

Formative research Uganda: Technology Arm

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inSCALE – Innovations at Scale for Community Access and Lasting Effects

The inSCALE programme, a collaboration between Malaria Consortium, London School of Hygiene and Tropical Medicine (LSHTM) and University College of London (UCL), aims to increase coverage of integrated community case management (ICCM) of children with diarrhoea, pneumonia and malaria in Uganda and Mozambique. inSCALE is funded by Bill & Melinda Gates Foundation and sets out to better understand community based agent (CBA) motivation and attrition, and to find feasible and acceptable solutions to CBA retention and performance which are vital for successful implementation of ICCM at scale.

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Respondents (VHTs, VHT supervisors, district health officials and NGO staff) set aside time to participate in the Study and travel to designated places to meet the research team.

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Introduction

The inSCALE project goal is to develop and implement innovative activities, grounded in theoretical and empirical evidence, designed to promote VHT motivation, performance and retention and thereby demonstrate that government led iCCM programs in 2 African countries can be rapidly driven to scale with quality, leading to a sustained increase in the proportion of sick children receiving appropriate treatment.

Through extensive review of the literature and in-country program experience multiple innovations in two 'arms' are proposed in Uganda:

1. Technology supported approach: promoting VHT learning and support using ICT

Aim: To achieve the principles of good supervision without frequent face to face contact we aim to utilise available technology and develop tools and applications for mobile phones and low-cost laptops which can be used for self learning; as job aides; for data submission and feedback; and for problem solving and peer-support.

2. Community supported motivation approach: promoting collective identity and accountability to improve VHT performance and retention

Aim: To increase retention and performance of VHTs by improving the perceived value of the VHT to the VHT themselves and the community they serve. It will make VHTs more visible and will contribute to sustainability of the VHT role.

The current report concerns formative research into the feasibility and acceptability of innovations proposed under the technology supported approach. This is the second stage of a three stage formative research process in Uganda with the first being a pile sorting activity with Ministry of Health representatives and the third being formative research into innovations proposed under the community supported motivation approach.

The innovations being explored in the current round of formative research are:

1. Providing a phone to call and / or send messages between VHT and health facility supervisor.

This activity would provide cheap mobile phones and set up user-groups with phone operators whereby VHTs can make free phone calls and send text messages to alert about problems, VHT seeking advice, VHT alerting about incoming referrals and supervisor providing feedback on referrals and VHT peer supervisors mobilizing other VHT members.

The innovation will work by providing simple phones and setting up a system which enables VHTs to have a direct communication with their supervisor (and possibly peers).

2. Using low cost mobile phones for VHTs to send data and receive automated feedback on performance.

- VHTs to submit routine data via mobile phones instead of paper based reporting.
- Feed back to VHTs how they each are performing through a variety of methods.
- Developing automated hints and support to VHTs who are rarely submitting data or who perform badly in the quizzes.

In the first stage (pile sorting) of formative research stakeholders considered this innovation to be a core function of the technology supported approach. It has also been demonstrated in several other

studies that VHTs are able to be trained to submit data using mobile phones, and that electronic submission of data from health facilities can even be a cheaper option than using paper based forms.

Aim

The inSCALE formative research into innovations from the technology supported approach in Uganda aims to gauge the views of VHTs, their supervisors and key program implementers on:

- 1. The potential for the proposed innovations to meet genuine needs and have an impact in terms of the project aims.
- 2. The <u>feasibility</u> (i.e. whether they are possible) of implementation and scale up of the proposed activities.
- 3. The <u>acceptability</u> of the proposed activities to VHTs themselves, supervisors, communities, districts and the Ministry.

Using this information, the inSCALE team aims to develop the proposed innovations in the most effective way to fulfil the aims of the project.

Method

Recruitment and training of fieldworkers and piloting of topic guides

Five fieldworkers were recruited and trained for one week on the background to the research, the topic guides, the 'fair notes' data collection method used, the principle of informed consent and the participant consent process required to comply with ethics as well as the five week data collection schedule.

Fieldworkers, under supervision, conducted a one-day pilot of the VHT interview and focus group discussion (FGD) guides in an urban setting in Kiboga District with iCCM trained VHTs (3 interviews and 1 FGD). Fieldworkers wrote up interview and FGD field notes and with the supervisors amended the guides accordingly. Upon completion of the VHT data collection guides for the supervisor and implementer data collection phase were piloted with supervisors and implementers in Hoima Town in Hoima District.

Key informant interviews targeted existing practices and beliefs of VHTs, supervisors and implementers. FGDs focused on reactions to and perspectives o proposed innovations with VHTs, supervisaors and implementers. Both addressed issues and opinions around current phone use and hypothetical phone and charger use with different phone and charger models.

Data Collection

Data collection was conducted in Kiboga District and Hoima District. In Hoima District VHTs were recruited as study participants in very remote areas with limited/ poor mobile phone coverage and supervision challenges relating to this poor network coverage.

The selection of VHTs and supervisors ensured a range of geographies (urban/rural), cell phone network access, data submission methods and type of supervising facility were accessed to produce the richest data set possible.

Thirty one (31) in-depth interviews and 12 focus group discussions were conducted with VHTs, VHT supervisors in Kiboga and Hoima District, Kiboga and Hoima District officials, and Malaria Consortium field staff based in Hoima.

Key information relating to the VHTs, supervisors and implementers recruited as interview and FGD participants is in Appendix 1.

Data analysis

Interview and FGD 'fair notes' transcripts were read and coded into themes. Relevant quotes were cut and paste from transcripts into a master copy coded data set for VHT, supervisor and implementer interviews and FGDs. Summaries were made for each theme and formed the basis for the report in accordance with a thematic data analysis approach.

Results and discussion

Section 1: the current context and its implications

1.1 Current VHT activities and motivation

Summary of key findings

VHT duties

- Communities have variable numbers of VHTs. In villages with basic and iCCM VHTs health promotion work was often equally divided between the VHTs.
- All VHTs had other occupations, the need to be on call all the time was difficult for iCCM VHTs who often made personal sacrifices to treat children and lost income.
- Basic and iCCM VHTs can receive different (and variable) supervision and are viewed differently by the community. This was rarely mentioned as an issue, when it was the focus was around the basic VHTs feeling bad or neglected.

Stopping work

- Most respondents reported that nothing, or that only structural issues such as moving villages, would stop them working as a VHT.

Motivation

- Key motivational themes were altruism, community standing, knowledge gain and validation and feedback from supervisors. The terms trust, appreciation, thanks, recognition, popularity, and respect were frequently mentioned by respondents.

Work problems

- The most common themes were around difficulties working with the community and issues with resources (including drugs) and distances/ transport. Other important themes were high work-loads, difficulties completing the VHT register and difficulties locating newborns.
- Difficulties working with the community included the community not following hygiene advice and resentment when children were not given drugs. There are some tensions and hierarchies between VHTs and the community.
- A key theme related to work problems was that when problems are reported they are rarely solved. This was frequently cited as a frustration especially when excuses were continually given or promises made

1.1.1 VHT duties

VHTs with basic training reported that they conduct community mobilization and health promotion through community meetings and house to house visits. They cover issues such as hygiene and sanitation, family planning, bed net use, nutrition, child immunizations and encourage the use of health facilities for ANC, delivery and when sick. They also advise parents with sick children to go to the iCCM VHT.

The iCCM VHTs reported that they diagnose and treat sick children, refer and follow up complicated cases, visit newborns, complete the register and submit reports. They also conduct community mobilization and health promotion activities.

Villages had between 1-10 VHTs. The basic VHTs usually worked between 2-3 days a week for between 3- 6 hours and usually had a fixed schedule. The iCCM VHTs reported being *'on call'*, although 3/11 said they tried to work specific hours. Most reported that they worked every day, for between 4-9 hours.

All of the VHTs interviewed were either farmers or fishermen, all of the basic VHTs reported that their VHT work suffered because of their own activities, however, a common theme amongst the iCCM respondents was that it was their personal activities that suffered. A high work load was one of the most frequently mentioned work problems (see section 1.4), however many VHTs showed great commitment to their role as a VHT but frustration at their loss of income and time.

I lose time to do my own work... some times on my way to the garden sick children are brought for treatment and so I have to abandon farm work, sometimes for the whole day' (respondent 6: 36 year old male, iCCM VHT).

Sometimes during outbreak of diseases, I end up being occupied the whole day, not even getting some breathing space for myself. During these times, things are really tough (respondent 5: 39 year old female, iCCM VHT)

It is a lot of time and I get losses in my fishing activity. If I don't serve the people, they will complain and say that I am not giving drugs. So I serve but am not happy since my other activities are at halt..... It is very stressing (respondent 16: 35 year old male, iCCM VHT)

In villages with both basic and iCCM VHTs the sensitization and health promotion work was often (8/10 cases) equally divided between the VHTs, with each VHT responsible for between 12-25 households. Where work is not equally divided, the basic VHTs attended to more households for promotion activities whilst the iCCM VHTs focus on treatment. Supervision was variable with some basic VHTs receiving the same supervision as the iCCM VHTs but others reporting that they were supervised by the iCCM VHTs or received supervision from fewer sources than the iCCM VHTs or not at all. Supervision is explored in more detail in section 1.3.

Despite the different tasks the basic and iCCM VHTs perform respondents reported that all VHTs are respected by the community, but most felt that the iCCM VHTs were slightly more respected than basic VHTs. The differences between the VHTs were not mentioned by most respondents, when differences were mentioned they focused around the basic VHTs feeling bad or neglected:

They are not recognized and never given materials and facilitations..... this has demotivated them so much(respondent 10: 30 year old female, iCCM VHT)

They feel bad.... At first they had refused to work with us... but we talked with them... and they understand that it is not our own making and that the program could not have taken more than two (respondent 31: 40 year old, female iCCM VHT)

1.1.2 What would make them stop work

Responses to this question demonstrated the commitment that most VHTs have for the job. Four of the 11 VHTs who were asked what would stop them working replied that nothing would stop them working and a further 5 gave logistical reasons such as moving villages, getting sick or being voted out by the community.

I don't have anything that can stop from doing VHT work.... What will happen to my children if I stop working as a VHT? I need them to grow well as well as those of fellow community members, get good health, study well and we develop our community. That is my dream (respondent 16: 35 year male, iCCM VHT).

A smaller number of respondents (2/11 for each theme) reported that they would stop work if they lost community trust and appreciation, had personal work commitments such as a paid job or if they were not supported (e.g no meeting allowances or contact/communication).

1.1.3 Motivation

Key themes (see Table 1) were around altruism, community standing, knowledge gain and validation and feedback from supervisors. The terms trust, appreciation, thanks, recognition, popularity, and respect were frequently mentioned throughout the narratives referring to the community, health staff and supervisors.

All of the basic VHTs reported a desire to help others and improve the health of the community as their main motivation for working as a VHT. This was also one of the most frequently mentioned motivations amongst iCCM VHTs. Amongst iCCM VHTs not wanting to let the community down, meeting new people, supervision visits, recognition from health staffand being able to treat their own children were also mentioned as motivators.

Table 1: The most common motivational themes

Help others and improve the health of the community (9/16 respondents)

My desire is to see my area benefiting I would love to see my village free of diseases (respondent 6: 36 year old male, iCCM VHT).

The desire to change people's lives is what drives me (respondent 8: 52 year old female, basic VHT)

Gaining community popularity trust and appreciation (6/16 respondents)

When I began treating young children in the community by giving them drugs, it has earned me respect in the community, Imagine I am now called 'doctor' and this makes me motivated and feel good(respondent 14: 31 year old female, iCCM VHT)

When some parents come and appreciate my work as a VHT especially after successfully treating their young children, I get courage..... supervisor (respondent: 4: 40 year old, makle, iCCM VHT)

Gaining knowledge (5/11 iCCM respondents)

I get a lot of wisdom and knowledge especially after being trained with words of encouragement (respondent 4: 40 year old male, iCCM VHT).

The kind of information I would like to receive is anything that contributes to VHT knowledge... such information is motivating to me and helps me like my work(respondent 8: 52 year old female, basic VHT)

Recognition, validation and feedback from supervisors and health staff (5/11 iCCM respondents)

Once I am told about how I perform, it will motivate me to keep up the good performance or if am performing below standard I will work hard to be a better performer (respondent 31: 40 year old, female iCCM VHT)

After becoming a VHT, I got well known to the health workers ... so wherever I go I am recognized and this motivates me to continue serving as a VHT (respondent 31: 40 year old female, iCCM VHT).

Not wanting to let the community down (4/16 respondents)

The people chose me to do this work. They trust in me and I cannot let them down so by that I keep on with my work as a VHT. There is no profit in terms of money but my profit is seeing them happy'(respondent 15: 36 year old female, iCCM VHT).

Meeting new people (3/11 iCCM respondents)

When I go for trainings and meetings I normally meet different VHTs, Doctors and other members with whom I normally share with experiences, challenges and advice on how to continue doing VHT work, this motivates and encourages me to continue working harder(respondent 14: 31 year old female, iCCM VHT).

Ability to treat or have free drugs for their own children (2/11 iCCM respondents)

I can now comfortably treat my own children without worry since I received training as a VHT (respondent 3: 30 year old, female, iCCM VHT)

1.1.4 Problems with their work

The most common themes related to work problems were around difficulties working with the community (13/15 respondents) and issues with resources and transport (13/15 respondents). Other important themes were high work-loads (6/15 respondents) and difficulties completing the VHT register (5/10 iCCM VHTs) (considered time consuming and complicated and does not have space for VHT comments) and difficulties locating new-borns (3/10 iCCM VHTs).

Only two VHTs reported problems related to their own skills such as difficulties diagnosing children and a further two reported problems using complicated English.

Giving drugs is not easy especially you may fail to know what the child is sufferingwhen a child has fever and an RDT for malaria shows negativeI fail to know what the child is suffering from (respondent 15: 36 year old female, iCCM VHT).

1.1.4.1 Difficulties working with the community:

The most frequent difficulties working with the community (Table 2) were the community not following hygiene advice and resentment when children were not given drugs because of a negative malaria test or because their children were over 5 years of age. Other, less common themes, were parents not following referral instructions, bringing children who had been sick for some time, not liking being checked on in terms of their hygiene behaviours and resentment from private providers.

Table 2: Difficulties with the community

Not following advice (9/15 respondents)

We face a challenge of the people refusing to do as they are told, they challenge us to go and dig toilets for them or stop telling them to do so(respondent 8: 52 year old female, basic VHT)

In the end some community members began to feel bad and hate me that I am putting pressure on them (respondent 13: 35 year old female, basic VHT)

Resentment at not being provided drugs (6/10 iCCM respondents)

The biggest challenge in my work is parents bringing older children ... they expect treatment ... this causes conflicts (respondent 5: 39 year old female, iCCM VHT)

Parents bring sick children when you test them and find they are negative some parents do not believe you..... I try hard to explain but parents don't agree especially when they see their children are having high temperature (respondent 7: 36 year old female, iCCM VHT)

Not following referral instructions (3/10 iCCM respondents)

When I give referral forms to the parent of the sick child...they do not want to go to the health centre complaining that it is far from here so instead they go to the nearby private clinics' (respondent 4: 40 year old male, iCCM VHT).

Other issues (bringing children too late, not liking being checked on, wanting allowances for attending meetings, resentment from private providers (6/15 respondents)

Although some VHTs acknowledged that some community members could not follow their advice due to lack of money others felt that the community was stubborn '*I feel my energy and time wasted*'.The Local Chairman was sometimes bought in to solve community problems. This emphasizes that the relationship between the community and the VHTs can be hierarchical and that VHTs can be viewed as being aligned with governmental rather than community structures:

Sometimes I report those who refuse to dig pit latrines to the chairman who arrests them, they link me to the chairman and this makes my life more difficult(respondent 16: 35 year male, iCCM VHT).

When I bring in the chairman with the law, they start complaining that we are tough (respondent 15: 36 year old female, iCCM VHT).

The community can also be demanding of the VHTs 'If I don't have drugs the patient abuses me that I have wasted her time' (respondent 9: 37 year old male, iCCM VHT).

1.1.4.2 Lack of resources and transport

The theme around lack of resources and transport (Table 3) included the distances that needed to be covered, insufficient allowances (which meant that several VHTs used their own money for VHT activities), a lack of drugs and problems treating children at night. Some VHTs were also missing standard equipment such as registers and things that identified them as VHTs in the community or felt they needed extra equipment such as rain coats.

Table 3: Lack of resources/equipment/transport (13/15 respondents)

Difficulties with distance and transport (7/15 respondents)

When I refer a child to the hospital ... in most cases I fail to go back to check on the child because transport is a challenge (respondent 9: 37 year old male, iCCM VHT)

Lots of time is spent on covering the long distances between homes..... my age is not good for walking for so long..... If I had a bicycle maybe I would reach more areas (respondent 8: 52 year old female, basic VHT)

Insufficient allowance/funds (5/15 respondents)

My problem is transport because I walk a long distance I spend my money and I should be refunded. One time we were invited to the Health centre and we were not given our transport refund and I felt so bad(respondent 31: 40 year old, female iCCM VHT)

We lack support from above.... they train us without leaving us any facilitation... they make action plans ... although no resources are allocated (respondent 8: 52 year old female, basic VHT)

Lack of drugs (4/10 iCCM respondents)

The problem is drug stock outs ... The test kits are finished first because we have to test every child who is brought sometimes you come to the health facility and find there are no drugs (respondent 7: 36 year old female, iCCM VHT)

Lack of light for treating children at night (3/10 iCCM respondents)

Sometimes parents bring sick children at night yet I don't have enough light in my house. It is so difficult to tell a parent that go back and come the following morning since sickness knows no time(respondent 7: 36 year old female, iCCM VHT)

Lack of standard equipment (Registers, IDs and other identifiers) (3/15 respondents)

Community members sometimes wonder what kind of people we are because we go and talk to them without anything showing we are VHTs (respondent 12: 35 year old male, basic VHT)

Lack of needed equipment (rain coat/boots/phone) (2/15 respondents)

A key theme related to work problems was that when problems are reported they are rarely solved. This was frequently cited as a frustration especially when excuses were continually given or promises made *'let people help in any way they can but not just making empty promises'*.

I have forwarded them [problems] to Malaria Consortium...we have reported them time and time again to our supervisors but nothing has been done about them(respondent 7: 36 year old female, iCCM VHT)

If they address the challenges we put across then it would be more useful(respondent 8: 52 year old female, basic VHT)

I hate the fact that when our concerns are referred to the higher authorities, they take long to respond or even never respond, this slows down our work (respondent 12: 35 year old male, basic VHT)

1.1.5 Implications

- The design of inScale innovations must reflect the variability in the number of VHTs in a team and the team structure.
- InScale should be mindful of the impact that innovations focusing on iCCM VHTs will have on the morale of basic VHTs
- VHT identity is complex. A decision needs to be taken about whether innovations that focus on group identity focus on the VHT team or the iCCM team identity.
- inScale should recognize that they are working with a motivated workforce whose motivation needs to be maintained rather than with a demotivated workforce whose motivation needs to be increased.
- inScale should ensure than innovations build on what motivates VHTs. For example they could invoke feelings of altruism, show the impact of VHTs work on the community, garner or show VHT appreciation, recognition and trust, or provide new knowledge.
- inScale innovations that take up a significant amount of VHT time may be problematic and demotivating.
- inScale should recognize that VHTs face many basic problems such as lack of drugs and transport, which may reduce the impact of any inScale innovation.
- Relationships between communities and VHTs can be complicated, however they are fundamental for successful programs.
- Inscale needs to ensure that any innovation which includes problem identification and solving is designed to ensure that problem solving can occur in practice.

1.2 The VHT team

Summary of key findings

The VHT – how it works

- The VHT members collaborate with each other, share knowledge and advice and on occasions support each other by assisting in each other's duties.
- VHT members are readily able to define their roles and those of fellow team members.
- VHTs with iCCM training are felt to command more respect in the community than those with basic training as they add more tangible value (i.e. treat and refer children).
- Community standing and respect for VHTs was considered susceptible to individual VHT behaviour (i.e. one VHT drinks and tarnishes the reputation of all).
- Without external structure and oversight VHTs felt they can lose cohesion and productivity.

Who in the VHT should receive phones?

- Mixed views with some suggesting all, some the coordinator and some iCCM trained VHTs arguing it should be them only.

The VHT and the community

- The status of VHTs and their standing in the community is important to VHTs and therefore interventions which increase this standing are likely to lead to increased VHT motivation.
- Many VHTs feel that their work and aims are not well understood in the community.
- Recommended by VHTs that the community and key figures in it such as the LC chairman be more involved in VHT work to improve the status of VHTs.

Impact of providing phones to some VHTs and not others

- While it was felt phones would bring added status to those VHTs who received them there were also fears that it would bring a negative stigma to those who didn't receive them as being unworthy.
- Those not t receive felt the allocation process was flawed and unfair given they had all shared the same basic training.
- Many VHTs were nevertheless accepting of a proposed allocation of phones to some VHTs and not others though this was apparently based on an assumption that they would eventually receive phones.
- Suggestions made to provide those who don't receive phones with additional, alternative support and communicate the strategy and its rationale clearly.

Which VHT members should be required to submit data?

- VHTs argued that all should submit data to lighten the collective workload and avoid some being left out and be thought less of by the community as a result.

1.2.1 How the VHT works – VHT's perspective

VHTs across all strata suggested that different members of the VHT team work together and support each other. On occasions this translated into actually performing each other's tasks when overburdened while on others it amounted to simply sharing ideas and offering advice. Many also identified that they have different roles and responsibilities within the team with those with basic training referring children who are sick to those VHTs with iCCM training.

