districts was pooled into one national data set. The data was then analyzed using Microsoft Excel 2007 for Windows to assess the means and frequencies at national and regional level. In addition specific themes explaining the functionality score variations in the regions were included in the analysis. A functionality rating scoreboard for the 15 components for all the 24 districts was also developed to provide a view of the national VHT functionality situation in Uganda. At national level, a desk review was conducted to ensure an in-depth analysis of the district reports and other documents relating to VHT functionality in the World Vision areas of operation to identify strengths and gaps in VHT functionality and to develop a descriptive analysis of VHT functionality in Uganda. The desk review was also used to identify common themes arising from the reports. The findings were used to generate discussion and recommendations for improvement of functionality.

### 3. Results

#### 3.1. Demographic Characteristics of Participants

2369 VHWs participated in the assessment; of these 56.6% were male and 43.4% were female.

42.5% of the VHWs interviewed in the assessment had achieved up to ordinary level secondary education, 37.5% had only attended primary school while 18% had only received preprimary education. VHWs in the Western region were most likely to have attended secondary level education; the assessment found that up to 65.7% of the VHWs in the Western region had attended secondary school. This is compared to only 13.9% in Karamoja and 33% in the Central region. Majority (49.4%) of the VHWs in Karamoja region had only attained primary level education.

*Table 3. Characteristics of respondents.*

Characteristic	Number (n= 2369)	Percent (%)
Sex		
Male	1341	56.6%
Female	1028	43.4%
Median Age group	36 – 45 years	
Region		
Karamoja	440	18.6%
Northern	526	22.2%
Eastern	641	27.1%
Western	432	18.2%
Central	330	13.9%
Level of education attained		
Completed primary school	891	38%
Completed secondary school	1036	44%
Other	441	19%
Years of work experience as VHT		
Less than 1 year	158	7%
More than 1 year	1639	69%
Not reported	572	24%

#### 3.2. VHT Recruitment

Identification and selection were the major forms of recruitment utilized by the districts. 72.4% of the VHWs were selected from and by their communities while 25% were selected through community facilitated identification. A very small proportion of the VHWs (less than 2%) were recruited by other means. Regional variations in the modality of recruitment were observed; for instance the districts in the Western and Central regions had a higher proportion of VHWs recruited through selection while those in the Northern region had up to 37% of the VHWs recruited through identification.

Across all the five regions, community led VHW selection accounted for over 86% of the recruitment process. Karamoja region had the highest ranking for community led VHW facilitation with up to 98% of the VHWs having been selected by their communities and only 2% selected by the government. District Health Teams (DHTs) and NGOs played a very minimum role in VHW selection although they may have facilitated the VHW selection process in the communities.

#### 3.3. Village Health Team Role

The Northern (14%) and Central (10%) regions had a

higher proportion of VHWs that did not know their roles compared to only 1% in the Western and Eastern regions. Conversely, the Eastern (21%) and Northern (20%) regions had the highest percentage of VHWs that were fully knowledgeable of their roles. This suggests that of the 4 regions included in the analysis for VHW awareness of their roles, the Eastern region had the best performance with the lowest proportion of VHWs that did not know their roles and the highest proportion of those that expressed full knowledge of the VHW roles and responsibilities. Nationally, less than 19% of VHWs were fully aware of their role, that is to say expressed knowledge of at least 4 of their roles in the community and health system. Majority (77%) of the VHWs interviewed had fair understanding of their roles, with 39% expressing knowledge of at least 2 VHT roles and 38% expressing knowledge of at least 3 roles. 4% of the VHWs were not aware of any of their roles.