"Our work is different from VHTs who have basic training only because for them they can't treat children but can refer them to hospitals. I think that is the only difference. The rest of the work is the same" (5, iCCM, rural, good coverage, electronic, 4 miles from HF) "We interact at least every week.... We talk about how we are with our work and find solutions... just seeing us all gathering is a sign of determination in our work and we are able to work together as a team and solve some problems that cannot be solved by an individual..... We work as a team, when I am not around my colleague can deliver my services" (12, basic , rural, poor network coverage, no supervision)

Several VHTs felt that those VHTs with iCCM training were more respected than those with basic training for the reason that they are seen to treat and refer children and are therefore widely perceived as offering more tangible value than VHTs who do not. Community standing and respect was also seen as dependent on individual conduct with some VHTs feeling that that the behaviour of an individual VHT could impact the way other VHTs were viewed.

iCCM VHTs we are more respected because we treat the sick children and our colleagues don't. So the people in the village say we are more important than those who don't have anything to give' (31, iCCM, rural, poor coverage, electronic, 4 miles from HF) '[in reference to a VHT who drinks] I feel bad, shameful because the community will lose confidence and trust in us as VHTs' (13, basic, rural, poor network coverage, 4 miles from supervising facility)

Some felt that the VHT team lacked a little structure and when left to its own devices was rarely productive. Others stressed the informal support and knowledge sharing that takes place within the team was beneficial.

'If we are alone during the interactions, fellow VHTs do not respect each other the whole interaction loses purpose...if the parish supervisor is around, they will respect and fear him hence bringing order in the interaction' (13, basic, rural, poor network coverage, 4 miles from supervising facility)

1.2.2 Who in the VHT team should be provided with phones?

Many felt that all VHTs should be provided with phones. Reasons provided were that they were led to believe that they would all receive them, all have duties and they all require the same tools and that the teams are often spread out so in the event of a crisis it would be important for them all to be able to link up.

"We may all (VHTs) need to use it at the same time especially when our villages are faced with an outbreak of disease like dysentery" (2)

Others suggested the VHT coordinators should receive them as they are the ones that link up activities. Perhaps unsurprisingly some iCCM VHTS felt it should be them to receive them while others felt as long as there was one per VHT team, one for the parish coordinator and one for the health facility supervisor then this was adequate.

" of course all of us would like to have phones but in situations where all of us cannot be given phones at the same time, then I think the coordinator would be the most appropriate person to get a phone and a charger on our behalf."(V4)

"The phone should be given to at least one (1) VHT per village, one parish coordinator, and a Health facility supervisor. This will take care of the different hierarchy coordination levels for VHT activities". (V3)

1.2.3 Impact on providing phones to some VHTs and not others

Phone bringing status and providing an incentive to perform. There was some suggestion that receiving a phone would drive VHTs to greater effort and act as a motivator. A phone, as an item of value, when given to a VHT in order to carry out their duties was thought of as conferring increased status and positive identity on those VHTs who receive them. As a tool for their work it was suggested by supervisors that phones may lead to greater efficiency of, for example, referral which may also bring greater levels of community respect.

"We always give priority to patients with VHT referral forms, so when VHTs get phones and call to say they have referred a child, we will treat their patients first, and the VHT will gain a lot of respect of the community" (S9)

While improved standing and respect of VHTs was generally thought of as positive, some felt that it may lead to bragging on the part of the phone recipients and cited cases where this had already occurred.

"This phone will act as an identity and the community will put trust in that person. A phone always has an impact on the community, it changes someone's status and people start trusting that person".(112)

"Those with phones already they go boasting that they are basawo [trained health workers] and these without phone just feel bad".(112)

Negative stigma from not being allocated a phone. The issue of the impact on those who did not receive phones was also explored. It was felt that if some and not all VHTs received phones then those that did not may be thought of in the community as less deserving and even intelligent and negatively stigmatised as a result. Many felt they could potentially lose morale and motivation as a consequence of being thought of as less valued than other VHTs. This was widely thought of as potentially leading to VHTs dropping out of the program.

"the village members said that I had failed exams and that is why I was left out. This affected negatively my status of being a VHT in the community". (B5) "It is serious now, they know that a few were selected and most of them abandoned work. When they see iCCM trained VHTs given T-shirts they think they are segregated, it is getting worse and will feel bad when they learn that in addition to what they were given they are also to be given phones".(S11)

Selection of who is to receive a phone flawed. For those VHTs with basic training, the proposal that they not receive phones elicited an often bitter response. Many suggested that the selection process

for iCCM VHTs was flawed as it was based on education and not true performance and many of those standing to benefit were undeserving. Others suggested nepotism was at play.

"those who were selected in the first case are just friends of those who were selecting not necessarily the best performers in their villages" (B5) "I am a trusted lady in the village, born again but less educated, some iCCM VHTs are drunkards yet well educated but with less commitment and willingness to do voluntary work. How should this be done?"(B5)

It seemed to both VHTs and supervisors that this feeling of unfairness at the different benefits and support received by VHTs had its origins in the shared basic training received. During this time all apparently expected to receive the same benefits. That some do not or will not was thought of as potentially leading to anger and jealousy and likely to manifest in a lack of support for those that have received phones by those who have not.

"We trained as VHTs when we were 10 per village. Later, 2 of us were selected for iCCM training and given phones. Other VHTs made enemies of us and have left responsibilities to us alone" (3) "The phones have already divided our cooperation as VHTs. Those who do not have them think that we earn a salary; they do not want to support our work. We feel bad, but they feel worse" (V3).

Acceptance of phones being given to some and not all VHTs. Some nevertheless expect those that do not receive phones will come to accept it. It does seem that this view is driven by the belief that these VHTs anticipate being seen to accept it will increase their likelihood of being the recipient of future benefits. There is perhaps a sense that their time will come. Some, including VHTs with basic training who have not received phones, did however argue that it was for the right reasons and that they would accept it.

"I don't feel bad since I have worked as a VHT for long time and I know that my chance will also come" (B5)

"Patience is needed because we were told that this is voluntary work for the good of the village so if some VHTs are given phones and others are not still we should know that it is still for the good of our community" (B6)

It is clear that uneven distribution of support which may be perceived as benefits, to different VHTs is problematic. While some suggest this is not new and they will accept it, it seems likely that this acceptance would be helped by a coherent explanation as to why some VHTs are receiving phones and not others.

Suggestions made to avoid problems. A number of suggestions were made by participants as to how to mitigate against the negative impact of providing phones to some VHTs and not others. To not do it – i.e. provide all VHTs with phones; provide VHTs who do not receive phones with different kind of support (explored in the 'support requested by VHTs with basic training in lieu of phones' section below); or develop a communication strategy designed to explain an allocation to some and not all and appease those who don't benefit. This final option was advocated for by one of the implementer groups with an emphasis on honest communication.

"I expect all VHTs to be key players and we would want to see them all work effectively. So giving phones to iCCM trained VHTs not basic ones should be done in a straight manner or otherwise they [basic VHTs] will feel insulted".(110)

1.2.4 Which VHT members should be required to submit data?

VHTs were asked who among their team should be required to submit data. While some in one group felt that this responsibility should fall to the parish level supervisor or those who are most competent in using a phone (V3), the rest argued that it should be all members. There were two main reasons given:

• Some groups felt that this would lighten the workload and help to share the responsibility among the group while raising the collective skill set (V1, V4).

"In case you have a challenge you can visit your fellow VHT member and be assisted which will develop your skills to do perfect work" (V1)

 One VHT group felt that as all VHTs have their own phones it wouldn't make sense to exclude some from submitting data. They felt that to exclude some would be demoralising for those VHTs. Another VHT group felt that if some were to submit data but not others then this would divide the group and lead to the perception that some are more valued than others (V2, V3).

"This will be like dividing us. Some people will look as if they work more than others and those that are not selected to submit data will feel less valued by the management of the program" (V2)

1.2.5 The VHT and the community

VHTs across all strata indicated either directly or by implication that status, visibility and standing in the community was vitally important to them. Many linked this increased status with their outputs as a VHT while others suggested that if they had some symbols of their work, such as badges or t-shirts, they would have increased status and be more effective in their work as a result. It would seem therefore that innovations which promote VHT standing in the community are likely to result in an improvement in VHT motivation.

I am now well known and well loved by the community because I treat their children very well (3, iCCM, urban, poor coverage, electronic, 1 mile from HF) 'We lack identifiers. People take time to accept what we are doing. Sometimes they resist home monitoring activities stubbornly saying we have no uniform, we look like them, hence not real VHTs'.(8, basic, urban, good network 5km from supervising facility)

Some VHTs felt that their status was improved by the presence of their supervisor in their local area. Such visits were said to confirm VHT identity as a person of status in the community and trust in the role of the VHT was seen to follow.

'Community trust is increased by seeing our supervisor local authority interaction with VHTs would show they are valued'(13, basic, rural, poor network coverage, 4 miles from supervising facility)

Several VHTs explained that the community does not always understand what they do or are trying to achieve. This leads on occasions to confusion over VHT workload, priorities and approach. The suggestion was made that in order to alleviate this situation a greater level of community

involvement as well as that of the LC chairman and other key community figures should be pursued. This was considered likely to assist in one of the other community engagement challenges that the community can on occasions be slow to react to VHTs. The reason put forward for this was the range and diversity of views held within the community. Again, greater community involvement was thought likely to assist in addressing this challenge. Better relationships and understanding between the VHT and the community are desired and should be fostered in the community monitoring innovation.

The respondent also said that it is very important for the LCs to be very much involved in the VHT work because they are more respected in community than VHTs. This will make VHT activities easier, especially mobilizing and sensitizing community about health related concerns. (5, iCCM, rural, good coverage, electronic, 4 miles from HF) 'people have divergent views and ideas and are not easier to be sensitized and mobilized, they take long to adjust and participate willingly' (4, iCCM, rural, good coverage, electronic, 10km from HF)

1.2.6 Implications

- Basic VHTs feel as though they are part of a team and meet to exchange views inScale innovations such as closed user groups for iCCM VHTs should not undermine this support.
- Encouraging Interactions between VHTs (e.g through closed user groups) may require support and facilitation to be effective.
- Changes in community perceptions of iCCM VHTs will have an effect on basic VHTs. This needs to be considered in inScale innovations.
- VHTs are used seemingly used to having different roles which may make providing different support to iCCM VHTs more acceptable.
- The perception of prioritisation of some VHTs over others is already apparent. This will need to be carefully managed to avoid ongoing negative consequences. This could be as serious as some VHTs refusing to work until they receive the same benefits. Clear communication is required at a minimum.
- VHTs who don't receive phones when others do will feel bad and may be disruptive. It seems
 that these (most likely basic trained) VHTs should be provided with some alternative support
 to maintain their status and sense of belonging and value.
- Status and standing in the community is important for VHTs. VHTs themselves recommend greater community engagement in VHT activities. This would appear to be a good strategy under both innovation arms.

1.3 Supervision and support

Summary of key findings

Who supervises VHTs and how?

- Supervision and support comes from a number of sources both official (e.g. health facility based supervisor) and informal / unofficial (e.g. local religious leaders). Some felt it varied for iCCM trained VHTs vs those with basic training while others thought it was the same.
- Supervision is broad ranging and includes a range of social and emotional support as well as technical guidance.
- Many VHTs described contact with health facilities as rarely happening unless they initiated it.

Main duties of health facility based supervisors

 The duties of VHT supervisors were many and varied according to supervisors.
 The main ones were ensuring timely reports submitted by VHTs and collating them, supporting VHTs in completing their registers, ensuring the VHT's working environment is clan and secure and managing the drug stock and supply of VHTs.

Tools and support received to help with VHT supervision

 Supervisors identified that some of them currently receive job aids, forms and stationary, transport and lunch allowance, support supervision visits, drugs for VHTs and, on occasions, phones for VHT work.

Extra tools and support that would be useful according to supervisors

 Items that would be beneficial for supervisors were identified as job aids which capture the range of VHT work in addition to iCCM related tasks, additional stationary and forms, constant and reliable supply of drugs, reliable transport allowance and, preferably, motorbikes, ensuring supervisors in remote locations are kept informed and more health workers trained to supervise iCCM trained VHTs.

Time spent on VHT related work – supervisors

- Generally VHT supervision took place for between 30 minutes and two hours with the main factors determining the length of time spent being how pressing the VHT's issues were, the distance required to travel to reach VHTs, the capacity of the VHT and their willingness to learn and engage with their supervisor and whether the VHT was with a patient at the time of the supervisory visit.

Supervisor motivation

The main motivators of VHT supervisors were identified as:

- a sense of obligation to bring health services to the community
- getting to know VHTs
- building trust and seeing VHT skills develop
- receiving allowances
- having access to the tools of the job.

What would make supervisors stop doing their work?

- The main reason supervisors gave for hypothetically stopping work was if their allowances were stopped. Other reasons given were that if the DHO instructed them, there were no drugs or if VHTs were to become inactive.

Main challenges

Supervisors identified a number of challenges in their work. The main ones were:

- poor drug supply and slow re-supply
- not enough forms and registers
- not being able to locate VHTs when conducting supervision visits
- inadequate amount of time allocated to supervision duties
- VHT delays in report submission
- understaffing of both VHTs and supervisors
- inconvenience and expense of accessing remote communities
- VHTs dedicating too much time to non VHT related but income generating work.

Suggestions to improve supervision

There were numerous suggestions made by VHTs, supervisors and implementers that were considered likely to improve supervision. The main ones were:

- Increasing the amount of contact between supervisors and VHTs
- Maintaining a steady supply of drugs (though acknowledged that supervisors couldn't be exclusively responsible for this)
- Having consistent means of transport for supervision visits either through allowances or a motorbike
- Greater access to and use of phones.

1.3.1 Who supervises VHTs and how?

VHTs identified a number of key features of their supervision experience – both formal and informal. These fell into three main areas.

1. That **supervision and support for VHTs comes from a range of places and sources**. People seen as providing support included the health assistant, the parish supervisor, Malaria Consortium representatives and those of other NGOs, those with iCCM training for those with basic training only, the LC chairman, religious leaders and the local VHT coordinator. It will be important for inSCALE to take care to integrate these sources into interventions. The VHT coordinator in particular seems and important figure for many VHTs. As a VHT nominated post it may be an opportunity to utilise this role, trusted as it apparently is by VHTs, despite it not currently formalised as Ministry of Health policy.

'The health assistant comes quarterly...... I like the contacts because the advice I receive is good and she makes me improve my work.... I am in contact with NGOs like NAADS ... they come twice a year.....BRAC promotes health and agriculture..... we meet them monthly' (8, basic, urban, good network 5km from supervising facility)

'Sometimes I have to travel long distance to carry out VHT work, the LC1 chairman gives me his bicycle' (12, basic , rural, poor network coverage, no supervision)

'my supervisor, coordinator and sometimes the in-charge of the health center have always been there for me and if I want to inquire anything, then they are the right people... my supervisor and coordinator try to check on me as much as possible such as weekly and monthly because I have to inform them of my progress as well as request for anything that might be out of stock (5, iCCM, rural, good coverage, electronic, 4 miles from HF)

For some VHTs the supervision was the same for all while others felt it differed for those with basic training and those trained in iCCM. As described above, it will be important for inSCALE to consider these different sources of contact and support.

'Supervision is different, VHTs with basic training are under the health assistant but the other have people from the malaria consortium' (8, basic, urban, good network 5km from supervising facility)

2. The content of supervision goes beyond simply reviewing the resister and covers a range of topics. Many VHTs indicated the content and indeed breadth of the support provided was of value to them. It seems therefore that some elements of a supportive supervision approach are being implemented and these need to be fostered and integrated into inSCALE innovations.

'Her work as a VHT is checked by the Sub County Health Assistant every 4-5 months who advises on how to perform her job better..... I like the contacts because the advice I receive is good. It helps me improve my work' (8, basic, urban, good network 5km from supervising facility)

'When they come, they check on the register, check on the drugs to see the available stock, observe how I do my checking and prescription of drugs to the children under five years, ask about the challenges I am facing as well as encouraging me to continue doing good work. That is all they normally do (31, iCCM, rural, poor coverage, electronic, 4 miles from HF)

3. Particularly for those VHTs with basic training, there was **little uninitiated contact with health facilities** (and none for VHTs 11 and 12). One VHT indicated that the supervision received was infrequent and unreliable. It seems the inSCALE project should not assume that health facility supervision is necessarily taking place as planned.

'Sometimes people go to the health centre to get drugs and they are told that they are not available, I am forced to go to the health facility to confirm whether it is true....I also go to the health facility to confirm whether parents have taken their sick children'.(13, basic, rural, network coverage, 4 miles from supervising facility)

'Initially 3 months ago they used to come and check on us especially when I had just got the VHT phone, but now it is almost coming to 2 months' (4, iCCM, rural, good coverage, electronic, 10km from HF)

1.3.2 Main duties of health facility based VHT supervisors

Supervisors identified a large number of duties they are required to perform (see table XX below). The main ones were to manage the flow of drug supply to the community via VHTs, collect and collate monthly VHT reports as well as support VHTs to complete their registers appropriately,

conduct VHT visits to check on their skills and standards of hygiene and hold quarterly VHT meetings where key problems are addressed.

Table 4: Supervisor main duties

Ensure constant supply of drugs (3/8 respondents)

'I also ensure that there is constant supply of drugs, RDT kits and other things needed in treatment of malaria, and management of diarrhea and cough' (Supervisor 21).

'I also inform Malaria Consortium on drug stock outs for restocking' (Supervisor 28).

Receive / collect VHT monthly reports/ data and compile them into one report for the Health Sub District/ Sub-County Health Officer once a month (5/8 respondents)

'Provide monthly reports to district' (Supervisor 28).

'I collect reports especially when VHT have not been able to deliver them at the health facility, and I also review the reports and correct mistakes together with the VHTs' (Supervisor 30).

Check and support VHTs to amend VHT registers (4/8 respondents)

'I also check on their registers to make sure they are filling it well and in case some parts are not clear then I advise them accordingly' (Supervisor 27).

Visit individual VHTs to observes them treating patients to assess whether they practice what they were trained (5/8 respondents)

'I have a duty of checking, monitoring and seeing how the different VHTs are carrying out their work and what more support they may need' (Supervisor 22).

Checks the hygiene and sanitation of VHTs home and the state of the place where drugs are kept to ensure that drugs are stored properly (3/8 participants)

'I normally check on the availability of the drugs, where they are stored and how much of the drugs were given out' (Supervisor 22).

Hold quarterly meetings with VHTs (3/8 participants) and meetings every two months with fellow supervisors to discuss different problems (1/8 participants)

'As a supervisor, I hold quarterly meetings with VHTs to assess successes, failures and constraints' (Supervisor 18).

Additional duties: advise VHTs to refer cases they cannot handle to the health centre (2/8), address VHT queries (2/8), provide refresher sessions (1/8), inform VHTs of upcoming programs and visitors (1/8), encourage VHTs to continue doing VHT work (1/8), handle cases referred by VHTs (1/8).

1.3.3 Tools and support received to help with VHT supervision

Supervisors advised that they received;

i) **Job aids, forms and stationary**. They specifically noted that they received sick child job aids, VHT referral forms, VHT registers, VHT activity checklists and stock cards and pens and paper. (Supervisor 18, Supervisor 20, Supervisor 21, Supervisor 22, Supervisor 26, Supervisor 30)

'I receive a number of tools, namely those for tracking VHT supplies, management of cases, assessment forms and also monthly logistics stock card' (Supervisor 18).

ii) **Transport and lunch allowance for supervision**. This enabled VHT supervisors to buy airtime and call VHTs before going to the community as well as buying something to eat (Supervisor 18, Supervisor 20, Supervisor 21, Supervisor 22, Supervisor 26, Supervisor 28):

'But most importantly I am given transport allowance that enables me to supervise VHTs especially those in remote areas' (Supervisor 27).

'We get support in form of facilitation for fuel and lunch' (Supervisor 30).

iii) **Support supervision** from either Malaria Consortium or the district through the DHO's office:

'I am also supervised by officer from the Malaria Consortium Office and the in-charge Health Sub-District Buhaguzi' (Supervisor 21).

iv) Drugs for distribution to VHTs:

'... we are given drugs to continue with the work' (Supervisor 26).

v) Phones which are valued by those who received them:

'This phone has eased my work because I can seek clarification on anything that I didn't understand in the monthly reports that VHTs submit' (Supervisor 27).

1.3.4 Extra tools and support that would be useful according to supervisors

There were a number of extra tools and support that supervisors identified as being useful and indeed needed in their work. The main ones recommended were;

i) Job aids which capture other tasks VHTs are engaged in that are additional to iCCM such as hygiene and sanitation. This was felt important to demonstrate that all VHTs were connected and that the iCCM program is not independent from the Ministry of Health (Supervisor 18, Supervisor 30):

'There is also need to redesign the tools so as to incorporate HMIS data requested from VHTs so that this iCCM project is not seen as a parallel program to Ministry of Health programs' (Supervisor 30).

ii) Stationery such as forms, registers, pens and paper (Supervisor 21, Supervisor 26):

'I need stationery as the extra support because sometimes I find VHTs registers are over and when they ask for new registers, pen and paper I don't have an answer for them' (supervisor 26).

iii) A constant and reliable supply of drugs so that VHTs are able to do their work (supervisor 21, supervisor 30).

'As long as there are drugs for them, my work will be easy since they are all the time asking for the drugs. You know the VHTs were given drugs once and they have given out all the drugs for cough and diarrhea but that for malaria is still available. So I really need drugs for cough and diarrhea for my VHTs' (Supervisor 21).

iv) **Consistent and reliable transport allowance and / or motorcycles** so that access for supervision is made less challenging. Supervisors explained that the difficult terrain and large distances

meant that assistance with transport is needed_(Supervisor 18, Supervisor 20, Supervisor 22, Supervisor 28):

'The supervised areas are large, VHTs are too distant. Such areas need increase on fuel allowance. We rely on one motorcycle in the whole sub county, we need another one because some activities collide and this is an IDI (Infectious Disease Institute] motorcycle' (Supervisor 28).

v) **Ensure supervisors in remote locations are kept informed about events** so they have a chance to participate.