#### 3.4. Initial Training

Initial training was defined as training provided to a VHT to prepare for their role in service delivery and ensure that they have the skills to provide safe and effective care. The standardized initial training of the VHTs in Uganda covers basic health promotion, referral, and service delivery at the community level. For the purpose of this assessment, it was agreed that the standardized training delivered to VHTs countrywide in 2010 would serve as the initial training. Up to 38% of the VHTs had participated in the initial VHT training for the recommended duration of one (1) week. However even more VHWs (46%) reported that the initial training they received had taken duration of less than one week. Conversely 12% of the VHWs had participated in initial trainings of longer duration (exceeding 2 weeks). The central region showed better compliance with training duration recommendations than the Eastern, Western and Northern regions. 51% of the VHWs in the central region had attended initial training for the recommended duration of 1 week compared to only 29%, 39% and 40% in the Western, Eastern and Northern regions respect. Conversely, the Western region showed the lowest compliance to recommended initial training duration; up to 50% of the VHWs had attended initial training for less than a week.

This assessment sought to document the proportion of VHWs that fall under either category by determining the number of VHTs in the five regions that had participated in the recommended basic VHT training before 2010 when the revised strategy was introduced and those who were trained after 2010. In all the five regions, more VHWs (51%) had been trained based on the revised training manual. A significant proportion (40%) however had been trained based on the previous guidelines, tools and manuals while 9% of the VHWs did not recall the time frame when they had participated in their initial training. More VHWs in Karamoja region (63%) had been trained after 2010 than in the other four regions. Conversely the Northern region had the highest proportion of VHWs (48%) trained before 2010.



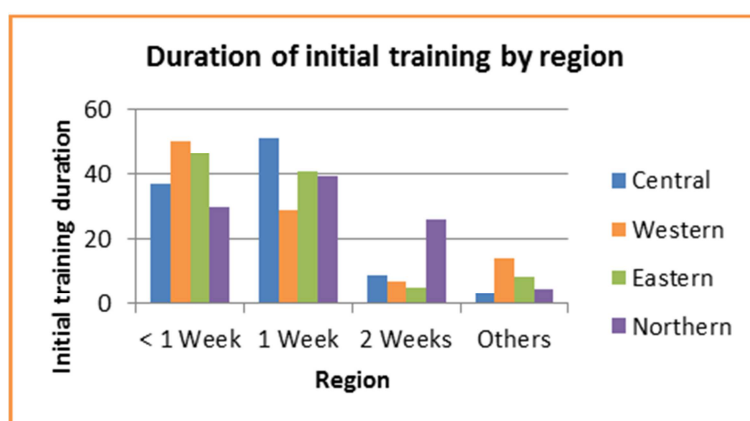


Figure 3. Duration of initial VHT training by region.

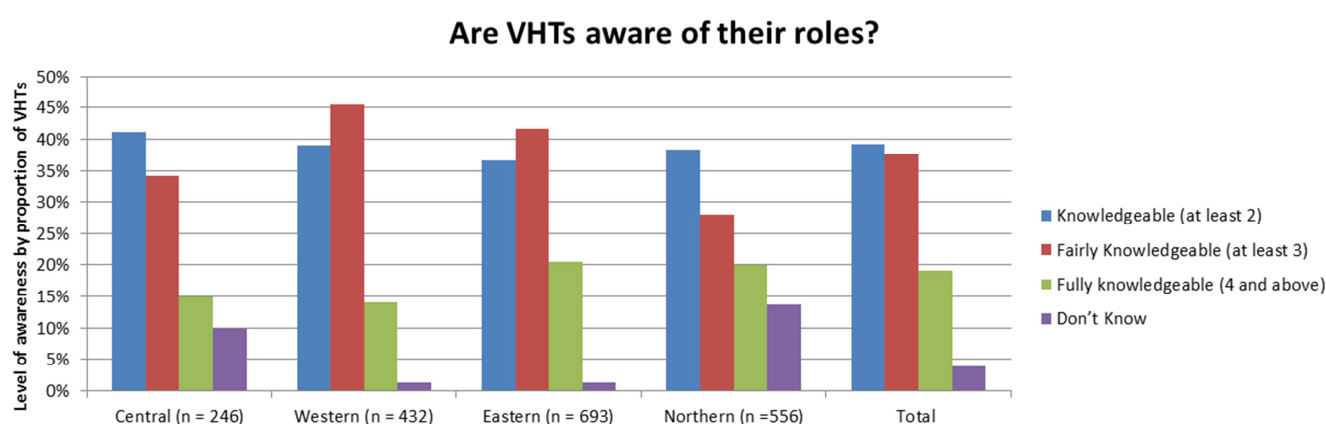


Figure 4. Level of VHT awareness of their roles by region.