'Some VHT supervisors cannot be reached by phone all the time, and no effort is made to contact them any other way; thus being excluded from participating in some trainings and meetings when the network coverage is unavailable at that particular time when a call is made' (Supervisor 21).

vi) **Train more health workers in iCCM** so patients referred by iCCM trained VHTs are more often treated when they arrive at the health facility.

'There is need to bring all health workers on board iCCM such that they can handle all VHT referrals as opposed to waiting for us the VHT supervisors to handle them, even when we are out of station. They [other facility health workers] think we earn extra money, so they call them our clients' (Supervisor 28).

Other requests / suggestions included providing supervisors with phones for their work with airtime, providing supervisors with money for personal expenses such as toiletries, increase support visits provided to supervisors, practical orientation visits for prospective supervisors of VHTs, facilitation (i.e. transport and lunch allowance) supplied directly rather than via the Health Sub-District as sometimes the money is less than it should be and make sure there are regular notices regarding upcoming events.

1.3.5 Time spent on VHT-related work - supervisors

Some supervisors said they spent between two, three and four days a week on VHT work with additional days for report writing. Other VHTs said they spent as little as four days a month on VHT related work.

'I spend four days a week because I visit four VHTs per week. But also when it comes to compiling a final report, I give this activity 4 days every end of month' (Supervisor 20).

'For supervision I use four days a month' (Supervisor 21).

'In a week, I give at least 2 days to VHT work and up to 8 hours per each of those two days. Supervision is not done daily, but instead is scheduled so we give ample time to it' (Supervisor 30).

Several supervisors indicated that they spent between 30 minutes to an hour with VHTs but some others said it was more like one to two hours. There were several factors identified that were felt to determine how much time was actually spent during a supervision encounter (see table 5). Key among these were; how pressing the VHT's issues were, the distance required to travel to reach VHTs, the capacity of the VHT and their willingness to learn and engage with their supervisor and whether the VHT was with a patient at the time of the supervisory visit.

Table 5: Factors determining the frequency and duration of supervisor visits with VHTs – supervisor perspective

Immediate problems that the VHT needs guidance and support with (2/8 supervisors):

Time spent with each VHT is different. It depends on the number of problems s/he has, but on average it is 1 hour per VHT' (Supervisor 28)

VHT busy with other work or private responsibilities (1/8 supervisors):

'Sometimes when you go for support supervision, some VHTs are digging or cooking and you just have to wait for them to be free and talk to you' (Supervisor 18).

Distance of the VHT's village from the health centre (3/8 supervisors):

'In some places ... you have to park the motorcycle at some point and walk. When you are exhausted, you take a short time with the VHT in order to make it back home on time. These are mountainous areas and very bushy' (Supervisor 28).

How active a VHT is, the VHT's level of understanding (quick to learn/ grasp issues) as well as their readiness to receive supervisor (3/8 supervisors):

'If I go to the village and find the VHT ready to receive me after my earlier communication since in training I always emphasize to them the need to be ready on their duties and thus little time is used' (Supervisor 22).

'I don't spend equal time with all the VHTs, the minutes I have mentioned [30 – 45 minutes per VHT] are general for someone who is doing well but I may spend more time depending on how the VHT is performing. I may be talking to a VHT and a patient comes in, this becomes my good chance to observe how he/she will attend to the patient, I have to see whether he/she will follow that procedure he/she was taught' (Supervisor 26).

Whether VHT has patients at the time of supervision (2/8 supervisors):

'Time spent is influenced by whether patients are found there or not; if found, an hour or more is spent with the VHT. If not, then scenarios are created so that the VHT can explain what s/he does in order for the supervisor to hear and support or advise accordingly' (Supervisor 30).

1.3.6 Supervisor motivation

There were many contributing factors identified by supervisor's as contributing to their motivation (see Table 6 below). Chief among these were a sense of obligation and bringing health services to the community as well as getting to know VHTs, build rust and see their skills develop. In addition receiving allowances and access to tools of the job were seen as motivating.

Table 6: what motivates VHT supervisors – supervisor's perspective

Being provided with an allowance for visiting VHTs (3/8).

'I am given assistance especially transport allowance of Ug. Shs. 32,000/= each time I go to the field to check on the VHTs, I think it is motivating considering the distances involved in travel' (Supervisor 22).

'When support supervision is scheduled, we are facilitated with lunch allowance and fuel' (Supervisor 30).

Sense of obligation (3/8)

'I know it as my work; I trained for it and I have to do it' (Supervisor 18).

'I have a heart of concern; I feel it is my duty to constantly check on these VHTs' (Supervisor 22).

Bringing health services to the community (2/8)

'When I reach the community and find them happy, I also get happy especially when I find the VHTs treating the community well in line with what we trained them like knowing how to use RDTs efficiently and treatment of malaria' (Supervisor 22).

Getting to know the VHTs so they trust their supervisor and improve (1/8)

'I enjoy doing supervision work because it enables me to get to know the VHTs more and them to know me more especially when I find them in their homes ... knowing VHTs personally helps to ease the tension when a VHT has made a mistake it can easily be corrected since they know and trust in their supervisor' (Supervisor 21).

The tools provided to assist in the work of a VHT supervisor (2/8)

'And also the fact that I am given ... materials that I use to write some information, this has motivated me to work' (Supervisor 27).

Additional motivating factors were: the knowledge acquired from the training (1/8), developing a close working relationship with VHTs (1/8), knowing work is relieving patient overload at health facilities (1/8).

1.3.7 What would make VHT supervisors stop doing their work

The main reason supervisors suggested would stop them from working would be if they were not given allowances.

'When I am not given transport, I will stop because I cannot be able to reach all those villages without support. Even when you are travelling you get hungry so I use part of the money given to me for transport to get some lunch' (Supervisor 21).

Others suggested that if the DHO instructed them, there were no drugs or if VHTs were to become inactive, it would be difficult for them to continue in their role and they may stop.

1.3.8 Main challenges supervises face

The main challenges supervisors reported facing were:

VHTs having low or no drug stock and the long period taken to restock (Supervisors 20, 22, 26 and 28) as well as the loss of confidence in supervisors when they can't quickly fix the problem (implementer 25):

'As their supervisor I have no drugs to give out to the VHTs and besides that, nothing else is added given to them, I think this is a challenge to me and do not feel good' (Supervisor 22).

One implementer noted that despite a shortfall of drugs impacting negatively on the VHT's ability to treat, it also impacts negatively on the VHTs respect for supervisors and their ability to make things happen (implementer 25).

"There is a problem when the supervisors go to supervise and find the VHT has no drugs and they ask about when they will get new stock yet the supervisor has no control over drug supply. This naturally makes the VHTs feel that the supervisors are doing nothing since they cannot help them with their problems so their supervision is useless" (Implementer 25).

Insufficient supply of forms (supervisor 22):

'When it comes to giving out referrals, it becomes a problem because most of these VHTs lack referral forms and so when they are to refer a patient they have to call' (supervisor 22).

Supervisors not finding VHTs at home during supervision visits, especially on market days, *and sometimes suspecting they are being deliberately avoided* (supervisors 20, 21, 22, 26 and 27)

'There are days when I go for supervision work to check how the VHTs are doing their work, sometimes, I find when they are not at their homes or not around and this is costly to me on the amount of time spent and costs involved' (Supervisor 22).

'My main concern is that some VHTs don't want to be supervised, so they decide to travel during supervision days and they leave the registers with their families who can't explain anything to us' (Supervisor 27).

Insufficient time available for supervising VHTs and compiling reports (supervisors 21 and 30) Supervisors were given only four days to do the supervision work and compile a report within those days. This meant first leaving all the health unit activities to attend to the VHT work.

'I really got tired because the four days I was given to supervise and compile the report were too few since we also have some more work to do at the health units' (supervisor 21).

Delays in VHTs submitting monthly reports (supervisor 20)

Sometimes VHTs bring their reports late or they are not at home when supervisors go to collect the reports. This reduces the time available for supervisors to summarise the VHT reports and compile their own report and even begins to encroach on time allocated for other tasks the supervisors are required to perform at the health facility:

'The only challenge I find during this activity is delays from the VHTs who may not bring their reports on time. If they don't bring their reports on time it delays the whole process of compiling and this affects other health unit work' (Supervisor 20).

Inadequate human resources (understaffing) and skills sometimes leading to over demand in well resourced areas and lack of trained workers when people move on or retire (supervisors 21 and 26) Each health centre/ unit has only one staff trained in iCCM VHT supervision so when he/she needs any assistance they have to go to another health centre which was considered to be a waste of time when it would not be necessary of there were more staff trained at the health unit:

'I am the only one who was trained in iCCM supervision and no staff at Wambabya can help me so when I need help I have to travel to Kikuube Health Centre IV which is about ten kilometres away' (Supervisor 21). On occasions VHTs retired and were replaced by the community's nominee who remains untrained until the next training cycle. This leads to challenges where community members travel for treatment to communities where there are known to be trained iCCM VHTS and drugs. This leads to some communities not having trained VHTs and often drug stock outs in those communities that do.

'In Kakunyu LCI there was an elderly man who was trained under HBMF [Home Based Management of Fever] and later became iCCM trained after the community had proposed him. He has retired because he said he was too old to continue with the work, so the community selected another one. The challenge I have is that this person cannot be trained alone either by me or the old man and I don't know when the next Malaria Consortium training will be'. The respondent's concern was when Malaria consortium would train other VHTs in iCCM so that she could send that chosen VHT. Also the village stayed without a service and the people started to complain while others went to the neighbouring village which was far and the VHT was overwhelmed by the number of patients the drug stocks were out quite often' (Supervisor 26).

Challenge related to transport and accessing remote villages (supervisors 18, 20, 21, 28 and 30):

'Some roads are impassable and if I decide to hire a boda boda [motocycle] these people overcharge me because places are far and the roads are impassable. This overcharging encroaches on my own money' [spent Ug. Shs. 10,000/= to 15000/= on motorcycle hire during the dry/ sunny days and Ug. Shs. 20,000/= on a rainy day] (Supervisor 20).

'When it rains here, the roads become impassable making it very difficult to move from one village to another so I would request for gumboots to enable me walk to the villages' (Supervisor 21).

VHTs dedicating too much time to non VHT related income generating work (Supervisor 26, Supervisor 27)

'Since VHTs are volunteers, they have to find income generating activities to sustain their families but if a small allowance is given then they will be motivated to work hard hence submitting reports on time; VHTs are occupied by income generating activities they fail to get enough time to do VHT work which leads to delay in report submission' (Supervisor 27).

1.3.9 Suggestions for improvement to current VHT supervision

There were a wide range of suggestions made for improving supervision by VHTs, supervisors and implementers (see table 7 below). Across groups there was the suggestion of more frequent contacts between VHTs and supervisors with both VHTs and implementers suggesting that increased access to mobile phones may present a solution. Many supervisors and implementers also suggested as a priority ensuring, where possible, the maintenance of a constant supply of drugs.

'There should be a continuous and reliable supply of drugs and equipment' (supervisor 30)

Many suggestions spoke directly to the key problems identified by supervisors. These included providing motorbikes for supervisors and transport allowance for VHTs. Interestingly, one of the main problems identified by supervisors was VHT absenteeism when supervisors come to visit. Some VHTs suggested that being provided with warning of when the supervisor was planning to visit would

contribute to their availability. This indicates that if VHTs could be warned then perhaps the problem would be lessened. Enabling greater communication between VHTs and supervisors seems tailor made for addressing this challenge in particular. Indeed both VHTs and implementers recommended facilitating greater communication through phones to improve current VHT supervision.

'There should be increased usage of mobile phones to increase communication between supervisors and VHTs especially through phone calls' (implementer 24)

Table 7: suggestions for improvement to current VHT supervision		
From VHTs	From supervisors	From implementers
 More checking and contact (12/17 VHTs) Less checking and contact (2/17) as long as there are no stock outs or outbreaks (1/17) More health related information provided (5/17) A variety of supervisors (3/17) Warning of when supervisor is coming (2/17) Feedback or more feedback from work submitted with a faster turnaround (3/17) Greater supply of phones to improve communications (1/17) 	 Provide supervisors with motorbikes and fuel allowance (3/8 supervisors) Ensure a constant supply of drugs and stocked drug storage at health facilities (2/8) Train more heath workers in supervising iCCM trained VHTs to spread the workload (2/8) Increase the number of days allocated for supervision or the number of interactions between VHT and supervisor – in person or on phone (3/8) Keep parish supervisors (coordinators) up to date with the latest information and reports (1/8) 	 Allowance for VHTs to attend supervision (4/6) More frequent contact to improve skills retention (2/6) Ensure sustainable support is provided – not just activity start up support (2/6) Transport allowance for VHTs (2/6) Ensure consistent drug supply (2/6) Motorbikes for supervisors (1/6) VHTs to work together to prepare for supervision visits – more time effective for supervisors (1/6) Provide feedback to supervisors relating to data submitted (1/6 implementers) Increase trust in the community for VHTs by engaging with local leaders (1/6) More training for supervisors in communication skills for interacting with VHTs, finances and technical skills (1/6) Facilitate greater communication between VHTs and supervisors by providing more phones and airtime (2/6)

1.3.9 Implications

- Important for inSCALE to recognise the diversity of sources of support for supervisors and seek to tap into this. This support exceeds technical support and needs to be considered holistically.
- There are high expectations on supervisors to provide what VHTs need including a regular drug supply. It will be important for inSCALE to ensure expectations of what can realistically be delivered by the project, by iCCM, by VHTs and by supervisors is managed.
- Supervisors recognised that any communication materials provided should include the role of basic trained VHTs so the value of the whole team can be promoted. inSCALE should consider how the whole VHT can be included in the approach adopted and their collective status be raised in the community's eyes.
- Supervisor motivation is seemingly a mix of duty and intrinsic factors combined with a need for revenue and work perks. There is an apparent opportunity for inSCALE to maintain and perhaps improve supervisor motivation by maintaining allowances and benefits while promoting aspects relating to duty and obligation to the community.

- Most problems and their solutions related to the practicalities of ensuring supervision took place (i.e. getting there, making sure the VHT is present, not having enough time) and only very few to the technical content of supervision. Before focussing heavily on the content of supervision the inSCALE project should work to ensure that supervision encounters are possible and likely.

1.4 Data collection, use and feedback

	Summary of key findings
ls data	a submission seen as important
-	Overwhelmingly responses were positive regarding the importance of data submission. Some implementers did suggest that it was only important if of high quality and available quickly.
-	Implementers felt it was important for planning and resource allocation.
-	VHTs thought it was important for them to be able to communicate their challenges and also so they feel connected to the health system.
What	are the main challenges to electronic data submission
-	The data entry screens and forms not being compatible with the equivalent screens and forms at later stages of the data flow.
-	Not having the right equipment at health facilities and other locations necessary for maintaining the flow of data.
-	Backlogged data at the health sub district or at other stages of the process where there isn't the capacity, equipment or will to process the data more quickly or efficiently.
How c	an data submission be improved
-	Training people in appropriate data submission methods at all levels involved.
-	Ensuring there are enough well trained data entry personnel where they are required.
-	Having good data organisation and data filing systems at health facilities.
-	VHTs having access to appropriate handsets and supervisors to web enabled laptops.
-	Feedback provided to those who submit data.
-	Maintain paper based records and use to cross check electronic data quarterly.
How c	an data use be improved
-	Training in all aspects of data collection and use for district personnel.

- Data to be used regularly for impact by the districts and for this use to be promoted to build greater awareness and confidence leading to more frequent

and better use.

What do users want regarding data use and feedback

- VHTs: many VHTs claimed they currently do not receive any performance related feedback. Almost all VHTs interviewed indicated that this is the type of feedback wanted.
- Supervisors: information relating to general program performance and any new developments or innovations.
- Implementers: data that can help with planning of key activities and interventions and that, preferably, is easily available online.

1.4.1 Is data submission seen as important?

There were a variety of views expressed relating to the importance of data submission from implementers, VHTs and supervisors. Most were overwhelming positive about the value data bring to the program and them. Some implementers did however argue that data was important **only if collected in a timely fashion and was of a decent quality**. They warned that if there are delays then the relevance of data may be compromised while if not of a sufficient quality then it is useless.

'data submitted late has less value as it cannot serve the purpose it is meant for ... some reports don't have dates and therefore cannot be used for the purpose it is meant for" (The respondent advised that for quality data submission, the supervisors also need to be supervised and mentored as well on how to make aggregated reports of the areas they supervise) (Implementer 25).

Other implementers argued that submitted data was important – both paper based (implementer 25) and electronic (implementer 17) - as it **helps the district with its resource allocation and planning**. Electronic submission was however felt to be more user friendly by some involved in the CIDA pilot.

"Yes, I say the data collected and submitted on paper is valued at the district level because it has a lot to inform the district when planning for malaria, diarrhea and pneumonia diseases in districts where malaria consortium is operating" (Implementer 25)

"Districts can now access internet so I think electronic data is more valuable than paper based data since it is in summaries that are easy to use" (implementer 19)

Some VHTs (both with basic training and iCCM trained) felt that data submission was **critical to communicate the challenges they face such as drug stock outs**. There was a sense that drug stock outs could be reduced with efficient data submission processes. Similarly some supervisors felt that the collection of data was worthwhile because it allowed them to track the progress of the program as well as stay up to date on the latest issues faced by VHTs.

'It is an opportunity to communicate drug stock outs and get re-stocked'(11, basic, rural area, poor network, no supervision)

'The information is useful because it helps to know why there is reduced OPD attendance for the under 5 years' (Supervisor 28).

Other VHTs indicated that submitting data made them feel **connected to the health system** and that it was an important **validation** of their role.

When I submit information, my coordinator and supervisor will know that am not just enjoying the privilege of being a VHT member but am showing that am capable of serving the community (5, iCCM, rural, good coverage, electronic, 4 miles from HF)

1.4.2 What are the main challenges to electronic data submission?

According to implementers involved in the current CIDA pilot there are challenges with **compatibility of the format that data is collected and collated in** at the different stages along the information chain. For example, one implementer advised that the data collected for iCCM at village level as designed for the CIDA pilot is collated at sub county level but when it gets to the district level the template designed for such data in accordance with Ministry of Health guidelines cannot accommodate iCCM data. While this challenge will apparently be addressed when iCCM is scaled up it does nevertheless clearly highlight the need to ensure that data collection, collation and reporting tools, entry fields and reporting mechanisms are compatible and coherent at the different stages of the information chain.

"Whereas the reporting template used at the VHT level captures data for both iCCM and Ministry of Health (MoH), the supervisor uses iCCM reporting template which is also used at the sub-county level yet at the district level the iCCM reporting component is not captured but only the MoH template is used which means that all iCCM data collected is not feed into the district report at the end of the month". (This anomaly in data capturing and reporting affects the usefulness of data collected currently at the district level. The data collected by iCCM is not included at the district reporting template because iCCM is only in nine districts and it will be after it has been scaled up that the MoH will include the data collected on the district reporting template). (Implementer 25).

Another challenge identified was **having the right equipment available at health facilities** and even district level to facilitate the entry and flow of electronic data. This includes having sufficient power or fuel for generators as well as the actual hardware such as computers and modems. Some VHTs involved in the pilot also queried whether there was sufficiently reliable network access to support such a system when they were already experiencing difficulties.

"one of the major vision for us is to have a modem at health centre iii, with the in-charge as the health supervisor and what I know is that these districts use this data because they have statisticians and these districts normally carry out routine data collection but a number of them lack power and sometimes fuel to use in the generators is not enough" (implementer 17)

I dislike walking a half a kilometer looking for the network to be able to submit the report". (31, iCCM, rural, poor coverage, electronic, 4 miles from HF)

A further challenge identified in the current electronic data submission process being piloted was that there was often a **backlog of data at the health sub district**. The suggestion was made (as documented in the section below relating to improving data submission) that the health sub district be bypassed and VHTs submit data to supervisors and on to districts as they are the ones that have the skills and tools to collate and analyse the data after all and not the health sub district.

"since the health sub district has proved dysfunctional because whenever report are taken there, they delay to get to the district yet the health sub district doesn't have the capacity to address any of the problems presented in these reports before involving the district" (implementer 19)

Some implementers had concerns related to whether VHTs would have the capacity to use the phones for data submission as intended.

"I think it is a good idea but only if a survey is done to get to know how many people have been using phones because that will determine their ability to manage the given phone" (implementer 29)

1.4.3 How can data <u>submission</u> be improved?

Some implementers noted that for data collection and submission to be handled well and the data to be useful there needs to be **training for all involved** in data processing and submission. A key concern was that the data be handled swiftly so that it could be collated and applied in a timely and beneficial way.

"At every level where data is handled one should be trained to enter and document data on time and send it to the next level as soon as possible" (Implementer 25)

A related concern was that there are **enough sufficiently well trained data entry clerks** to handle the flow of data in an efficient and timely manner.

There is lack of enough personnel and many health units are under staffed with no full time data entrants, so there is need to have trained personnel" (implementer 17)

While this is the case regardless of whether a paper based or electronic system of data submission is adopted, implementers argued that electronic data submission nevertheless had the potential to speed up the process by reducing the time required of VHTs.

"Reducing on the amount of time spent to send data will improve data submission through Mobile phones because having data from the VHTs to the supervisors and then the health facility is costly for VHTs in terms of transport movements and time spent" (implementer 24).

Some implementers suggested that for data submission to be effective the **filing systems at health facilities need to be improved.**

"Filing systems especially at health centers need to be improved for easy data tracking" (Implementer 25)

Some felt it was critical that VHTs had the right phone handsets to be able to properly submit data while supervisors should be equipped with web enabled laptops stationed at the health facilities. It was argued that these equipment supplies along with proper training would lead to an improvement in the quality of data submitted.

"there is need to give more VHTs phones for easy contacts with their supervisors and to strengthen the middle link (supervisors) by providing simple laptops enabled with a web platform so that they can summaries the data and send it directly to the district" (implementer 19)

Another suggestion from an implementer was that **feedback should be received following data submission** so that whoever collected and submitted the data has an opportunity to improve (implementer 17 no quote).

While many implementers advocated for the adoption of electronic data submission methods, caution when it comes to doing away with paper based methods was advised. The suggestion was made that **paper based records should still be kept and submitted quarterly whereupon they can be used to validate the electronic data** collected.

"data should be submitted electronically and paper based data should only be used for validation to ascertain that there is completeness in actual reporting. Otherwise phasing out paper based data submission now will come with a cost" (implementer 19)

1.4.4 How can data <u>use</u> be improved?

There were several suggestions made as to how data use could be improved from program implementers. They suggested that there was a need for **training in all aspects of data collection and use for district officials** as currently they need to outsource many tasks.

"District HMIS need to be trained on how to be able to use and analyze data. There is need to revamp the records/ data section of the district so that it can perform its duties such that instead of data being sent to Malaria Consortium for entering it should be entered at the district and a copy is shared with Malaria Consortium unlike today where the data is entered by Malaria Consortium and shared with the district" (Implementer 25)

Other implementers suggested that monthly meetings be held at district level and involving key partners from NGOs where the latest data and the next steps in its use and application are discussed. The key, it was suggested, is that **data needs to be both used and seen to be used on a regular basis** in order to stimulate more frequent and better use of data. One suggestion for how this could meaningfully take place was for trend data to be recorded, analysed and made publicly available. The view expressed was that this may spark the district to support those areas not performing so well.

"There is also need for monthly meetings at the district with Malaria Consortium staff to determine how data submitted in a given month is going to be use ... In order to improve the use of the data submitted, there is need to use data submitted on a monthly basis" (Implementer 25) "I think the only way data usage can be improved at district level is by comparing trends so that they

come out with a general report for public consumption and this report should show the performance of different areas and areas with underscore should be supported accordingly" (implementer 19)

1.4.5 What do users want regarding data use and feedback: VHTs, supervisors and implementers?

VHTs

VHTs with basic training as well as those with iCCM training **indicated that they receive little or no feedback on their performance** which, for some, was highly discouraging. Those iCCM trained VHTs involved in the CIDA pilot advised that while they too receive little performance based feedback they do on occasions receive some. On occasions this was in the form of an automated 'thank you' message following data submission while on others, in person thanks in response to paper based data submission or in appreciation for the work completed when collecting drugs was forthcoming.

'I do not receive any feedback and that de- motivates me and feel my concerns are not addressed' (13, basic, rural, poor network coverage, 4 miles from supervising facility)

'I have never received any information about my work it is only yesterday when the in-charge (of the health center II) called me and invited me for this meeting with you. For me I see the drugs being brought I am not informed prior' (15, rural, iCCM trained, paper-based, good phone coverage).

'After sending the report I get an appreciation message and that is all. We were not told during training how the data we send is relevant and how it is used' (31, iCCM, rural, poor coverage, electronic, 4 miles from HF)

Across all VHT groups the **desire for more performance based feedback** was apparent. While positive reinforcement and information relating to the specific context of the VHT's operation was seen as desirable, so too was prompt action in response to identified challenges. Some VHTs liked

the idea of seeing how they were performing against other VHTs and communities while others preferred the idea that they receive feedback just on their own performance.

'I would like to receive information where people talk positively about my work in order to help me build confidence in what I do' (11, basic, rural area, poor network, no supervision)

'If they address the challenges we put across then it would be more useful' (8, basic, urban, good network 5km from supervising facility)

'Once I am told about how I perform, it will motivate me to keep up the good performance or if am performing below standard I will work hard to be a better performer' (31, iCCM, rural, poor coverage, electronic, 4 miles from HF)

Supervisors

Some supervisors advised that information they would most like related to **general program performance and any new developments or innovations** they should be aware of. Others felt that the information they had already received during training was sufficient unless there were new developments in treatment guidelines for instance. In this last instance further training was an identified need.

'Information I have is enough, I got enough information during training. Except for new discoveries in science that show different treatment guidelines from the ones we follow today. With such new information, I need orientation workshops from District health department, Ministry of Health or Malaria Consortium' (Supervisor 18).

Implementers

The data considered most useful to implementers was:

1. Data that can help with planning of key activities and interventions such as variations in VHT activity in different areas as well as trends and lessons across other districts so that lessons can be learnt and applied.

"I would like to receive information concerning the comparisons and progress of other districts and gain experience from them on how they are handling different projects... I would like to receive a lot of information like whether 90% of all VHTs are submitting data ,the number of VHTs without drugs in stock, as this can help a lot for planning purposes" (implementer 24)

2. Data that is easily accessible online so that busy district officials who are moving around are able to access it easily.

"it would be easier and faster to see and get the information, because I am always on the move, up and down, so it (accessing data online) would be convenient for me" (implementer 24)

1.4.6 Implications

Data submission, run effectively, was seen by some VHTs as an opportunity to communicate challenges and have them met. If there is an understanding that data is being efficiently sent then there is likely to be a heightened set of expectations that an appropriate response will follow. A key example is drug stocks where if the need is communicated but there is little positive response it may in fact undermine the credibility of VHTs. This is likely to have consequences for VHT motivation. Expectations need to be managed as to how data submission will be responded to and, perhaps, credible explanations provided to VHTs –

both for their own understanding and to communicate to community members - as to when responses cannot be responded to despite the identified need. inSCALE should have a strategy for either solving or managing any challenges and performance gaps that are identified.

- Data submission as representing connectedness to the health system and role validation for VHTs represents a potential opportunity for inSCALE to promote the importance of VHTs in the process to both VHTs and the community.
- inSCALE needs to be aware of the different links in the information chain and that any skills deficits, shortfalls in equipment or power source may lead to a slowing in data flow and a raft of knock on problems. Measures need to be taken that involve the appropriate equipment and supplies being available where needed as well as training and refresher training for key personnel.

1.5 Current phone use and preferred phone characteristics

Summary of key findings

Use of Personal Phone for VHT Activities

All iCCM VHTs and supervisors used their personal phones for VHT activities. The functions were limited to calling and receiving calls from VHTs, supervisors, community, sending and receiving messages in the local language. Only two of the eight interviewed supervisors had received handsets from Malaria Consortium to enhance supervision of VHTs.

Desired phone features

Both VHTs and VHT supervisors described the best phone features as:

- Long battery life: both VHTs and supervisors wanted a battery that lasts seven days.
- In terms of size/weight, preference was for a small, light, portable phone.
- Regarding colour of phone VHTs preferred black phones while VHT supervisors had different phone colour preferences (green, silver, black, white, blue, maroon).
- Internet.
- Camera.
- Radio.
- Dual sim card to hold more than one network.
- Flash light/ torch for VHTs to use at night.

Access to Charging, Repair and Airtime

- Most VHTs charged their phones from the nearest trading centre with solar chargers at a fee of Ug. Shs. 500/= or diesel generator at a fee of Ug. Shs. 1,000/=, while most supervisors charged their phones from the health facilities or homes.
- Both VHTs and supervisors took their phones to Hoima, Kiboga or Fort Portal for repair; only 1 VHT and 1 supervisor took their phone to Kampala; only 1 supervisor took his phone to a nearby trading centre. Two VHTs and two supervisors had never repaired their phones.
- Airtime is available/ easily accessible; VHTs and VHT supervisors got airtime for personal phones from retail shops in their locality/ trading centre, although airtime is more expensive in remote areas. VHTs and supervisors with Malaria Consortium phones were given airtime. Supervisors got airtime at a personal cost ranging from

Ug. Shs. 10,000/= to 50,000/=.

Available/ preferred mobile phone network operator

MTN was the most available and preferred mobile phone network.

1.5.1 Use of personal phone for VHT activities

All (8/8) iCCM trained VHTs submitting only paper-based data used their personal mobile phones for VHT work. Mostly they used it to contact their Parish supervisor and the health facility to enquire about the availability of drugs, call fellow VHTs for help and advice on VHT work, community mobilization and to contact the Local Council Chairperson. The airtime was covered from their own pocket. Many also made their number available for members of the community to contact the in the context of VHT work.

'I use my phone as a contact where community calls to inform me of sick children. I also use it for mobilization activities. Others beep me and I call back. Airtime is paid at a personal cost. I use it to call other VHT members informing them of upcoming VHT activities' [Because of the proximity of his home to Health Assistant's office, much information is channeled through him to other VHTs] (2 iCCM, rural on main road to the neighbouring district, very good network coverage all year round with MTN, airtel, ORANGE and mango, ½ a kilometer from Sub County Health Assistant's Office).

Similarly, supervisors commonly used their personal phones in the course of their VHT supervision duties (5/8 supervisors).

'After training VHJTs, I gave them [VHT] my telephone number to call me for support anytime it is needed. iCCM VHTs call me, together with their peer supervisors. We discuss issues of drug management, stock outs and ordering, storage of drugs and accountability for the drugs in their care. Some VHT contacts are out of network area or off due to lack of charge on their phones, but most often I reach them. When I call and phone is not available, I ride there and find out' (Supervisor 18). 'I use it [phone] for supervision activities through calling VHTs to know that I am going to visit them' (Supervisor 21).

Two of the eight VHT supervisors in the study had received handsets from Malaria Consortium for VHT work. They reported using them exclusively for this purpose (2/8 supervisors).

'I have my personal phone that uses MTN and a VHT phone that uses Orange network. I use my personal phone for my other businesses and the VHT phone is strictly used for VHT-related work. It's mostly VHTs who call me but I also call them once in a while if need arises' (Supervisor 27).

1.5.2 Phone Functions Used

Most VHTs and supervisors used both VHT and personal phones mainly to make and receive calls. Other phone functions VHTs used were: send and receive messages in local languages and occasionally receives messages in English, retrieve contacts; calculator; clock, and calendar. Supervisors sent and received messages in local languages and English, retrieved contacts, used the calculator, clock and calendar and some used 'mobile money' and camera.

'I receive SMS but I don't send SMS because people don't read them and therefore I can't get immediate response so I opt to call. I also use the calculator and calendar' (10, female, iCCM VHT, paper data submission, good network coverage, 30 minutes walk from supervising facility, owns phone).

VHTs reported having difficulty learning the phone functionality and advised that it often took them some time. Some also advised that they have family or friends help them with using their phones and reading messages.

'He cannot write messages because he does not know how to use the message function on the phone and also does not know how to write using the phones buttons' (11, basic, rural area, poor network, no supervision)

'When I receive the SMS, my son reads them for me. The messages that I receive are usually in English. My son knows how to read them because he is in Senior Two now so he helps me and tells me what they are about. I also told him to teach me how to write them. My son reads the message and then interprets for me I don't know what happens after that' (15, rural, iCCM trained, paper-based, good phone coverage).

For sure using messages was a problem to me and took a lot of my time. Our common language here is Runyoro because Rugungu is very difficult to write while writing messages' (16, male, iCCM VHT, paper data submission, good network coverage only MTN, difficult and expensive to access supervising facility, owned phone but lost it in December 2010).

1.5.3 Availability of Phone

• Phone always on 24 hours

For the many VHTs and supervisors their personal phones were always switched on and always with them (8/17 VHTs and 5/8 supervisors).

My phone is always tuned on all the time and also moves with it wherever I am going' (13, basic VHT working in rural area with poor network coverage, 4 miles from supervising facility)

'My phone is always on may be when I am going to charge it. It charges for three hours and the power lasts three days. Even if you call me at midnight you will find it on I don't switch off my phone' (15, rural, iCCM trained, paper-based, good phone coverage).

• Phone on 16 – 18 hours a day (Supervisor 20, Supervisor 26):

For some supervisors (2/8), the phone was switched off only when they were sleeping.

Phone is usually turned on all day but he switches it off at night at 11:00 p.m. (Supervisor 20).

• Personal phone always on but VHT phone often off (Supervisor 28):

Only one VHT (14) and supervisor (28) said their phones were off most of the time due to very limited network coverage:

'Because of poor net work coverage, my phone is always off, I only put it on when i am in some place where I can receive some network signals, then after I have finished making phones calls I switch it off again to save my battery since they would be no network coverage' (14, iCCM, paper data submission, poor network coverage only MTN from Uganda and Vodacom from DRC, rural, accesses supervising facility by boat).

1.5.4 Desired Phone Features

Both VHTs and supervisors overwhelmingly nominated Nokia brand phones as the most suitable phone for VHTs and supervisors to use. They commonly indicated that Nokia phones are more user friendly and familiar to users, are more durable yet easy to repair when faulty and the battery life is good.

'I think a Nokia would be the best phone for them because it has a better display screen' (Implementer 19).

'I think the best phone would be a Nokia phone because I think it is durable, common and can be easily repairable in case it gets faulty (Implementer 24).

'I would recommend a Nokia phone because I have been using it and I find it user friendly, the functions are straight forward and its battery life is good' (Implementer 29).

The key features that phones should have according to VHTs, supervisors and implementers were:

• Long battery life of 7 days or more as some village had no electricity meaning that VHTs on occasions must travel to the nearest trading centres once a week to charge their phones (10/17 VHTs and 7/8 supervisors and 2/6 implementers):

'I want.... A long lasting battery that can take me a week without having to spend money ... on charging' (12, basic, rural, poor network coverage, no supervision).

'The strength of the batteries should be those that can take more than 2-3 weeks but I know if they are to be using these phones only to send data, they could last about 2 weeks so the longest battery life span that can be made would be the best' (Implementer 24).

• Size/weight

The desired phone size and weight was small/ light/ portable (5/17 VHTs, 5/8 supervisors and 1/6 implementers).

'A phone should be small to fit in my trouser pocket ...' (9, iCCM, paper data submission, good network, urban, 2 Kms from supervising facility, doesn't own phone).

'... small and can fit in my smallest bag' (15, rural, iCCM trained, paper-based, good phone coverage).

• Colour of phone

Black was the favourite colour across VHT and implementer respondents with many feeling that it would not look as dirty (6/18 VHTs and 2/6 implementers).

'It should be black in colour because black hides dirt' (6, iCCM, rural, good network, 2 ½ miles from supervising facility).

'These phones should be of dark colour because people in the villages are not good at keeping things clean since they have so many activities to work on like digging and dust on the roads so these phones may get dirty and look bad if they have other colours like white colour which gets dirtier easily if exposed to dust' (Implementer 24).

VHT supervisors on the other hand nominated a wide range of colours as their preference. These were; green (Supervisor 18), silver or black (supervisor 20, supervisor 26, supervisor 28), white (supervisor 21), maroon (supervisor 26), or blue (supervisor 21 and supervisor 30).

• Sim card preference

While some VHTs preferred single sim phones (2/17 VHTs) suggesting that dual sim phones used too much battery, overwhelmingly the preference was for dual sim phones (5/17 VHTs, 4/8 supervisors and 1/6 implementers). This reference was most commonly based on it enabling the user to alternate between networks depending upon which network was strongest.

'Dual sim drains battery so not wanted' (12, basic, rural, poor network coverage, no supervision). 'For me, a phone with one sim card would work but the one with two would be better because I may travel to another area where one network is not accessed so I could use the other one which has

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network there' (7, iCCM trained, paper-based data submission, rural, limited network coverage with only MTN and AIRTEL, 5 Kms from supervising facility, doesn't own a phone).

- Torch for use at night (3/17 VHTs, 2/8 supervisors)
- Camera/ video (3/17 VHTs, 2/8 supervisors)

'Should have a camera so that you can capture some photos of VHTs treating children' (Supervisor 18).

• Clear screen (1/8 supervisors).

'A light phone not a heavy one with a big and clear screen because I have eye problems and I don't see at night' (Supervisor 21).

- Radio (1/17 VHTs, 1/8 supervisors)
- Memory card (2/17 VHTs)
- Connected to internet (1/17 VHTs, 2/8 supervisors and 1/6 implementers)

'Since we are moving towards the modern world, I would also want a phone with internet ...' (Supervisor 20).

• Phones should be able to submit data (2/6 implementers).

if data is submitted electronically it could save them time and costs involved other than somebody bringing reports for example we have got weekly surveillance reports that are sent weekly and this is costly in terms of transport' (Implementer 24).

1.5.5 Access to Charging, Repair and Airtime

• Charging

Phone charging commonly took place at three locations: in the home, at the health facility, and trading centre. Most VHTs charged their phones from the nearest trading centre with solar chargers or diesel generators, while most supervisors charged their phones from the health facilities or homes. Encouragingly VHTs given chargers along with phones for electronic data submission in the CIDA pilot were, reportedly, using them. This was according to an implementer and therefore may have been assumed rather than witnessed.

a) Charges from home (VHT 11, Supervisor 18, Supervisor 26)

'My phone is never out of battery because I have electricity in my house' (Supervisor 18).

'All these VHTs (iCCM trained VHTs submitting electronic data) who were given phones were also given solar chargers which they use to directly charge their phones and this is accompanied by a lighter which is also used in their homes for light' (Implementer 17).

b) Charges from health facility (Supervisor 20, Supervisor 28, Supervisor 30):

Phone is never out of battery because he has 24 hour access to electricity and solar power at the health centre (Supervisor 28).

c) Charges from nearby trading centre at a fee of Ug. Shs. 500/= with solar power and Ug. Shs. 1,000/= with generator. (VHT 10, VHT 12, VHT 13, Supervisor 21, Supervisor 27):

'I take it to my friend who has a solar panel and I pay Ug. Shs. 500' (12, basic VHT working in rural area with poor network coverage, no supervision).

'We don't have electricity so I take my phone to someone who has a solar changer and I pay 500/=. When there is no solar, I take my phone to the video there and it is charged at 1000/=' [by video, VHT takes the phone to the person who owns a video hall and a generator to charge it] (15, rural, iCCM trained, paper-based, good phone coverage).

Repair

 Phone taken to district capital sometimes calling on personal favours to get it done (Hoima, Kiboga or Fort Portal (VHT 2, VHT 8, VHT 12, VHT 15, VHT 16, Supervisor 20, Supervisor 21, Supervisor 22, Supervisor 28, Supervisor 30)

'If my phone needs repairing, I give it to someone who takes it to Hoima Town to the repairer. Recently my phone got a problem and I gave to the person who operates a taxi to and from our village. I also gave him ten thousand shillings for the repairing charge. His transportation is free because he is my good customer and I give him fish at a discount sometimes' (15, rural, iCCM trained, paper-based, good phone coverage).

• Phone taken to Kampala (VHT 6, Supervisor 28):

'If my phone is faulty, I take it to the mechanic in Bukomero or in Kampala. But I prefer taking it to Kampala because there are experts there.' VHT sends his phone through taxi operators on Bukomero-Kampala road, either at a small cost or on friendly arrangement. If he has a cause to go to Kampala, he can as well get his phone repaired (6, iCCM, rural, good network, 2 ½ miles from supervising facility).

- Nearby trading centre (Supervisor 28)
- Never repaired phone with some feeling that when phone breaks or is need of repair it will have come to the end of its life (VHT 9, VHT 14, Supervisor 18, Supervisor 27):

'If the phone needs repair, I give it out and buy another. I don't believe in repairs because for a phone to start misbehaving [getting faulty], it will have served its life expectancy [served long enough as was determined by the manufacturer]. It now needs to be turned to a toy' (Supervisor 18).

Airtime

Airtime is available/ easily accessible. VHTs and VHT supervisors purchase airtime for personal phones from retail shops in their locality/ trading centre. Airtime is more expensive in remote areas, sometimes out of stock and always marked up. VHTs and supervisors supplied with phones as part of the CIDA pilot were given airtime though some reported that it ran out of airtime on occasions and users have to wait before it is refilled – presumably by the program administrators.

'The shops are always open so I can buy airtime even at midnight. But the problem that we have in the village is that for every 1,000/= worth of airtime there is always an addition of 200/= by the shopkeeper, so I buy the airtime at 1200/=. The shopkeeper always tells us that this is to compensate for his transport to and from the place where he buys it in Hoima. You know madam that our place down there is not easy to reach so we accept and buy. We cannot buy airtime from anywhere else because even if we climb up to this place [top of escapement] to buy airtime the price is still the same up to Kyangwali Health Centre III and beyond. I don't want to spend 4,000/= on transport to buy airtime of 1000/= so we let the situation stay as it is' (15, rural, iCCM trained, paper-based, good phone coverage).

'Airtime cannot be got all the time. There are some times when it not in the whole trading centre, and also you cannot get it during late night shopkeepers close their shops at around 8:00 p.m. and go to their homes. (Supervisor 20).

'For my own phone I buy airtime from anywhere while for the VHT phone, Malaria Consortium provides the airtime' (Supervisor 27).

Supervisors get airtime at a personal cost ranging from Ug. Shs. 10,000/= to 50,000/=:

'About Ug. Shs. 20,000/= worth of airtime is spent on VHT work, and about Ug. Shs. 30,000/= on my other personal calls' (Supervisor 18).

1.5.6 Network operators used and why

All supervisors were on MTN network because it has the strongest signals of all networks and sometimes is the only network available in their area. Further, most people they contact are connected to MTN.

'MTN is better for me; all the time coverage is available' (supervisor 22).

'... I think it [MTN] has a bigger coverage ... than other networks which cannot be reached in some other rural areas in Hoima District' (Implementer 24).

'I would advise them to use either MTN or orange because they are well covered here and it is my opinion and which is not based on facts but just estimations' (Implementer 29).

1.5.7 Implications

- Both VHTs and supervisors use mainly one phone function (calling and receiving messages). Very few send and receive messages, especially in English.
- VHTs and supervisors repair phones at places they feel can provide quality services. With regard to giving VHTs and supervisors mobile phones, there is need for inSCALE to set up a central system/ place for maintenance/ servicing/ repair of VHT mobile phone; phone maintenance.
- VHTs initiate most communication between them and supervisors. inSCALE needs to set up closed user caller groups not only for Orange but also MTN for to increase communication between VHTs, between VHTs and supervisors, and between supervisors. Maintaining phones supplied for VHT work with airtime is a key issue.
- inSCALE should provide dual sim card mobile phones to increase options of network coverage though needs to consider the feasibility of such an arrangement given that user groups would need access to both networks if the advantages of a multi network phone are to be felt. This would have cost implications.
- Use of mobile phone with videos and cameras to record VHTs treating sick children that can be reviewed by supervisors at a later date (during supervision visits) to check whether VHTs are following procedure. VHTs can also discuss recordings among themselves.