### 3.5. Continuing Training

Continuing training was assessed by identifying the additional modules that VHTs had been trained in addition to the basic VHT training curriculum. While preventable childhood illnesses particularly malaria, diarrhea and acute respiratory infections account for over 60% of childhood mortality and morbidity in Uganda, less than 50% of the VHTs in the Western, Northern and Eastern regions had been trained on Integrated Community Case Management (ICCM). In the Western region where 91% had been trained in ICCM, none have been trained in Family planning, Infant and Young Child Feeding and Reproductive Health. Similarly none of the VHTs in the central and less than 5% in the Northern and Eastern regions have been trained on sexual reproductive health (SRH). In the same way, despite the high prevalence of chronic malnutrition in Uganda, less than 10% of the VHTs have received training in Infant and Young Child Feeding and nutrition.

The western region had the lowest coverage for additional training with VHTs in the region only having had continuing training in ICCM and a few (9%) in IRS. Modest effort had been made in the northern region to train VHTs in all the recommended additional modules. However the number and proportion of VHTs trained was too low to adequately address the needs of the population. For instance in this region,

where nodding disease has been a public health challenge for the past two years only 1 VHT had had been trained on the management of nodding disease. Similarly in the central and eastern regions only 4.1% and 7.2% and 7.9% and 6.3% of the VHTs had been trained in IYCF and Family planning respectively.

### 3.6. Equipment & Supplies

Across all the four regions, less than 15% of the VHTs had all the basic supplies. VHTs in the central region were most affected by lack of adequate supplies and equipment. In this region, only 5% of VHTs had adequate equipment and supplies, 27% reported having inadequate supplies and most unexpectedly 48% of the VHTs stated that this question was not applicable to them. Overall, a small proportion of VHTs (9%) had an adequate supply of the above mentioned equipment that is to say had at least six (6) of the required types of supplies and equipment. Majority of the VHTs (66%) had less than six of the required set of equipment and supplies. VHTs reported that they faced stock outs of Coartem®, contraceptive pills and condoms and antibiotics. There were no significant regional variations observed in the rate of stock out of these essential supplies. However the central, Western and Northern regions were most affected by stock outs of Coartem® with 52%, 46% and 40% of VHTs reporting stock

out while the eastern region was most affected by stock outs of condoms and contraceptive pills (47% of the VHWs).

### 3.7. Supervision

More than 50% of the VHWs in all the regions reported to have received support supervision. Karamoja region had the highest proportion of VHWs (63%) that were most supervised regularly while the central region had the lowest (53%). However a significant gap still exists in the component of VHT supervision as none of the regions achieved full coverage. In the central region nearly 48% of the VHWs are not supervised. The situation is similar in Western, Eastern and Northern region where 40%, 46% and 42% of VHWs respectively had not received any form of supervision during the quarter preceding the assessment.

Health assistants carry out majority of supervisory work for VHTs with up to 40% of VHTs reporting that they have been supervised by them. Other VHT supervisors are the in-charges from the nearest health centers and the parish VHT supervisors who account for 28% and 26% of VHT supervision respectively.

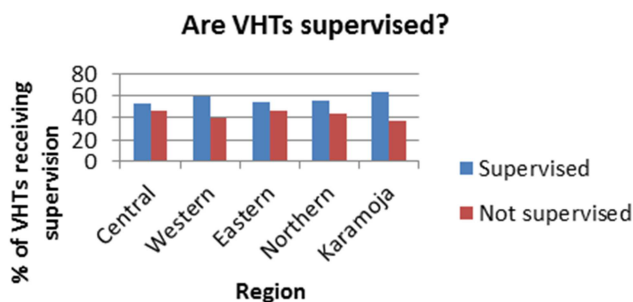


Figure 5. Level of VHT supervision by region.