Section 2: preferred phone and charger characteristics

2.1 Phones liked most and why?

There were a wide range of views expressed in groups and consensus was rare. In terms of brand and type the **nokia** phones were the most commonly viewed positively across VHT, supervisor and implementer groups. The main reason cited was familiarity with the functioning. The following comments from a supervisor was typical.

"For me Nokia is okay because I am used to it and know how to use very well compared to all the rest" (S8)

Other reasons given for liking Nokia phones were that they are easy to use, have a good battery and they break down less commonly than the other phones presented. It was also noted – in the context of the Nokia C1 - that the connections are more easily available so more outlets can charge them – a key issue for sustaining use in the community.

"Nokia C1 because it stores battery since it has one line, its functions are easy to understand and the charger pin is commonly available".(V7) "It is easy to read and every one can operate it and use it for communication" (I12)

Other respondents, though less commonly and enthusiastically than those who preferred Nokia, expressed a preference for the Samsung and Tecno phones. Those that liked the **Samsung** felt they were easy to use and commonly saw the slide feature as helping to protect the phone and make it more durable.

"I like a Samsung because it has a door [the upper slid part] one can slide open and close. This door protects it from the rain and dust". V056 (B6)

Those that preferred the **Tecno** tended to do so due to its size. It appeared to be large in size from the display photo used which was seen as beneficial in terms of the screen being easy to read from, the key pad easy to operate and in terms of not easily losing it.

"I like this phone (Techno) because it has big screen and the words will appear big and readable. Besides the buttons are big the numbers on the buttons are clear" (V2) "Because it is big [TECNO], you feel it in the pocket hence cannot easily lose it".(V3)

Familiarity seemed to breed confidence in the phone respondents had most come across and the most common and therefore the brand inspiring most confidence is **Nokia**.

2.2 Phones liked least and why

No respondents across the groups expressed a particular dislike for **Nokia** phones. **Samsung** were the least popular followed by **Tecno**. **Samsung** phones were disliked by some as they were considered tricky to use from an operating language point of view. Others thought they were delicate with some saying they appeared like a 'toy' (4 p. 11). Others felt the slide could easily break and the charging system complex and for that reason it was hard to find a battery charging outlet with the right connection when out of batteries. Others even felt that the slide could use airtime.

"The samsung phone has English that is mixed with Chinese, which is not easy for me to understand" (V7)

"I am not used to it and the slide which you push to talk can easily get broken" (S8) "I don't like the Sam-sung because it looks very delicate and its charger is rare to find should be out of battery and you never carried yours along" (S9)

Those who didn't like the **Tecno** phone cited its size as an impediment claiming it was too big. This may have been from the photo used in the display which wasn't proportionally in scale with the other photos. Nevertheless many felt that due to their lack of familiarity with the brand people were not comfortable using them. As familiarity and confidence were such key features it seems clear that the brand of preference is **Nokia**.

"These Techno phones are not common and people in the community may not know how they work and this may pose a challenge to them since if they got a problem with its operation, there is no one to run to".(S11)

Preferred phone brand: Range of brands but most emphasised familiarity and preferred Nokia

Suggestions / recommendations: Nokia

Key discussion points: Which is the best Nokia to go for considering the need for user friendliness, battery life and serviceability?

2.3 Single or dual sim phones?

Across the respondent categories the majority view was that having a dual sim phone was preferable to a single sim. Poor network connection was continually cited as a challenge and having a handset with dual network capacity was identified as a key means of countering this. It was also felt that it represented a practical way for keeping ones personal phone line and ones work phone line together to aid convenience. Basic trained and iCCM trained VHTs as well as supervisors agreed.

"These days net work coverage can be challenging as it is on and off, so in case you are in an area where there is poor Net work then you can put in another line of a different Network" (S11)

Those VHTs submitting data electronically also felt the dual sim was a better option as the supplied phone was Orange network and commonly they were on other networks meaning they could cover a wider reception area with one handset.

"Two lines are better because Malaria Consortium dictated our lines to be on the Orange network yet some of us were on other networks. So the double line phone will solve the problem"(V3)

The preferred model of dual sim phone was the Nokia C2 and this is where the implementers added their voice. Otherwise citing many of the same reasons as others who preferred dual sim phones they felt that the Nokia with its greater reliability and convenience in terms of parts replacement was a better option.

"Nokia C2 would be very good for supervisors because they can use more than one sim card in case the network for a particular operator service is not stable and even Nokia batteries can easily be replaced in case the battery got a problem" (110)

In addition it was felt by some that a dual sim card carried prestige and would add to the status of VHTs. Some also felt that it was more convenient to have a single handset for the practicality of carrying and storing it – especially for female VHTs and supervisors who were considered less likely to always have available pockets.

"As for us ladies, moving around with two phones might be a problem since in most circumstances our clothes do not have pockets".(S9)

Some nevertheless preferred single sim phones. Reasons given for this preference were that dual sim phones consume too much battery and when charging points are not commonly available this is a key consideration.

"Most of these dual sim phones take long too long to be charge fully unlike the single sim phones. The dual phone charge may stay on for a maximum of three days while the single sim phone the charge may stay for at least a week V119".(I12)

Some also felt that it may be too complex for VHTs and it will be confusing. It should be noted that this was an implementer's perspective and this concern came neither from VHTs themselves nor supervisors.

"I like Nokia C2 single sim because if it is a dual sim, it will confuse the VHTs, you find instead of using line one h/she is using line two".(I12)

Overall it seems that a dual sim phone is preferred as long as the charging is manageable and the operation is workable by all.

Dual or single sim: range of views but most prefer dual sim.

Suggestions / recommendations: dual sim but must be easily chargeable and user friendly.

Key discussion points: Is a dual sim phone cost effective and easy to maintain, use and service?

2.4 Potential identification of provided phones

All FGD participants unanimously agreed that any phones provided for the VHT program should be identifiable. They felt they should be easily identifiable in order to provide a deterrent against theft.

"It is good to be marked 'VHT phone' because sometimes phones are stolen when they are taken for charging. So even if this phone is good looking it cannot be stolen because no one will buy it. Everyone will know that this is a VHT phone"(V2)

The key they felt is that this identification should not be easy to remove and there were a number of suggestions made in this regard. Some felt that the acronym 'VHT' should appear on the casing of the phone and others suggested that 'VHT' or 'VHT supervisor' should appear on the screen when turned on or as 'wallpaper' while the phone is in operation. Regardless of how the phone is to be branded, many emphasised that it is essential the phone be branded both internally and externally

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in a location specific way to ensure it was traceable and identifiable even if the outer casing was tampered with, removed or replaced.

"If you switch it on and it tells you welcome VHT so and so, it will help me because in case it is lost and found it can be brought to me direct without having to first announce for the lost phone" (V2) "It should be on top and the inner parts of the phone. This will avoid changing the housing and stealing the phone" (V3)

An added benefit of branding a phone in such a way was felt to be that it would aid the identification of VHTs and increase their status. By doing so it was felt by some there would be an incentive to use the phone for its primary purpose and that there would be less misuse of the tool.

"Even having a VHT marked phone brings you respect from the people in your community" (B6) "It reduces the misuse for example if the phone is clearly labelled, even children at home cannot play with it they know that is the phone for VHT job"(I12)

It was also noted that it is important when branding the phone to also brand the battery and charger as they can be commonly swapped when taken for charging.

Phone branding: all respondents suggest phones should be branded

Suggestions / recommendations: phones to be branded inside and out so they can still be identified even when tampered with. Battery and charger to be branded as well.

Key discussion points: what is the best way to mark phones inside and out? Is there an opportunity to promote collective identity of VHTs? How can the branding be made coherent with the rest of the VHT strategy?

2.5 Anticipated problems using phones

There were a number of anticipated challenges relating to the use of phones for VHT work. These fell into the broad categories of poor network access, lost, stolen, damaged or sold phones including the fear of this happening, challenges with charging, user friendliness and the need for training in use, and finally, the use of phones by VHTs and the community they serve.

Many participants cited sporadic network as a challenge to any program seeking to utilise mobile phones in Uganda. In different areas different networks are more effective. This may represent a challenge to a program such as inSCALE that eventually wishes to scale up nationally. It is likely that there will need to be a combination of network providers engaged in order to ensure coverage.

"Net work is a problem in some parts of Kiboga District especially orange network is so poor, there are some VHTs I know who when they want to send their data on the phones, they have to stand in specific positions and places or else they may not get the network" (S11)

Many groups discussed the challenges of keeping phone batteries charged. The main issue was having access to electricity to charge the battery but also the cost of both the charging as well as the transport to the place where batteries can be charged. Associated issues discussed were ensuring phones have batteries that can hold a charge for a reasonable length of time and that new phones

often have batteries exchanged for old ones by unscrupulous vendors. While branding phones may be an approach that addresses some of these problems so too may be the provision of solar chargers (see next section). Regardless of the approach adopted it is evident that there needs to be an overall policy of phone use developed for inSCALE that incorporates the issue of charging.

"Charging will be a problem because it necessitates paying shs. 500/- each time you are charging in addition to moving long distances in search of a place to charge" (S9) "Sometimes when you take a phone for charging, you find that your battery has been exchanged and you are given fake battery which cannot last for two days" (B6)

Many respondents were concerned about the user friendliness of the phones provided and that there should be training in their use no matter which phones are eventually adopted. There was some anxiety expressed that phones may be provided and VHTs and supervisors would be expected to use them straight away. It was stressed that training is essential as there are varying levels of familiarity and competence in the use of phones.

"If not all VHTs are oriented on phone use some may have a problem operating the phone itself V112".(I12)

Many respondents identified that phones were a valued commodity and therefore liable to being stolen and on occasions sold. They also stressed that given their use and conditions in which they are likely to operate and be stored there is a real risk of damage. It is also likely that some will be legitimately mislaid from time to time.

"There is also a challenge of phone theft and loss. A supervisor may lose the phone or this phone may be stolen from him/her, but also there is a possibility of the supervisor selling it" (S8) "I may leave this phone at home and the children play with it and end up spoiling it" (2)

Given these risks it was suggested that many VHTs and indeed supervisors may have a level of anxiety rating to loss damage or theft of a provided phone and any consequences that may follow. Rather than being a negative for the program there was a suggestion from one of the implementers that such anxiety can be harnessed for the benefit of the program. The suggestion was that this anxiety may lead to an increased sense of ownership and responsibility regarding the phone. Emphasising this point (i.e. the opportunity the phone provides and the responsibility it comes with) may be the best approach to take.

"It will create tension among the VHTs since there is already phone loss so they will have that fear and tension" (I12)

However one other respondent found no problem with tension and fear and argued that, "When there is that tension and fear there will be a sense of responsibility and these phones will be handled well. Those days someone could lose a register and they don't mind but now if they lose that phone and there is punishment then they will be responsible enough". (112)

While suggesting there may be 'punishment' for a lost or damaged phone is a bit extreme it may nevertheless be useful to highlight the 'consequences' of such a scenario. One approach may be to require VHTs who no longer have their phones to travel to the next village and borrow another VHTs phone to submit reports. This may prove to be a useful incentive in the maintenance of phones. Even if this exact strategy is not adopted it would appear that there needs to be a policy regarding the response to loss or damage to phones.

A further challenge highlighted by VHTs was that of the shared ownership of the phone or at least the perception of this. If a phone is provided for VHT work and the VHT member is a nominee of the community, it was considered likely that some community members may view any tools provided for VHT work as for their use as well. Reserving VHT phones for the exclusive use of VHT members may cause problems especially when community members learn that they have closed user group capacity. A policy on the use of phones is therefore required to ensure VHTs have strategies for dealing with such scenarios.

"People may come asking for help to use the VHT phone and say it is a group phone and may hate you if you refuse to give to them given the fact that they are the ones who selected you in the first place to be given the phone" (B5)

The potential for conflict within VHT households provides further evidence for a clear policy on phone use. A concern raised on a number of occasions but always by female VHTs was that unless the purpose of the communication is clearly explained and understood by the community then there is the potential for domestic issues to arise. Scenarios that could cause conflict at home were identified as the provided VHT phone being called late at night and the female VHT feeling obliged to answer it, denying ones husband use of the phone yet using it for VHT business and having to move around to make calls due to poor network coverage. It is apparent that there needs to be a clear explanation for the use of any phones supplied including material that may be used to explain this use to friends and family of VHTs in order to manage expectations and not rouse suspicions.

"My husband may take my phone and use it to call his friends not knowing that it is only for VHT work. This could cause misunderstanding in the home especially when I tell him that my phone is only to be used for VHT work as he may think am lying to him "(V2) "I am scared these VHT phones might bring problems in our homes especially for us female VHT members who might want to pick calls elsewhere for purposes of accessing Network...I hope this does not cause separation and divorce to some of us" (V4)

Anticipated problems regarding phone use: poor network access, challenges with charging, user friendliness and the need for training in use, lost, stolen, damaged or sold phones and the fear of this eventuality and finally, the use of phones by VHTs and the community they serve

Suggestions / recommendations: consider a combination of network providers, brand phones and provide users with a independent power source such as solar chargers, provide training in the use of supplied phones to those required to use them and develop policies on the use of supplied phones which incorporate elements relating to who is to use them and when, their storage and charging and the consequences of loss or damage. The policy should take care to emphasise the opportunity the phones represent to users and as much as possible encourage responsibility. Consideration should be given to how the policy is communicated to VHTs, supervisors and the community.

Key discussion points: approach used to communicate to phone users. Suggest a 'strength

based approach' where skills, opportunities and accountability are emphasised rather than skills deficits and negative consequences. The need for a strategy to provide support and maintenance to whatever is provided (as with chargers)

2.6 Features most liked about chargers

The feature most liked in the charger that was presented to FGD participants for comment are its multi-purpose nature and the benefits of it being a solar charger that is portable. That is, the fact it was part of a package that included multiple phone connection pins, a lamp, a box and that it was mobile as it could tap into its power source from multiple locations was well viewed. The cost saving associated was a key factor – both in terms of saved cost of travel for charging and no longer being a need to purchase paraffin (see below).

"what I like about the charger, is that I would be able to charge both my phone and light without any difficulty since it is portable ,one can move with it anywhere and charge".(V4) "It will save me the burden of incurring transport and charging costs leave alone reaching the person responsible for charging and telling me that I do not have the pin to charge your phone" (B6)

The included lamp was seen as of particular benefit. The need to work at night was identified by participants as was the accompanying challenge of finding an adequate light source. The lamp provided with the charger meets this need. It also brings two further benefits. These are according the owner some added standing and status¹ and reducing the need for money to be spent on paraffin for lamps.

"If I have got a sick person at night I can use the lighter and therefore I cannot complain that I have no paraffin or match box to help the patient". (Having the lighter in the house and using it at night was seen as upgrading in terms of status since there are no more people in the community with such lighters).(B5)

"where I stay as a VHT , there is no electricity, so these chargers would save us costs of buying paraffin since one could use the lighters." (V4)

2.7 Features liked least about chargers

There were several identified challenges with the presented charger. The most commonly expressed was that it will only work (presumably) in fine conditions and therefore, when it rains, there will still be a need to travel and pay for charging. Related to this concern was that the charger cannot hold a charge and must transfer power to the battery of the phone at the same time as it is receiving the power input (i.e. solar energy). The charger is therefore a conduit of charge rather than a power storage unit. If a charger could be supplied that could hold charge and therefore be used to charge phones after dark then this was seen as advantageous for a number of reasons. Firstly this would make VHTs more mobile and flexible as they would not have to watch over their charger all the time, secondly, and related to the first reason, there would be a lessened likelihood of theft of the charger as the VHT would be able to look over the charger when most convenient to them rather than

¹ Identified in earlier inSCALE reviews as a key component of VHT motivation and retention. It is also in the inSCALE conceptual framework.

having to keep their phone charged all the time, even when busy, and therefore run the risk of turning their back and having the charger (and phone) stolen.

"The charger might not work during the rainy season since it depends on sunshine. It might as well be stolen when left out in the sun unless you keep there and watch" (S9) "For me the challenge with this solar charger is that it does not store battery hence it does not work during the rainy season V002" (V1)

Other challenges identified were that neighbours would want to charge for free (though presumably this is offset by the benefits), that pins quickly become faulty and that it doesn't appear to be particularly durable. This last point was especially a concern when it came to storage. These issues highlight the need for the most robust charger possible to be provided, with sturdy pins and a strong storage box.

"in terms of storage, the charger looks to be delicate and can easily break so any bad mistake while trying to keep it would lead to destroying it"(V4)

"this charger comes with many pins that would necessitate changing depending on the type of phone to be charged, I think regular connecting and disconnecting of these pins would spoil the charger port and once it is spoilt, then the whole solar panel will be useless".(V7)

Some participants who had already been provided with chargers explained that previously they had been advised not to use the chargers for other phones. If multiple pins are provided using the charger for charging other phones than the one provided is being actively encouraged. In the context of a project conceptual framework which includes the aim to, where possible, cater for the basic needs of the volunteer workforce that makes up the VHTs, providing such an opportunity for generating some side income seems ideal. If this is an approach that is to be pursued it seems essential that guidelines are developed and sensitisation takes place for the use, management and potential of the charger both for its primary function (as a tool for VHT activities) and its potential secondary function as source of income.

"...we were stopped from using the solar charges to charge other phones and we were only given one pin to only charge the Nokia phone we were given."(V1) "since this is new technology, I think there will be a problem of understanding its usage but with constant training, I think we shall be able to learn how to use it properly"(V4)

If such an approach is adopted the damage to pins through inappropriate use may be avoided and host of secondary benefits, including, potentially higher rates of VHT retention, may follow.

Solar charger and light: potential seen in terms of cost saving and practicality

Suggestions / recommendations: distributing chargers that can hold a charge, that are sturdy and durable and are accompanied by strong pins and a storage box. Training and guidelines in use both as tool for VHT activities but also as potential tool for revenue generation to be provided

Key discussion points: cost benefit of the expense of solar charging packages, the need for a strategy to provide support and maintenance to whatever is provided (as with phones)

Section 3: innovations to increase communications

3.1 Perceived benefits and preferred content of communication between VHTs and their wider support network including supervisors through provided phones

Key themes that emerged relating to the benefit of being provided with phones were improving communication, reducing stress through sharing problems, gaining information, saving time and money and increasing VHT credibility. In relation to saving time and money it was felt that VHTs and supervisors would be more likely to contact each other as they would not need to spend their own money on air time, they would need to travel less as much discussions could occur over the phone and that activities would be more efficient as advance preparations could be made:

"This innovation is very welcome because we are in the changing world where communication is being eased through ICTs. So I think VHTs and supervisors can communicate on a regular basis on matters concerning VHT work without having to move long distances hence improving their relationship at community and sub-county level." (I10)

A supervisor FGD felt that providing phones could aid the credibility of the VHT through greater flow of information. For example a VHT may not treat a child with fever for malaria based on a negative RDT but the facility may treat the child as they do not have RDTs. This inconsistency can undermine the VHTs credibility but could be avoided if the VHT and the facility could communicate easily regarding the child.

Themes around the content of the communication included:

- Getting advice from supervisors and other VHTs and talking through problems and challenges,
- Monitoring drug supply and other commodities,
- Communicating about referrals, complex cases and disease outbreaks,
- Being informed of meetings, report deadlines and trainings,
- Organising community mobilisation and supervision visits

Getting advice and talking through challenges: Being in touch with supervisors and fellow VHTs and being able to discuss challenges and issues at short notice was the most commonly cited benefit of being provided with a phone across VHT, supervisor and implementer groups (though it does seem that this sort of communication occurs anyway to a certain extent without phones being supplied). It was felt that this communication would help relieve some of the pressures of being a VHT and many respondents felt that there was significant potential for improved performance through enabling a more user friendly and accessible communication channel between VHTs and supervisors.

"We have benefited a lot because you may get stuck and call a supervisor or a fellow VHT member who can advise you accordingly" (V1 – received a phone from the pilot) "VHTs do a lot of work that puts them under pressure but if they can call each other or call us, then the can share some of the problems and we find solutions to the problems". (S9) **Monitoring drug supply and other commodities:** It was felt that improving communication between VHTs and supervisors would allow greater monitoring of drug supply and other commodities: *"These call and texts should be about health matters such as informing the health centre about drug shortage".(S9).* Improving communication between VHTs was perceived as advantageous as it would allow VHTs to identify who had drugs in stock and share supplies: *"We stay further apart from each other, if I run out of drugs I can call my fellow VHT to find out if he/she has some drugs and if they are there, then I make a journey knowing I will get what I want but not to go blindly without knowing whether I will get what I want or not". (V2)*

Communicating about referrals, complex cases and disease outbreaks: Topics that were considered useful to communicate about at short notice included letting the health facility know that a referral had been made and providing background information on the referral, providing information about disease outbreaks, discussing complex cases and ensuring the involvement of authorities in domestic violence cases: *"sometimes before I refer any one at the health centre, I need to first involve the LC chairman and get his advice especially on matters related to injuries resulting from domestic violence." (V7)*

Being informed of meetings, report deadlines and trainings: Being notified of upcoming meetings, events and report due dates was also widely viewed as a key benefit of phone communications as this would improve VHTs abilities to prepare for meetings: *"When we have workshops, a colleague can inform me before and I prepare. It is better than the past where one could approach you abruptly when you are in the garden and calls you for a meeting".(V3)*

Organising community mobilisation and supervision visits: Some VHTs thought the phones could help improve the efficiency with which communities were mobilized by XYZ. Some supervisors felt that being able to call ahead to ensure a VHT was both available and anticipating their supervision visit would save time: "There are times when I go to supervise VHTs and do not find them in their homes, this is because they would not be aware of my coming to supervise them, so if we are given phones, I can always call these VHTs first before I go to supervise them"(S11) and that regular contact would allow them to identify which VHTs needed more support: "supervisors will know which VHTs need extra support as well as monitoring VHTs for better performance."(I10)

Benefits and preferred content of calls: benefits widely acknowledged and a range of content identified.

Suggestions / recommendations:

Key discussion points: how can the availability of the calls be designed in such a way as to maximise positive benefit? What will the parameters on the communication activity in terms of those who have access to the communication, when and for how long?

3.2 Desirable frequency and timing of calls

While this question was only put to the iCCM trained VHT groups there was nevertheless a consensus of opinion that the number of calls should depend on urgency and need.

"Speaking from experience of having a phone I use it to communicate any time with other VHTs. We inform each other of new developments. So the contacts should be as many as needed" (V3) "Any time there is need because people can fall sick any time" (V2) Some did feel that they would need to be relatively frequent and at least weekly to be meaningful suggesting that frequency and regularity is the key.

"For these contacts to be more useful and meaningful, they will need to be more frequent on a daily and weekly basis so that we can get know about certain programmes like seminars, trainings and workshops ".(V4)

There were some differing views expressed relating to the availability period VHTs should be expected to be accessible for these calls. Some felt that the ideal time should be during traditional working hours and ideally up to 7pm but more realistically until 10pm.

"Because of the nature of our work, these contacts should stop by 10:00PM. This is because we also need time to rest. We could have stopped at 6:00PM but life's illnesses occur and dictate that we help up to 10:00PM".(V3)

Others felt that the job, despite being voluntary, carries responsibility. Having signed up to the position in the knowledge of this responsibility, the view expressed from this perspective was that VHTs should effectively be on call.

"We committed ourselves voluntarily to serve the community. The phones we have are used by all people; community members know our numbers so they call. One parent called me past midnight. It was an emergence. So phones should be available all night".(V3)

Frequency and timing of calls: dependent on urgency and need though frequent enough to have a positive impact. Timing best in working hours and evening though some felt should be on call. There are some sensitivities relating to the trimming of calls in the evening and it causing problems for personal relationships.

Suggestions / recommendations: semi regular contact in working hours

Key discussion points: how should the timing and frequency of calls that is desirable be communicated to VHTs and supervisors?

3.3 Impact for implementers and supervisors if they were to be provided with phones

If implementers (i.e. district health personnel) were to be provided with phones it was felt it would enable them to more closely monitor disease spread and general health in the community. Such support would seemingly be most welcome as there are not the funds currently available from the district.

"This will help so much because the office of the medical director is financially incapacitated so if phone are provided it will act as an avenue to have a picture of what is going on in the field with minimum cost".(112)

"One of our roles is to see VHTs perform effectively so if they are given phones, then this will enable us to evaluate their performance plus that of their supervisors since we shall be able to communicate with them on a regular basis and find out how they are doing their work."(110)

Supervisor groups suggested that if provided with a phone to facilitate communication with VHTs then they would expect communication to become more regular and easier and lead to a greater bond developing. It was also thought referrals and the provision of advice as well as logistical and

commodity needs would become simpler and more efficient. It would also, it was felt, ease supervisor's travel burden.

"This strategy will motivate supervisors because they will not have to move a lot during supervision but rather communicate on phone and do field supervision once in a while" (110) "Communication would be improved and even made easier because sometimes you may need to talk to the VHTs to discuss with them their challenges but you don't have any way of doing it since some VHTs do not own phones, but if they are enabled to have phones it will help a lot"V103." (S11)

The counterpoint to the suggested convenience and time saving providing phones represents was the view that supervisors may come to rely on them and be reluctant to visit VHTs in the field.

"it might bring laziness in the supervisors they may not go the VHTs because they will depend on the phones".(I12)

3.4 Potential challenges to communication

Many challenges identified related to the specific use of phones and is addressed in section 2.5. These challenges commonly concerned damage, theft, airtime, charging, network coverage and communicating how phones are to be used by VHTs and supervisors.

3.5 Support requested (needed and wanted) by VHTs with basic training in lieu of phones

Many VHTs with basic training requested assistance with items that help with their job. The most common suggestions were for bicycles, gumboots, raincoats and t-shirts and even VHT badges. If they helped in the recognition of VHTs as serving in that role then this was even more desirable.

"The ICCM trained people are respected but for us (basic trained) we are not. If we are given something to identify us like badges and T-shirts it would be good" (B6)

Other VHTs were more direct in suggesting what was really required was financial support. This took a number of forms. Some felt that they should be given an allowance for their work while others felt that there should be a better system of transport refunds in place for their work given the burden of travel they endure in their role. Others still suggested that if they need to gather members of the community (as they do from time to time to avoid paying to move from house to house) then 'sitting allowances' are demanded for attendance. This is seemingly a major aspect of mobilisation at community level and will need to be considered in the design of the community monitoring innovation.

"When we call community members, they always ask for sitting allowances. But again the issue of transport comes in again because it would be easier to facilitate one person to move from one home to another than facilitating the whole village"(B6)

Some VHTs with basic training felt that as volunteers they and knowingly signed up t the program and it was therefore inappropriate for them to be asking for allowances. The suggestion was made that 'in kind' support would be welcome though in the form of items such as flour or salt.

"for allowance we were trained to work for free and whoever needs an allowance should stop being a VHT".(B5)

"when we talk of allowance we don't mean cash; it could be inform of giving us soap, salt or lunch" (B5)

There was also a call from some VHTs for additional training opportunities in iCCM so they too could get the benefits that come with it. Some said that there are not at resent nough iCCM trained VHTs to meet the need while others suggested that they simply should be given an opportunity based on their performance and no discriminated against due to their educational level achieved. There was the suggestion that there is a double discrimination process at work here. Many of the VHTs with basic training that acted as participants were women and they suggested that they were under represented as iCCM VHTs. The implication here is that as women were less likely to have the educational opportunities than men now they were missing out on the chance to serve the community through providing iCCM. Man felt that despite being less educated they were better suited to the role and more conscientious than many that had been selected ahead of them.

"For me I suggest that even the less educated should be considered for training in iCCM instead of selecting only those who are literate, yet they cannot deliver services. This will motivate us so much especially we the women who are less educated" (B5)

There was a concern raised by VHTs that those with basic training were struggling a little for credibility in the community in the face of the perception that those trained in iCCM were of more value. Two main suggestions were made to counter this. The first is that those with basic training be provided with visual work aides that help communicate information but also signify to the community their connectedness to the health system. The second was to work with LCs to generate local support for the activities of all VHTs including those with basic training.

"Usually when we are educating people, they tend to disrespect us saying that we don't know what we are talking about and we never learned. I am requesting that if you could give us written educational material in form of pictures and notes so that when we educate them and they are looking at the steps or pictures they would believe in us" (B6) "If you could please advise the chairmen local councils to also get involved in this or educate them on what is going on. Sometimes when we call for the health education meetings the chairmen always ask 'you are calling the meeting as who?' and this causes a misunderstanding" (B6)

If the inSCALE project is able to provide some sort of support to VHTs with basic training then this would clearly b well received. What may be easier to implement would be incorporating key messages relating to the value added by VHTs with basic training and affirmation of their role in any community sensitisation. It is clear that this sensitisation should have a central element engaging with LCs.

Support to VHTs with basic training: in kind support or visual job aids which signify role welcome. Community sensitisation as to their role and the value they add essential.

Suggestions / recommendations: community sensitisation to incorporate the role of VHTs with basic training and concentrate on generating support and respect for their work – especially from local leaders.

Key discussion points: what sort of support can the inSCALE project afford to supply to VHTs with basic training?

3.6 Specific communication activities and their usefulness, motivational properties and challenges

	Potential impact on performance	Potential impact on motivation	Potential impact on other activities	Acceptability and feasibility
Someone from facility calling to see how you are and asking if you have problems	 Supervisors cannot gauge when a call is needed so calls may not be useful Supervisor may call when there are no problems Supervisors may not act on information VHTs provide this will reduce impact and be de-motivating 	 VHTs may feel they are called as they are not doing their job An unexpected call may increase VHT pressure as they are not prepared Call may be intimidating Contact makes VHTs feel valued and increases community status 	 Supervisors may feel there is less need to make a physical visit VHTs may lose their general pro-activity 	 Time and resources intensive VHTs may not be able to articulate problems over phone Call may be at a bad time and if the VHT is not available they may be thought of as a non- performer
Someone from the facility calling to see how you carry out a specific task and suggesting ways to improve	 Could improve/maintain treatment quality for difficult tasks Supervisors cannot gauge when a call is needed so calls may not be useful This type of supervision cannot be done over the phone as tasks need to be seen 	 Reassuring for VHTs and makes them feel trusted and appreciated Improved performance is motivational An unexpected call may increase VHT pressure as they are not prepared 	 Supervisors may feel there is less need to make a physical visit VHTs may lose their general pro-activity 	 Time and resources intensive VHTs may not be able to describe how they did a task over the phone and supervisors may not be able to explain complicated tasks VHTs may deceive the supervisor or only want to talk about tasks they do well

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Someone from the facility calling to discuss the last child you saw and giving you feedback on what you did	 Some suggestion that it could improve performance but few data available 	 Motivational if their discussion impacts on the health of the child or improves performance VHTs may feel they are being exposed as poor performers An unexpected call may increase VHT pressure as they are not prepared 	As above	 Time and resources intensive VHT may not remember the last child they saw Supervisor may call at bad time when the VHT does not have access to their records
Someone from the facility sending you a 'text message of the month' with tips and advice for your work	 Knowledge/reminders could improve performance especially as can refer back to messages Content may not be relevant at the time they are received and may not focus on VHT needs As only per month may have minimal impact As messages need to be short they 	- Could motivate and inspire, especially if gives acknowledgement of a job well done	None described	 Difficult to determine content of messages (role of supervisor unclear) VHTs may not check/read messages (time constraints, forgetfulness, messages too long) VHTs may not be literate, may not understand the language or may have poor eyesight Technical issues may cause problems (e.g phone coverage)
Being able to call someone at the facility when you have a problem Being able to call the facility to say you have referred a child	 Allows access to advice that is relevant and timely; especially in emergencies Could improve drug supply Impact on child health/referral rates but not directly on VHT performance 	 Could motivate if action is taken or performance improves Supervisors can be rude and unhelpful which is de-motivating Would be de-motivating if they were unable to reach anyone or if action was not taken Ensuring good referral would be motivational as their patients would get preferential treatment and VHTs would feel listened too and respected De-motivating as it is a duplication of 	None described	 Supervisor may not be able to solve the problem (supervisor unavailable or lacks capacity/resources) or may not feel it is their responsibility Supervisors may not be available (phones off, no time, out of facility) None described

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		 the referral form De-motivating if they do not get feedback on the referred child 		
Being able to call	- Could assist in managing drug supplies	- Liaising with supervisor more	None described	None described
being able to call		S .	None described	None described
another	as can find which VHTs have medicines	motivational		
VHT/peer	- Would improve communication during			
supervisor	mobilization activities			
	- Peers may not be able to provide			
	technical guidance/content value and			
	VHTs already liaise with facility staff			
	- Peers easily contacted in person			

A: Someone from the facility calling to see how you are and to ask if you have any problems. Useful?

• Recognised by some VHT groups as an opportunity to share ideas, talk about problems and get feedback (3 of 8 in V4, one in V7, one in B5)

"A health worker calling me from the facility would give me chance to explain what ever problem I have and I would receive advice immediately which would help me perform better".(V7)

• Some supervisors felt such an activity might be useful for calling ahead of their visit to see if the VHTs had drugs and if not they could bring some (S8)

"It is useful to call a because I may be informed that the drugs are out of stock so when I am going to supervise, I can carry some" (S8)

Least useful?

 Many felt – VHTs, supervisors and implementers - that it was nonsensical for the supervisor to be the one to initiate the call as they are not in a position to gauge need. The suggestion was that it should be the VHT who makes the call. Also if a supervisor calls and there is no problem they may conclude that there never is which was thought to represent a waste of resources and not be the best use of their time (1, S9, I10, unanimous B6, I10, I12).

"The person from the facility calling me is not so useful because he may call when I don't have any problem. This person may take it that I never have problems all the time or when I have the problem he or she does not call" (B6)

"VHTs can call when they have problems, but supervisors calling them will be wastage of resources since they cannot tell which VHT has problems" (I10)

• Some felt that it made more sense for supervisors to come in person rather than call (B6)

"A person at the facility is not supposed to call, he is supposed to come to the village physically and give support to the VHT" (B6)

Most motivational and why?

• Several VHT groups felt that such a call from a supervisor would make them feel valued which would be motivating for them (unanimous 2, one in 7, B5).

"A health centre staff calling me about my problems as a VHT helps me to keep remembering I am known and respected". (V7)

• Feeling valued in this way by supervisors was felt by some to result in increased status at community level as well (B5).

"Someone from the facility calling me improves my status in the community since people will know that am in touch with the health workers and therefore they will agree with me when I advise them to do some activities especially in their homes" V042 (B5)

Least motivational and why?

• Some still felt that supervision should be face to face and that calling may be seen as a replacement for visits. This was seen by some as de-motivating (B5).

"Activity A is least motivating for me because it would be good for the health officials to come and visit me face to face rather than just calling".(B5)

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Problems or challenges

Many problems or challenges were put forward relating to this activity.

Some thought that VHTs called may not have problems, identify problems that have nothing to
do with VHT work or only give partial information. Those that saw it from this perspective
argued that it was no substitute for face to face visits and may in fact be a waste of time (V1, S8
and I12).

"There might be waste of resources and airtime and yet the supervisor may never get the exact information on what is happening on the ground V112"(I12)

• A related concern to the previous one was that VHTs may not have any issues or problems at the time of the supervisor's call or be unable to articulate them leading to a false conclusion that there were never or seldom any problems. Being less than forthcoming on the phone could also lead to an impression that the VHT was not doing a good job when they in fact are. An added concern was that this could translate into less actual face to face visits. This was thought likely to add to the pressure felt by VHTs. Interestingly this concern was raised by supervisors and implementers and not VHTs themselves (S11, S8 and I10).

"If a VHT is called when h/she does not expect it and may be is asked to give information or asked if h/she has any problem and fails to mention any, h/she may be taken as someone who does not do his/her work well" (S8)

As the call is to be initiated by the supervisor it was felt there needed to be some lucky timing if
it were to be effective. For instance if the issue identified by the VHT related to a referral, to be
effective it would mean that the supervisor should be physically at the health facility at the time
of the call (V2).

One day a child with convulsions could be brought to you and by luck someone from the facility calls and when you explain the situation he/she may tell you that they are not at the facility at that moment therefore this cannot help" (V2)

• As the schedule for calls is set by the health facility based supervisor then this activity would have limited value if there was a pressing issue for VHTs. It was suggested that there would therefore need to be some opportunity for the VHT to also initiate calls (B6).

"The activity will make communication one way so if I have a patient it may be difficult to be assisted since I have to wait for this person to call me"(B6)

• There may be negative consequences for VHTs in terms of both feeling disheartened if there is little or no response to the information they have provided (V2) and losing their pro-activity as they will be encouraged to simply wait for their supervisors to call (112).

"If you call me and I tell you that I don't have gloves and I don't get them, then that call will be wasted" (2) "VHTs will relax because they will expect to be called by the supervisors and this will make the work slow down" (I12)

Some raised concerns about the calls being intimidating for VHTs or inappropriate. As seen earlier in the report (section xx) concerns about timing of calls leading to domestic issues was a concern. In this instance concerns were raised about, for instance, a male supervisor calling a female VHT at night.

"In regard to a call from the facility asking if you have a problem, before you answer the call you worry as to why the supervisor has called. You are intimidated by the fact that he is so superior to you hence it causes your heart to beat so fast".(V3)

"If a VHT is a young girl, and a supervisor is a young man, then calling at night might result into relationship problems like separation, fight or divorce because your spouse does not why you always call or receive calls from that specific VHT caller".(S9)

Recommendations

Communication activity A: while seen as conferring status there were many concerns relating to the calls being initiated by supervisors – potential inappropriateness of male supervisors calling female VHTs was a concern.

Suggestions / recommendations: develop a policy for how this communication would take place, appropriate questions and content to cover and the best timing for calls

Key discussion points: is this the best way to go or should the VHT initiate contact?

B: Someone from the facility calling to see how you carry out a specific task (e.g. use a Rapid Diagnostic Test [RDT] or engage effectively with the community) and suggesting ways you could improve the task.

Useful?

• From supervisors perspective (one in S11) feel that the VHTs will feel reassured that the supervisor is checking on them.

"These VHTs will show that there is more contacts with them and this will make them more confident when a supervisor calls on them to find out how they are performing some tasks" (S11)

• Some supervisors and implementers also felt these were difficult tasks and it would be useful for the VHTs to have support on them to help maintain high treatment standards (one of S9, I10).

"Some specific tasks like handling a sick child in convulsion stage are a bit hard for VHTs since they are not professionally trained health workers, so I need to call to be sure how they handle such kinds of cases".(S9)

"When the supervisor calls a VHT to check child last seen, it is most useful because it will enable VHTs to do the correct thing always so that treatment standards are not compromised". (110)

Not useful?

• As with activity A some feel it should be the VHT to initiate contact. Others felt that this was the sort of activity that needed to happen in person (I12)

"Activity B is the least useful because the supervisor should not be the one to call a VHT, the VHT should be the one to call in case they have a problem" (112) "Activity B is the least useful because supervision cannot be done on (the) phone, the supervisors need to go there to the VHTs physically. Phone supervision is not proper supervision"(112)

 It was suggested that it will take a long time and use a lot of airtime and there was also a feeling that VHTs may not be able to provide supervisors with the full picture. It was considered by some as likely to represent a poor performance return on what would be quite an expensive activity (one in I10, I12). "VHTs can easily deceive supervisors since they are not with them, and the discussion will be long hence consuming a lot of airtime" (110) "Activity B is least useful because it is even expensive because by the time a supervisor calls to discuss may not get the clear picture on the ground" (112)

• Some supervisors felt it wasn't useful as the VHTs already have these skills (unanimous S8)

"With an RDT we train the VHTs and they know what to do. Like when they test and find that the child is negative they should not treat and when positive they treat" (S8)

Motivational?

• Thought of by some VHTs as motivational through a sense of improved performance with supervisors' support. There was also a sense that it may make VHTs feel more trusted and appreciated (V1, V7)

"I think I will go with activity B as the most motivating because for my supervisor or any other person from the facility calling me to find out how am carrying out a specific task will give me a chance to know how am performing as well as provide test kits and drugs that help me to carry out my work more effectively" (V1)

"When a patient comes to me and I test him with RDT and give treatment, I feel appreciated when the health worker call to inquire how I run the RDT and how the patient is doing, V065" (V7)

Not motivational?

n/a

Problems or challenges

Some felt it may be challenging for supervisors to effectively explain complex tasks over the
phone, especially with occasionally poor reception, and that it would be preferable to conduct
such supervision in person (V2). Considering the nature of the tasks and their importance the
risk of misinterpretation was considered too high a price to pay by several supervisors and
implementers for this activity to be worthwhile (S9, S11, I10 and I12).

" It is more important for the supervisor to be there physically and explain specific tasks or challenges faced by the VHT such as using the timer while using RDTs, this cannot easily be explained on the phone" (V2)

"A task such as running a rapid diagnostic test is practical and needs you to see. So calling for explanations for VHTs on how they did it might not reflect how they actually did it" (S9)

 As with activity A there was a feeling that supervisors may put pressure on VHTs by calling them unexpectedly and get a skewed impression of the situation. This could work either way – i.e. by giving a falsely positive or a falsely negative impression. There was also the risk of VHTs deliberately misleading supervisors about the effectiveness of what they're doing (S8, S9, I12).

"The VHTs calling me would be okay, but me calling them will put them under pressure and may end up giving me wrong responses" (S9) "There could be getting biased results because a VHT may pretend that she/he is doing the right work when in the actual sense h/she is doing something wrong" (I12)

• Again, as with activity A, some felt it would take too long and not be an effective or best use of resources. The emphasis here was that a phone call was not an effective medium for an expert to communicate to a non expert and that there may be difficulties in understanding. While this

may be so it does also indicate that the maintenance of these power hierarchies is important to those at the upper tier. Regardless, the argument is that such technical conversations are best held in person (I12).

"It will be expensive to discuss issues with a person at that level and beside the perception will be low like if I call sister here (Respondent referring to a colleague, also a participant in the discussion) we shall with in very short time discuss fast because we both know what we are talking about as elites and implementers but by the time the supervisor explains to the VHT what he/she means it will take a lot of time especially VHTs who are not so educated" (112)

 Some implementers felt that VHTs may only wish to discuss those activities they are performing well on. Such a situation was thought likely to be exacerbated by any communication challenges

 be they language or network – and conversations may revert to yes and no answers (I10).

"I think it will be just a narration of was to be exactly done as opposed to what is on the ground especially for tasks that need practical procedures. This might not reveal situations that need immediate supervisor support" (I10)

• Some implementers felt that visits from supervisors were a key motivator so replacing them, even in part, with calls would be de-motivating (112)

"Visiting the VHTs is one of the motivators, so calling them will de-motivate them as they will think that they don't care about them so much and what they do on the community" (I12)

Recommendations

Communication activity B: again while seen as conferring status there were concerns about the level of technical content that could be addressed over a call

Suggestions / recommendations: if adopted there should be protocols for the content of the calls and also for how the conversation should flow. The strategy will also need to address the risk of supervisors inappropriately using the activity as a rationale for reducing the number of face to face visits.

Key discussion points: how will the technical quality of the calls and that they are a two way exchange of information (as opposed to a one way, expert lecture) be ensured?

C: Someone from the facility calling to discuss the last child you saw and giving you feedback on what you did

Useful?

n/a

Not useful?