### 3.8. Individual VHT Performance

It is recommended that at least once a year an evaluation that involves individual performance including an assessment of service delivery based on documented supervisory feedback and evaluation of coverage or monitoring data is conducted to assess individual VHW performance. The frequency of such review meetings in the communities was assessed by asking the VHWs whether they had participated in a quarterly review community meeting during the preceding three (3) month period.

Except for the Karamoja region where up to 90.7% of VHWs participated in the review meetings, the VHT attendance at these meetings in the other regions was generally not satisfactory; for instance in the Central region up to 54% of VHWs did not participate in review meetings. In the Western, Eastern and Northern regions, VHW participation in review meetings also remained below 60%. Political leaders particularly the LC I chairpersons (53%) and parish leaders (21%) were the most likely attendees at VHW review meetings while very few (9%) technical supervisors (Health

Assistants) participated in the review meetings.

### 3.9. Incentives

The VHTs in this assessment were asked to outline their most preferred form of incentive that would motivate them to perform better and increase their satisfaction at their work. The most preferred forms of incentive favored by VHTs are monetary payments. This was particularly so in the Eastern (70%), Northern (59%) and Western (56%) regions. Across all regions very few VHWs (less than 10%) identified official recognition and capacity building as motivating factors. Generally however, it appears that VHWs prefer a balance of both monetary and non-monetary payments in the form of tangible items for example bicycles and t-shirts. In the central region for instance, 36% of the VHWs preferred monetary remuneration, 40% preferred tangible items and 12% preferred official recognition. In the Western, Eastern and Northern regions the preferred forms of incentives were comparatively similar with more VHWs preferring monetary incentives over tangible items, capacity building and official recognition.

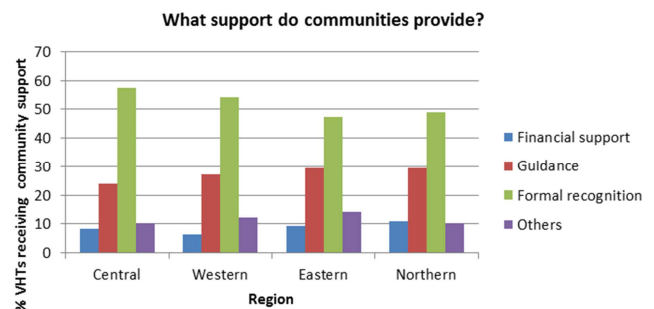


Figure 6. Forms of community support to VHTs by region.

### 3.10. Community Involvement

The most common form of support given to VHTs by their communities is formal recognition which 52% of VHWs reported to have received from their communities. 28% of the VHWs also reported that they had received guidance and feedback about their work from the communities. Remarkably there was a proportion of VHWs though small (9%) who reported that they received financial support from their communities. There were no significant regional variations in the form of support accorded by communities to VHTs.

### 3.11. Referral System

This assessment examined the adequacy of the VHT referral systems in the five regions by identifying the tools and systems used by VHTs for conducting referrals within the community. Overall, almost half (47%) of the VHWs had referral forms which they complete when referring clients to health centers while 28% use books and 24% refer clients by verbal communication.