 This activity was on occasion misunderstood by VHTs who felt it was not for the supervisor to call them and tell them about the last child they saw. It is clear that there will need to be a very clear explanation of this activity focussing on the discussion (as opposed to telling or lecturing) to take place between the supervisor and the VHT (V1, V4)

"for the supervisor to call and inform me about the child I last treated, it is me to report back to the supervisor about how the child is progressing. It cannot be the supervisor to call me and tell me about how the child in my village is doing" (V1) "...when I refer a child I always remain with a copy of the referral form and the patient referred also brings back the treatment form which helps me for record purposes. I therefore see no need of the supervisor calling or giving me feedback about the child I last treated because I can always refer to my records in case I need to find out any information about that patient." (V4)

Motivational?

• For some VHTs this activity had the potential to be motivational through being able to see the positive impact of their discussion with their supervisor in the progression towards health of the child that was discussed and understanding both what they have done and what could be done better (V3, V4).

"The most motivational to me is when the facility calls to discuss the child I last saw. This because when the facility calls to inform me of the recovery of a child I referred, it is very motivational" (V3)

Not motivational?

n/a

Problems or challenges

Some VHTs felt anxious that at the time of the call they may not remember the last child they
saw or have access t the necessary information. There was a anxiety at somehow being caught
out or exposed for poor performance that many respondents were sensitive to. This mirrored
the earlier results from the pile sorting activity held with key personnel from the Ministry of
Health where it was stressed that VHTs were volunteers ad should be recognised for what they
are doing rather than for what they are not (V2).

"We see many children sometimes in a day and thus by the time the supervise calls I may not be in position to remember very well and hence his advice may not be relevant" (V2) "The message to remind me may come in when I am far from home and I cannot look through the register to give details and it makes look like am not doing my work well" (V2)

Recommendations

Communication activity C: some potential to be motivating but the purpose of the call needs to be clearly communicated and any anxiety about being called when unprepared addressed

Suggestions / recommendations: develop and communicate a plan for these calls and a structure including how the supervisor should manage a situation where a VHT does not have the relevant information to hand. Communicate to VHTs that the calls are designed to support them and ensure they are prepared for the calling supervisor's questions

Key discussion points: to what degree and how can the inSCALE project implement a 'strength based' approach across its communication activities?

D: Someone from the facility sending you a 'text message of the month' with tips and advice for your work

Useful?

• Some VHTs and supervisors felt receiving such a message would be useful as is expert knowledge and would improve work (one participant V3, one participant V7, one in S9)

"Receiving the 'text of the month' is very useful because I get more expert knowledge on how to do my work better" (V3)

"The text message of the month is very important to VHTs because it reminds them of their work and this improves their general performance" (S9)

• Others saw value in having a resource that could be referenced again over time (B5)

"You can also remind yourself because you can read and re-read the message many times" V047 (B5)

A point for clarification is who will determine the content of the messages? Some supervisors
felt they were well positioned to decide on the most appropriate content needed by the VHTs
they supervise. Whether this is the approach to be taken or whether there will be a prescribed
message per month that supervisors are asked to send to VHTs they supervise or they are to
select the most appropriate message at a given time point from a suite of messages is to be
confirmed (S8).

"I choose sending VHTs a 'text message of the month' with tips and advice for their work because I will have got their reports, worked on them and I can ably give them feedback after a month".(S8)

Not useful?

• Some supervisors suggested that the impact of the messages was likely to be minimal as the VHTs don't have time or may not remember to check their messages (one of S11)

"Some of the VHTs are too busy when they are not VHT related work so it most likely that one may forget to check and read the message sent to them since it is even done monthly. Its impact would be minimal in relation to their work" (S11)

Motivational?

• Some felt that such messages may help motivate VHTs to submit reports and inspire them towards better performance (V4, one of V7)

"Since this text message comes once a month, it means I will be in position to prepare the report and submit it on time. I think this text message will give some knowledge on how to do my work better" (V4)

• Others felt that tips would be some acknowledgement of a job well done and provide encouragement to carry on and improve (B6).

"The tips and advice for my work would help me improve and this also shows that some one knows that I am doing good work" (B6)

Not motivational?

n/a

Problems or challenges

• Not all VHTs are literate and may not therefore understand the messages. In this context a call would be preferable (unanimous V2).

"Most of us we don't know how to read and write the messages. It would be better for someone to call directly rather than sending a message which I may not be able to read" (V2)

 Some implementers and VHTs were concerned about VHTs being disappointed with the messages. For some this was thought likely to stem from them not being sent or received due to technical faults (I12). For others it was thought likely that the content of messages would not always be relevant to VHTs at the time they were received (V2). While for others still the fact that the content of the messages would need to be so condensed to fit in a phone sms it was considered likely they would no longer be useful (I12).

"The concept of the text may not be the right one since it involves so much of summarising added respondent" (I12)

 Many supervisors and implementers felt that messages wouldn't be useful because VHTs may neither understand the language used nor have the technical capacity or time to retrieve and read them. Many also felt messages may be too long for the small screen and therefore the behaviour they seek to address would most likely remain (S11, S9, S8, I10, I12).

"There will be a problem with very long texts because some VHTs will fail to read them not only because of the language barrier but also because they are many pages on a small phone screen"(I10) "There could be a challenge of retrieving information from their phones since most of the VHTs

"There could be a challenge of retrieving information from their phones since most of the VH are not used to phones, unless trained on how to properly use them"(S11)

Resting on the assumption that it would be up to supervisors to manage the phone messaging system as well as develop the content of the messages some concerns were raised. Some felt that it could be problematic if different supervisors were to develop different messages and their supervised VHTs were to confer and discover contradictions in the messaging. This, it was felt, could cause confusion among VHTs and have negative consequences for performance. Other supervisors expressed concern over managing their own work flow in the face of needing to determine appropriate content for the many VHTs they supervise. In light of these concerns it is clear there needs to be some clarification of the process for both the development of content and the dissemination of messages. An appropriate balance needs to be struck with consideration to both the optimal placement of supervisors in determining the most appropriate content to send to a VHT at a given time and the busy schedule supervisors keep.

"My main concern here is the issue of uniformity because I don't think it will be possible for supervisors to send similar messages to VHTs. This might cause disagreements since VHTs meet each other with diverse advice on the same work" (S9) "I supervise almost 30 VHTs and each may have a different problem so how will I know which text to send to whom and the texts will be many" (S8)

• As with earlier activities, concerns were raised relating to the timing of communication and the explanations of its purpose so as not to cause domestic problems for VHTs (B5)

"The time this sms comes must be day time especially for the married women so that their husbands do not suspect them" (B5)

An important concern was raised with regard to the ability of VHTs to read text messages as they
are on small screens and many VHTs may have less than perfect eyesight. One implementer
estimated that half of the VHTs in Kiboga district had problems with their eyesight. Even if the
actual figure is only a fraction of this it would be problematic for the effectiveness of the activity.

"Almost half of the VHTs in Kiboga District have problems with their eye sight, they struggle to read so the texts sent may give them a problem in reading" (I12)

Recommendations

Communication activity D: some saw the potential of this activity but many concerns raised in relation to the determination and management of content, the timing of the messages, whether the screen would be large enough for messages with impact and the eyesight of VHTs being sufficient to make good use of the messages.

Suggestions / recommendations: strike a balance between supervisors having some say over the type of content sent to VHTs and management of supervisor workload. Consider the optimum length of texts and the eyesight of the end users.

Key discussion points: what is the best way for supervisors to be involved with the development and dissemination of messages?

E: You being able to call someone at the facility when you have a problem

- Useful?
- Being able to initiate contact with supervisors regarding specific challenges was seen as useful by several VHTs and implementers with a key benefit seen to be having access to advice from supervisors even when they are not physically present. This was thought to be especially important in the context of emergencies (V1, unanimous V2, I10, I12).

When I get a problem with how to use an RDT I can call the supervisor and he explains to me in detail and thereafter I will be able to do it successfully" (V2) "It helps VHTs to get professional advice on handling complicated emergencies while they wait for a professional health worker to arrive" (I12)

 Being able to initiate contact with the supervisor on specific problems was seen as critical by some groups as VHTs were thought to be the ones who know best what is important at community level (NB: see concerns raised relating to supervisor initiated contact in the sections concerning activity A and B above) (V4, S8)

Me being able to call someone at the health centre when I have a problem is most important because I know which kind of problems the community experiences. Therefore someone from the health centre calling me without any idea of what is happening in community would not be meaningful" (V4)

"Enabling VHTs to call you and others at the facility when they have a problem or if they have referred a child is important because it helps the supervisor to give practical help like when a VHT has a problem with conducting an RDT" (S8)

• VHTs having close contact and strong communication links with their health facility based supervisors was thought crucial by some VHT and supervisor groups in ensuring drug supplies are monitored and replenished as well as alerting the health facility about any major health issues (one on S9, majority V3, B6)

"VHTs can call at the health centre in case of drug stock out, and I can devise means of sending them drugs which will make them feel motivated since their orders and requests are attended to"(S9)

"Calling the facility when I have a problem is most useful because, as a VHT I am a bridge between my village and health facility. I can call asking for drugs, informing the health facility of disease breakouts and any other cause for calling" (V3)

Not useful?

n/a

Motivational?

• Seeing a direct line between identifying a problem, calling their supervisor in the context of that problem and seeing an effective and timely response, was seen as motivating by one VHT group (V3).

"Being able to call the facility in case I have a problem is most motivating. Because, when I have a problem and I call; and the supervisor acts, it motivates me a lot" (V3)

Not motivational?

• Some VHTs had heard during training that health facility based supervisors can be rude and unhelpful and thought that this would be de-motivating (V7).

"During iCCM training, we were fore warned that health worker sometimes is rude to patients and callers; so if I call and they are rude or refuse to pick my calls, it de-motivates me" (V7)

Problems or challenges

• There seemed to be a level of anxiety on the part of VHTs regarding the reception they would get when calling the health facility with a problem. Some worried that they may be told that the problem was not their or the health facility's responsibility while others anticipated the frustration of not being able to reach someone when needing to discuss a pressing issue (V2, V7.

"On the issue of being able to call the facility when I have a problem such as drug stock outs, sometimes the responses you get are confusing. The health worker keeps referring you to stores person or sometimes say that VHTs belong to programmes of Malaria Consortium yet drugs available are from government" (V7)

When you call someone at the facility when you have a problem the challenge could be calling when his or her phone is off. This could be so frustrating especially when you wanted an urgent solution to your problem" (V2)

It seems the anxiety of such calls was present for some supervisors as well but this time with
regard to being too busy to take a VHTs call or meet the needs identified by a VHT in a call. It
was felt that the consequences of such a situation may be to discourage the VHTs. If supervisors
could not help – whether due to unavailability, capacity or resources – it was felt that this was
not a good outcome for anyone (S8, S9, S11).

"There are at times when VHTs may call at the health facility when there is only one health worker at the facility and may fail to pick up phones and this may be so disappointing to the VHTs and may lose morale of calling them again" (S11)

"There are sometimes when a VHT calls and request for more drugs yet the supervisor does not have them. The challenge goes both ways because me as a supervisor will not have helped and the VHT will not get help" (S8)

Recommendations

Communication activity E: clear benefits of problem specific communication between VHT and health facility initiated by the VHT were identified. The main concerns relate to the tone of the response and the consequences of any inability to deliver.

Suggestions / recommendations: expectations of what can reasonably be raised and when

and the type of response expected need to be managed from both VHT and health facility side. Promote responsiveness as being mutually beneficial.

Key discussion points: how can health facilities best communicate what they can and cannot do to VHTs? How can collaboration be best promoted where inability to deliver is not always seen as a lack of will?

F: You being able to call the facility to say you have referred a child Useful?

• For some VHTs this was already happening but it was self funded. This was because they had not received referral forms and wanted to avoid referred patients being sent back to them due to not having a form (V7)

"Ever since we trained in July 2010, we have never been given referral forms. So whenever we refer a sick child, we can only follow up by giving the health worker a call" (V7)

• It was thought a good initiative by some VHTs because it would provide the health facility with the appropriate background information (B6).

"The doctor at the hospital may not know what is happening so I who is in the village must inform him through calling" (B6)

• Some implementers thought it would allow VHTs to follow up with patients as not all go to the health facility when referred (I10)

"Some parents end up not taking children to the health centre when referred; so if VHTs are availed phones, they can call the health centre supervisor to follow up the referred child" (110)

• Several supervisors felt such an arrangement would assist the health facilities to be as prepared as possible for patient's arrival which was in the best interests of the patients and could be motivating for VHTs (S9, S11).

"I find this activity most useful because it enables VHTs to call me when they have referred a child and I treat their referred patients first which pleases and motivates the VHT who referred them".(S9)

Not useful?

 Some VHTs felt that referral forms were adequate and there was no need for additional measures (V3)

"We give sick children referral chits before they go to the health facility. The facility can understand which VHT has referred, so it is not important to call the facility that you have referred a child"(3)

Motivational?

• For some VHTs, being able to notify the health facility about a referred patient made them feel listened to and respected. It seems it affirmed their identity as someone who contributes to the health of the community (V7).

"When I refer a patient, I want to ensure that my patient is given immediate attention, which boosts my confidence as an important person in the community that can be listened to" (V7) • Some VHTs suggested that with such an activity even if you don't have transport you can still alert the health facility about an important referral and possibly save a life (B5).

"motivates me most because when you have a sick person, you don't have any means of transport you can easily call someone at the health facility and you be assisted and you save the life of the patient" (B5)

Not motivational?

• For some the proposed activity represented a duplication of work and potentially an unnecessary additional expense. These respondents were not aware that what was proposed would most likely be free to use and part of a user group (V3, V4).

"Calling the facility about referral is less motivating because it is just an addition to the referral chits". (3)

Problems or challenges

There was some lack of optimism expressed by some VHTs relating to never having previously
received feedback relating to a referred patient. This was found to be discouraging. Perhaps if a
process of follow up could be implemented where VHTs do receive some feedback on referrals,
then this concern could represent an opportunity (V3).

"I have ever referred a child to Kiboga Hospital and never got a feedback. I felt I was disrespected and deemed useless" (V3)

Recommendations

Communication activity F: clear benefits were identified by VHTs and supervisors. Has the potential to raise VHT confidence and affirm them in their role.

Suggestions / recommendations: develop a process for VHTs to receive some follow up on their referrals so they feel more connected to the health system. Develop guidelines for how this process would work and manage expectations of health facility workers and VHTs as t the timeliness of feedback and the possible reasons for delays.

Key discussion points: What is the best way for health facility workers to keep VHTs informed about the patients they refer to the health facility?

G: You being able to call another VHT and / or peer supervisor Useful?

• Some supervisors and implementers felt that enabling such peer level communication between VHTs and supervisors would assist in managing drug supplies and potentially be more convenient than always relying on the health facility (V7, I12).

"I can call a fellow VHT and get medicine from him other than walking to the health center which becomes costly in terms of time and transport" (V7)

• Others felt it would be a useful option during mobilisation (B6)

"For me I think calling the fellow VHT is most useful especially during mobilization work" (B6)

Not useful?

• Several groups including VHTs, supervisors and implementers felt that for any problems faced in the pursuit of VHT duties would be better addressed by the supervisor as they have the

necessary technical skills to help. It was interesting that there was such a response and in some ways resistant to a peer support based activity. Perhaps the benefits were not clearly understood or there is an entrenched belief in experts having the solutions. If such an approach is to be adopted it is clear that there would need to be extensive sensitisation as to the benefits of peer supports emphasising the strength of local knowledge and collaboration and emphasising that it presents no threat to the authority of supervisors if managed the right way. All parties are aiming for better health outcomes in the community after all (V2, V7, B5, S9, I10).

"VHTs should rather call me other than calling their fellow VHTs for advice because their fellow VHTs were trained the same way" (S9) "Calling a higher level in medical hierarchy would be much beneficial than calling other VHTs because at their level, they might not be capable of advising or handling some cases" (110)

Motivational?

n/a

Not motivational?

• Some VHTs felt that they already liaise with the health facility so see little point in contacting their peers. As described above, perhaps this is indicative of a need to explain the purpose and benefits of peer support (V3).

"Less motivating to me is calling another VHT. Since I will have informed the facility supervisor, calling my peer VHT is not motivating" (V3)

• Others felt that facilitating phone calls of this type was a waste of money as they knew where to find their fellow VHTs if they needed to speak to them (V4, B5).

"Activity G would not motivate me because it would be money wasting if I called other VHT members yet I can reach them in person and discuss with them whatever Is necessary" (V4)

• Other VHTs felt such calls would go on for too long with no content of value likely to come from someone perceived as having exactly the same skill and knowledge level as them (V7, B6).

"We do the same job so why would I be calling my fellow VHT?" (B6) "We have learned together with other VHT so there is nothing much really this person is going to help me" (B6)

Problems or challenges

• Some supervisors and implementers felt that the content of the conversations were unlikely to stay on VHT work and had such a low expectation of the value of the calls that they were concerned they would lead to the phone battery being needlessly wasted (I12, S9).

"VHTs might misuse this opportunity and talk about other matters not related VHT work and this will be consuming the battery of the phone" (S9)

• As described in the 'not useful' section above many felt, especially implementers, that it should be supervisors who provide technical support to VHTs as they felt the VHTs may misinform each other (110, 112).

"There might be a problem where advice sought and given by VHTs on some matters may misinform and or ill inform VHTs hence end up going completely wrong on ways of performing treatment tasks. It should be the supervisor to be consulted on all matters pertaining to VHT work" (110)

Recommendations

Communication activity G: either misunderstood or the value in general could not be seen of peer support. This was so for VHTs, supervisors and implementers alike.

Suggestions / recommendations: if such a peer support based approach is to b

implemented there will need to be 360 degree sensitisation as to the process, the benefits and the non threatening nature of what is being implemented. This needs to be done with awareness of a seemingly entrenched belief in an 'expert' model.

Key discussion points: is it worthwhile to attempt a peer support approach in a context where the benefits would need to be sold to all parties if it is to be successful?

3.7 General challenges with communication activities

Many of the challenges have been captured within the specific activities as described above. Nevertheless there were a number of overarching issues that emerged.

• There were concerns expressed by VHTs that they may not be able to manage the new technologies to expectations. Most did feel that if they were to receive sufficient training they could cope however. It will be important to communicate expectations and train in the required skills.

"...the technology in this phone is not easy to understand for me and that is why it becomes very difficult for me to communicate with my supervisor" (V1) "It may happen that I forget to open my phone and read the SMS received. Even I might fail to tell that the SMS has been received" (V2) "my main concern will be our ability to use these phones because it will be the first time for most of/all of us to use them for this kind of work. However with the constant trainings, I think we shall be able to slowly learn how to use them" (V4)

 Concerns were regularly raised relating to whether there would be sufficient network coverage for communication activities, whether there would be enough airtime available, whether the challenges surrounding phones had been considered and the question of what would happen if phones were stolen.

"phone being off due to low battery, not having credit/ airtime as well as not being with the phone at the time of call" (V2) "Sometimes the phones are not charged because we have no electricity in the villages; we may not have airtime even to call" (V2)

 Some VHTs were worried that if they were not available to take a call they may be thought of as a 'non performer'. They were also concerned that if required to call the health facility, if they call too much or not in what was perceived by the health facility workers as the right way, then their calls would be ignored. Furthermore, some VHTs felt calls would be used to reinforce an uneven power hierarchy.

"Someone can call you from the facility when you have left your phone at home and it is taken as intentional ignoring to answer, hence deemed as a non-performer" (V7) "May be the health worker can refuse to pick your call simply because she does not care, also if you are all the time calling to send sick children she may get to note your phone number and she refuses to pick it when you call or she tells you am not at the facility" (B5) "We as VHTs under respect ourselves. Our coordinators call to show their power over us. They even write negative comments in our registers because they feel they are superior" (V3)

• Supervisors also worried that VHTs may not be available when they needed them.

"I may call a VHT and h/she is not at home yet I need the information urgently" (S8)

• Some implementers were also concerned that there would be misuse of phones allocated for VHT work. Other implementers worried at the cost of the program and the ability of districts to sustain it.

"There is no control in the phone so there is no filtering on what to say, a VHT may call a supervisor and say 'please keep for me some cassava' and you find they are misusing the phone given for serious work talking other things" (I12) "However this program is too expensive the district may fail to sustain it" (I12)

Recommendations

General problems with communication activities: Suggestions / recommendations:

Key discussion points:

Section 4: innovations related to data submission and use

4.1 Preferred frequency and timing of data submission

 Most commonly responses relating to how frequently VHTs should be required t submit data settled on weekly. Some did nevertheless push for monthly based on the rationale that it would be more manageable for a workload perspective as it mirrors what is currently required in the paper based system. A counter view to this was that weekly submission would avoid the backlog that would have to be waded through on a monthly basis (V2, V3, V4).

"data should be submitted monthly because it would give us enough time to compile the data effectively" (V4) "I differ from what my fellow VHT is saying because our villages have a lot of people and if we are to wait for a whole month the work will be too much to report on the side of the VHT" (V2)

• Several felt Sunday should be the day for submission though many of these respondents already submit data electronically and this preference is most likely a function of what they have been taught and are familiar with V1, V3).

"Once a week is okay, you still have fresh memory and can recall. I don't send on Saturday, I send on Sunday after prayers because it crowns that week and takes care of patients seen late Saturday" (V3)

 Regarding the time during the day when data should be submitted, most opted for a time between mid morning and mid afternoon. Many felt that the morning was a bust time taken with other chores while others felt any later than mid afternoon may become problematic for anyone receiving the data to process it (many respondents assumed their submitted data would be manually processed by a individual who received it) (V2, V4)

"for me I think 1 o'clock would be convenient because I am a farmer and I need to first go to the garden in the morning and once am back, then I can relax and send this data" (V4)

Recommendations

Preferred frequency and timing of data submission: Saturday or Sunday, weekly (though some through familiarity were comfortable with monthly) and from mid morning to mid afternoon.

Suggestions / recommendations: consider that monthly submission would tap into what is familiar but that those who now submit data weekly seem to be happy with the arrangement.

Key discussion points: is weekly or monthly data submission more desirable?