### 3.12. Aggregated VHT Functionality

**Table 4.** VHT functionality scores for the 15 programmatic components by region.

Programmatic Component	Northern	Eastern	Western	Central	Karamoja	National Score
1. Recruitment	3	3	2	3	3	3
2. Role	2	2	2	2	2	2
3. Initial training	1	1	1	2	3	2
4. Continued training	1	1	1	1	2	1
5. Equipment and supplies	1	1	1	0	2	1
6. Supervision	1	1	1	1	1	1
7. Individual performance	1	1	1	1	0	1
8. Incentives	2	2	2	1	2	2
9. Community involvement	1	1	1	1	1	1
10. Referral system	1	1	1	1	1	1
11. Opportunity for advancement	1	1	1	1	0	1
12. Documentation	1	1	1	1	1	1
13. Linkages to referral	1	1	1	1	2	1
14. Program evaluation	1	1	1	1	1	1
15. Country ownership	1	1	1	1	2	1
Total	19	19	18	18	23	19
Average score	1	1	1	1	2	1

As indicated in table 3 above, although there were components for which the VHT system was functional across the five regions, none of the regions had a fully functional VHT system as they all scored below the minimum standard for 30 for functionality (a score of at least 2 per component). However of the five regions included in the assessment, Karamoja region had the highest overall score for functionality with a score of 23. Karamoja region scored a level indicative of functionality at or above the minimum standard for 6 components; VHT role, continued training, equipment and supplies, incentives, linkages to referral, country ownership and best practice for 2 components (score of 3); recruitment and initial training. Of the four other regions the Northern and Eastern regions performed slightly better than the Western and Central regions. Both had a total functionality score of 19 compared to 18 in the Western and Central regions. Furthermore, although the Northern, Eastern and Western regions had a lower total score than the Karamoja region, it is important to note that none of the 15 components was found to be non-functional in these 3 regions. In Karamoja and Central regions however complete non-functionality was registered for individual performance, opportunity for advancement and equipment and supplies respectively. For all the 5 regions, recruitment had the best score with scores from the Karamoja, Northern, Eastern and Central regions indicating that their present VHT system was functional for recruitment. Similarly all the regional scores indicated functionality for VHT roles and incentives except the central region which attained partial functionality for VHT incentives. For the remaining 11 components, namely continued training, supervision, individual performance, supervision, community involvement, referral system, opportunity for advancement, documentation, linkages to referral, program evaluation and country ownership all the regions had score that indicated that their VHT systems was partially functional.

## 4. Discussion

This study provides important insights into the current status of functionality of the Village Health Team structure in Uganda based on a sample of 24 districts. At the national level, the aggregated findings of the assessment indicate that although the VHT strategy has been implemented for over 10 years in Uganda, the progress in attaining a fully functional VHT system has been slow. The total national functionality score was 20. However progress is being made in defining VHT roles, providing initial training for VHTs and offering appropriate incentives as the scoring shows that these components are functional. Gaps still exist in 11 of the 15 components; the program scoring found that the present VHT system is only partially functional for i) continued training and supervision which fall under the broad category of capacity building, ii) the human resource management components of opportunities for advancement and performance evaluation, iii) specific supportive components relating to equipment and supplies, and community involvement, and iv) all the components under the linkages category which include the referral system, linkages to the health system, information management and country ownership.

In all the regions, MoH guidelines on implementing VHT programs were adhered to at district level up to a point. While compliance to the guidelines was high for recruitment processes this was not the case for initial and continuing training. The initial 5-day basic training for which a national curriculum exists was accessed by only 38% of VHTs and any training beyond this tended to be largely NGO-driven and lacking regulation by the authorities at national and district levels. Increased regulation and standard setting for the continuing training of VHTs should be pursued to ensure quality of service delivery and skills building relevant to specific district contexts. The lack of a program performance evaluation framework for the VHT structure in Uganda makes it difficult to monitor effectiveness and impact. Indeed more



than 10 years since the VHT strategy was rolled out there remains limited evidence of its direct impact on maternal and child health outcomes.

## 5. Conclusion

The functionality results were found to be particularly useful for district level action planning on VHT training, equipping and supervision. We recommend that in countries like Uganda where community health workers constitute an integral part of the health system efforts should be made to ensure institutionalization of assessment tools that support tracking of community health worker performance to inform program priorities and resource allocation. Further implementation research is needed to guide the development of national frameworks for CHW program performance evaluation building further on tools and experiences such as those presented in this paper.

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