4.2 Most useful kind of response to submitted data

A common theme across respondent groups regarding feedback on submitted data was
personalisation. Respondents wished to receive feedback specific to the data they submit which
acknowledges the positives and make suggestions on how to correct or improve on any errors as
well as provide tips for effective practice and upcoming deadlines, such as the next report
deadline. Key in this was an acknowledgement that the message had been received with a
response tailored to what had been submitted (V2, V3, V4, V7, B6).

DRAFT REPORT – DO NOT CITE

"When I submit any data, I need to get a delivery report showing that the data has been delivered, and thus response should also acknowledge what I have done" (V7) "I like it when I get to know my mistakes and work upon them but if am not told then it becomes useless."(V4) "If I get feedback on whether the message has reached or not and I also get the message giving me ways of doing some tasks. This would be more useful to me because I would work with fewer problems" (V2)

In addition many felt that a vote of thanks for their efforts would go a long way but many suggested too that this thanks would only be positive if it were to be personalised, be pleasant in tone and be accompanied by constructive feedback. This was felt by many to indicate acceptance of the data which was very important to many respondents. In addition, when asked what type of feedback in general would be most valued, many respondents indicated that appreciation – both from supervisors and patients – was most encouraging. This is consistent with the expressed desire to be thanked for efforts but in a way that can help with improvement (V1, V2, V4, B5, B6).

"If I have submitted data I would want the response to be like 'thank you Afuwa' I have received your data" (V2)

"I would like to be thanked because when am appreciated like saying you have done well or you need to improve this and that it really encourages" (B5) (therefore we first is used, the advise should encourage [Step Fordherefore]

"thanking me first is good, the advice should come later. Feedback should not be in form of blame but rather simple and calm advice and not given in a rude way" (B6)

 While apparently contradictory some said despite a thank you message without constructive feedback being the least useful type of feedback, it would still be encouraging because it would be a sign of appreciation and validation.

"Much as a 'thank you' would be the least useful type of feedback, on the other hand, this 'thank you' would be the most motivating type of feedback because it would give us energy and morale to carry on our work since it's a sign of appreciation for our work from both the supervisor and the community" (V4)

 VHTs felt strongly that depersonalised messages that showed a lack of understanding of context and potentially contradicted information provided directly by supervisors would be discouraging (V1, V3).

"What is least motivating is that the messages are automatically generated and does not distinguish whether I have done well or not, can't show whether am progressing or not but it is a message sent to whoever submits data" (V1)

 In addition to text based responses many respondents felt that if they saw effective action – for example, response to alerts about drug shortages – then this would represent an appreciated outcome from data submission (V1).

"I reported last year about the absence of Amoxyl, but up to now I have not received any feedback" (V1)

Recommendations

Most useful kind of response to submitted data: personalised response with constructive feedback specific to the data submitted and a vote of thanks or signal of appreciation for

effort. Responsiveness to issues raised.

Suggestions / recommendations: be sensitive for the need for acknowledgement of efforts and personalisation of responses.

Key discussion points: how tailored can responses be? Is there a clever way to have a suite of messages that could be selected from automatically based on key content submitted by VHTs?

4.3 Electronic data submission and response to VHTs

Benefits

The benefits of electronic data submission were recognised by most respondent groups. Key benefits were perceived as;

• Once VHTs understand how it is to be done it will reduce the time it takes for data to be submitted leading to a reduction in VHT and supervisor workload and greater motivation for the task (B5, S9, S11, I12)

" this idea is very nice because it will ease our work as supervisors and also VHTs' work although they will have to undergo constant training so that they learn how to use these phone very well" (S9)

it normally takes some time for paper report to reach so I think this is going to quicken data collection and they will be motivated to send" (I12)

• VHTs potentially seeing a more rapid response to any needs identified especially in terms of drugs and other stocks (V1, V3, V4)

"It [phone] helps notify the health facility that there are drug stock outs" (V3)

• Being able to submit data from anywhere allowing VHTs greater flexibility over their travel and time with cost savings and a reduction in late submissions anticipated to occur as a result (V2, V3, V4, V7, B5, B6, S8, S9, S11)

"There will be limited cases of sending data and reports late since it would be done directly on the phone at that very time and VHTs will not be having complaints such lack of transport anymore since electronic reports will be submitted while the VHT is at his or her home" (S11)

• Improved information security (B6, I12)

"It would be good because it reduces data loss because there are scenarios when the VHTs living far away give the report to other people to bring the report to the health unit and the person loses it on the way to the unit" (I12)

Challenges

 Some felt that submission of data and the receipt of an electronic response would be challenged by intermittent phone network and internet access as well as other faults considered inevitable with ICT. This led some respondents to conclude that the paper based reporting system should be maintained (discussed further below). Some also felt that searching for network connection is time consuming and it would be better if this time were to be reallocated to more useful VHT work (V3, I10). "I think the Ministry of Health paper based reporting system will be disrupted, phones should only supplement paper reporting, because with ICT anything wrong can happen"(110) "It delays to register on the internet hence takes some valuable time that would be used for other things" (V3)

 Some respondents had concerns over whether VHTs could handle the necessary new technology and that there would be additional problems in hardware maintenance and repairs, battery life, and airtime. Some also cautioned that it would be unlikely that there would be sufficient capacity to analyse the submitted data anyway and intermittent power supply would be an additional challenge (V1, V4, I12).

"my phone failed to work, I reported to malaria consortium but no one has ever come to repair it so I keep it at home " (V1)

"we have challenges because we do not have enough gadgets to help us with the analysis. Another challenge that we may have is the inconsistence in power supply if the power is off nothing will be done especially in sending data and retrieving data on the computer" (112)

Some VHTs, from experience of the system in the CIDA pilot, expressed frustration at the lack of response to needs they had identified and communicated. The conclusion was that their needs were not a priority. Such a conclusion indicates that while speeding up communications may result in data being available more rapidly, it is likely to be accompanied by an increased sense of expectation on the part of those who have compiled the data that equally rapid action will follow. It may be useful therefore to communicate what kind of response VHTs can anticipate receiving to their submitted data and, importantly, in what kind of timeframe. If, as in the example cited, the issue is drug supply, it may be useful to communicate the reasons for the slow supply to address the assumption that it is due to lack of prioritisation if indeed this is not the case (V1).

We were told that once you send the report you get the supplies which are reported to be out of stock. However, in my sub-county it has taken over two months without some of the requested supplies such as Amoxyl. Therefore, this indicates that our queries are never prioritized (V1)

• Some VHTs were concerned that the screen of a mobile phone and the length of standard sms may not be large enough to convey the full range of information required by them to communicate their true situation (V2).

"this data submission will limit me because I would want to give a reason why I have few admissions or requested for more dugs this cannot fit in one SMS" (V2)

 For many supervisors and implementers ensuring adequate quality control measures are in place regarding data entry was a factor. Done correctly electronic data submission by VHTs was seen as a method which could improve efficiency and reduce supervisor workload. In order to be effective it was recommended that there be ongoing training to ensure entry takes place correctly as well as effective limitations on data entry options. There was optimism that with such measures it could be a worthwhile approach (S8, S9, I12).

"this idea is very nice because it will ease our work as supervisors and also VHTs' work although they will have to undergo constant training so that they learn how to use these phone very well"(S9) "they made very few mistakes after I helped them during the first supervision. So once the phones have the format where they can fill in figures it will be done very well" (S8)

 Many supervisors and implementers were concerned about both the need for comprehensive data records safe and their safe storage. Many suggested that there needs to be a parallel, paper based system to ensure nothing is missed and health facility staff have access to the data they need. The point was made that not many health facilities have computers so access will be challenging if exclusively reliant on an electronic system. Some also felt that the introduction of an electronic system may lead to slipping of standards of paper based record keeping, which in the event of any shortcomings with the electronic system would lead to the absence of a comprehensive data set (S8, I10, I12).

"Using phones is good but using a phone alone may not give complete information so I am suggesting that if the paper report could be brought to the centre to supplement the phone sent data" (The respondent referred to a quarterly basis of the paper based reports) (S8) "hard copies are our evidence because someone told me that the phones can crush and all the data can be lost" (112)

"my main fear is sending the hard copy as evidence will be a problem since there will be some relaxation, VHTs and supervisors will know that they have already sent a report or data through the phone" (I12)

• There was a view that an electronic data submission may result in an increased workload for supervisors as they will have to transfer electronic records to a paper based version. Te strategy should ensure that reports can be compiled or aggregated easily to avoid such a situation (S8).

"Such an arrangement of sending and receiving reports on phone will cause more work for the supervisors since they will have to copy and write the information on a paper as a phone cannot save such reports beyond a given number of sms which are normally twenty in the phones we have" (S8).

Recommendations

Electronic data submission and response to VHTs: benefits were seen as improving speed of data submission and potentially the response, flexibility in submission timing and location, less delays and improved information security. Potential challenges were seen in poor network coverage and resulting unreliability of the system, phone maintenance and repairs, lack of airtime, poor response to rapid requests leading to VHT disillusionment, inadequacy of a phone for sending what is necessarily a large and comprehensive report, quality control of data entry, poor access to data at health facilities due to lack of computers, concern that there be a paper based backup system but concerns that standards of paper record keeping may slip due to reliance on new, electronic system and fears that may be an increase in workload for supervisors who have to transcribe electronic reports.

Suggestions / recommendations: process needs to be clearly outlined to VHTs and supervisors including how data integrity will be maintained and data stored, transferred and accessed. Expectations around the response to data submission need to be managed and supervisors briefed on how best to communicate with VHTs in this new operating context. Fears concerning moving away from paper based systems need to be convincingly allayed.

Key discussion points: how rapidly can a paper based system be moved away from and

what is the best way to do this? How can all who need access to data have it?

4.4 Data would like access to – implementers?

• One implementer group suggested that they should have access to all data indicators (I12).

"To me all the necessary information because as we do the monthly reports, each has an indicator. This data is not collected for the 'matter of good to know' there are indicators we use so everything has a reason V112".(112)

• Other groups were more specific asking for the number of children treated and referred, as well as the outcome or efficacy and the drugs used in order to gauge how busy VHTs are and what their supply needs are, as well as cross checking against health facility records (I10, I12).

"For me I would want to know the number of children treated and the outcome because I will know how busy the VHTs are so that I can continue to send drugs" (I12) "We need to access the number of referred cases to ensure that they are tallying with what was received at the health centre" (I10)

4.5 Data supervisors and implementers believe supervisors should have access to

Some groups felt that supervisors should have access to the full range of available data so they can build a comprehensive picture of the VHTs they supervise. While some supervisors were happy with de-identified data, one implementer group suggested that they needed a comprehensive names list to ensure that there are no double records or track chronic cases (S8, I12).

"Of course I need everything may be apart from the names of the patients, but the sex, age, knowing how many were tested, referred, number of children delivered and others are all important. This information will help me in my supervision work" (S8) "To me I still think all because they have the registers and a name appears twice then he must try to find out whether they are different people or the same child was used to get medicine for someone else or may be is the child constantly sick?" (112)

Other groups mentioned specific data needs. These were:

- Number of sick children treated and referred in both a week and month to the health facility (S9, S11, I10, I12).
- Drugs used / distributed by each VHT and patient (S11, I10, I12).
- Number of malaria and diarrhoea cases (S9).
- The major challenges to VHT work (S9)

4.6 How should data be accessed – supervisors?

Supervisors and implementers suggested a range of ways in which they thought supervisors should be able to access data. Some suggested they should be emailed (S11), others thought it would be adequate and more convenient to receive a report on their mobile phone (S8, S11) while others still thought that a hard copy report should be sent to the health facility for the to collect (S9). Some felt VHTs should be assigned a code so the data they submit could be easily tracked (S8). Others argued for more complex systems where the data submission format on the phone is mirrored by the system on the computer that displays the information in summary form to aid data merging, extraction and transfer for planning purposes (I10). "If the software is structured in a certain way on these phones, then the same format should be incorporated in the computer so that it can enable data to be merged and extracted so that it can be sent to the district departments for consumption in planning" (I10)

The two implementer groups felt that data should be made accessible in the same format as the VHT register or at least in line with the Ministry of Health's reporting requirements (I10, I12).

"It should actually look like the way a VHT Register looks, just copy and paste the format" (110) "Since the ministry of health is revising the reporting system, then data set should bring related information to actual surveillance of different diseases handled by VHTs" (112)

One implementer group felt that hard copy records should printed by the district health team and made available for available for feedback to supervisors and VHTs as well as for planning purposes (I10).

"We [DHT] should print out various specifics, merge them and put them in the data bank in hard copy format for public consumption. Once this is done, then you can analyse data and generate trends to inform interventions" (I10)

4.7 Best ways to encourage data submission by VHTs

• Ensure network coverage is consistent and better than it presently is and ensure charging and airtime is adequate in order for VHTs to meet the requirements (V1, V2, V3).

"If there is better network and the phone registers easily, it will encourage us to submit data" (3)

• Ensure language used is accessible to VHTs. This may mean using local languages (V3).

"The challenge is language used in the VHT register and phone system. We do not understand English at the same level. If the weekly tally sheets were in Luganda, it would be easier. That would save us from sending wrong data" (3)

• Provide training in the use of phones and refresher training for those who already have phones (V2, V3, V4).

"I think if they are to give us phones, it would be better to take us through a series of training so that we master whatever we are supposed to with these phones" (V4) "We need refresher trainings and or meetings because this is where we can share technical challenges" (V3)

4.8 Closed user groups – advantages and disadvantages

Advantages

Many respondents felt that VHTs being able to communicate with supervisors and other VHTs without limitation and time restrictions would be beneficial both in terms of time and money saved (no need to travel to buy airtime) and technical support provided (V1, V3, V4, V7, B5, B6 S8, S9, S11).

"Since we are volunteers, for us to be able to call one another, one has to sell something like chicken to afford airtime (V7)

"If you give VHT supervisors phones without giving us Air time, it would be difficult to talk and express ourselves with the VHTs but if given phones and then using close user group services, then communication would be made easy" (S11)

 For some the potential benefits of unlimited access to a peer group of contemporaries represented particular value. These benefits were described in terms of information sharing, general support and also practical benefits such as sharing drug supplies with each other based on local need (V3, B5, B6)

"There are sometimes I feel weak and I cannot do the work alone, if this [closed user group] is brought to us, it will help because I can call my fellow VHT for free any time" (B6) "Yes I say people will make use of it because it will improve information sharing" (B5) "It is good because I can seek rescue from other VHT members if I am out of drugs yet I still sick children to treat" (V3)

 It was also felt by some as meaning that there would be fewer excuses for failing to meet deadlines – especially those based on communication and report submission – as expectations and timelines would, it was assumed, be more efficiently communicated (S9, S11).

"Supervisors and VHTs will have no excuses of failing to communicate matters related to their work on time" (S9)

Disadvantages

Under the current pilot the supplied phones could receive but not make calls. Some VHTs expressed frustration with not being able to use the full functions of the phone. They also felt that the use of the phone and particular the restrictions, had not been adequately communicated. Others felt that providing access to a phone and a closed user group may create dependency on free communication and resentment of what it could not be used for rather than the benefits it could potentially bring. It is clear that the operating procedure with a particular focus on what the phone can and can't be used for will need to be communicated (V1, V3).

"these people didn't not allow us to learn more things about these phones such as camera, radios yet all these functions would be of use in one way or another" (V1) "We are used to free calls between VHTs. So when you are to call other people it is challenging. I fear that the 'free things' syndrome is beginning to come up" (V3)

Some VHTs had concerns that if provided with closed user group capacity, phones may not be
used as intended. Some felt calls may go on for too long which may put strain on the cost of the
program both in terms of airtime and battery. Others felt that it may encourage community
members to ask VHTs to allow them to borrow the phone for any communication with the
health facility. Some also felt that it may be challenging to communicate to family members that
the phone is not for their free use. These examples highlight the need for a policy on use and
that this policy is communicated to VHTs with advice on how to explain it to members of the
community and indeed their own families (V4, V7, B5).

"sometimes someone may call you and they talk for hours and without being considerate you are tired but they talk unlimited because they are using free things" (V4)

"They will appreciate it in my village because in case one has a health related problem they will come and contact me so that we can call for more assistance" (B5)

"Since the phone will be limited to calling only VHTs, it will be a problem not to use it to call others". [Respondent emphasized that other family members might want to use the phone to

reach their colleagues but he will find trouble convincing them that the phone won't go through yet he uses it anytime to call his VHT colleagues].(7)

Recommendations

Closed user groups: benefits unanimously acknowledged in terms of access to technical input from supervisors and peer support. Some frustration expressed over not having access t full range of phone functionality and that community and family may assume can be used for any health related matters and / or personal use.

Suggestions / recommendations: develop a policy on use of phones and closed user groups. Communicate policy emphasising opportunities it represents rather than restrictions. Provide VHTs with means of explaining closed user groups to the community and their families.

Key discussion points: what additional phone functionality should VHTs have access to for personal use (e.g. camera)?

4.9 Specific data submission and response activities and their usefulness, motivational properties and challenges

	Potential impact on performance	Potential impact on motivation	Potential impact on other activities	Acceptability and feasibility
Submitting data summaries on your mobile phone	 Reduce time taken for data submission once system understood Faster response to needs identified and communicated by VHTs Being able to submit data from anywhere Improved data security 	- Faster response to needs identified and communicated by VHTs may make VHTs feel more valued and inked up to the system		 ICT problems Slow response to identified needs 'indicates that our queries are never prioritised' Quality control of data entry – training essential Unreliability of electronic data records back ups Electronic submission leading to lax standards of paper recording and resulting lack of back up records Increased supervisor workload as they transfe records from electronic to paper based
Receiving reminder messages on your mobile phone that the monthly data are due and requesting you to enter and send the information	- May help VHTs keep to submission schedule	- May imply to VHTs that they are not trusted to do the job or not considered competent	 Depends if de- motivating. If adopted needs to be well explained otherwise probably not worth the risk 	- Likely to depend on way communicated

DRAFT REPORT – DO NOT CITE

Receiving a message to thank you for submitting data after you have sent them	 Thank you without constructive and specific feedback may lead VHT to believe their work is perfect and mistakes may become harder to later address. 	 Potentially high as it is a validation of role and thought of as indication that VHT is valued and part of the system. Likely to have greater motivational impact if personalised and relevant to the VHT so contains additional, context specific information that indicates data has been received, processed and now being acknowledged. Has to be prompt to have motivational impact. 		
Receiving summaries of the data you have submitted on your mobile phone		 Summary as indicator that data submitted is complete and appropriate seen as motivating Would necessarily be a delay between submission and return of summary (at least that was the assumption). This may be de-motivating as feel being ignored / neglected 		 Felt by many supervisors, VHTs and implementers to be duplication of work that is available in registers anyway May lead to some VHTs thinking their work has been rejected as been sent back Abbreviated form may not be understood unless travel with an explanation Lack of understanding – both of phones and the message may lead to deletion Likely resistance to using data from VHTs as feel it is already in the registers
(for VHTs only) receiving information about how your village is performing on key health indicators based on the data you have submitted, compared to other	- Competition may raise standards	 Performance based feedback and learning from the experience of others viewed positively by VHTs – improving their own performance seen as motivating Competition providing impetus to work harder Comparison leading to recognition Low scorers may become disgruntled and leave 	-	 Clear performance feedback welcomed Those consistently scored low may become disgruntled with the approach

villages / parishes / sub counties / districts / the nation.				
(for supervisors and implementers only) using the submitted data to determine how individual VHT members or the VHT team are performing compared to other villages or parishes and communicating this information to the VHTs.	 Allows for targeted supervision of poor performers VHTs may take the example of poorly performing communities 	 Competition thought by some implementers as motivating for VHTs but by others as potentially de- motivating for poor performers Consistently poor performers may feel victimised 	-	 May be unfair due to performance being beyond VHTs control or that some get more support than others May take too long to be effective May create an incentive for VHTs to falsify records
(for VHTs only) using the submitted data to check your performance and give you feedback.		 Performance based feedback welcome and thought of as useful and motivating 		- Tone needs to be respectful and feedback not to be delivered in front of patients

(supervisor and implementer groups only): supervisors receiving text messages with individual performance indicators for each of the VHTs they supervise so they can identify who needs extra support and the type of support needed.	 Allows for targeted supervision of weak performers to improve performance Those who receive positive feedback may get complacent 	 Thought of as potentially cost saving through targeted supervision. VHTs falsifying responses to get positive feedback. May be too time consuming 'Extra support' may be misinterpreted as all encompassing and involving financial support as well as goods and raise expectations of VHTs to unsustainable levels Reliant on a strong relationship between supervisor and VHT otherwise feedback may be vindictive or seen as such
(for VHTs) using the submitted data to determine how much face to face supervision you need (i.e. those who perform well get less supervision)		- Helps VHTs be prepared for supervision - Activity not very well understood and very few comments on it

A: submitting data summaries on your mobile phone

Useful?

 One VHT group, one of the groups who were not part of the pilot (i.e. did not submit data electronically), perhaps under the impression that they may receive phones if they provided such answers, suggested that as the main function of phones was to submit data this was the most useful activity (V2).

"The actual reason you are given this phone is to submit data so it is the most useful activity" (V2) (After this respondent said this, all the other ideas were compromised considering the fact that this was a group trained in ICCM awaiting to be given phone to start electronic data submission).

Not useful?

n/a

Motivational?

n/a

Not motivational?

n/a

Problems or challenges

Many of the problems cited were similar to those named in the above section on electronic data submission and response to VHTs – challenges. The main ones cited were problems with internet connectivity, charging and the screen being too small. There was a common frustration also aired relating to the restrictions on the use of phones supplied to the CIDA pilot. It seems the focus in the pilot was on controlling the research environment and the experience of this was that users were not necessarily as free to use the phone in the way they deemed most appropriate as they would have liked. It is clear that any program utilising such an approach in the future will need to communicate clearly to all users around what the purpose of the phone is and, in addition, it would appear advantageous to highlight the benefits that phone use may bring to users (V1). Focussing on opportunities rather than restrictions may assist in gaining support for h program (V1).

"You have to keep the phone in the box where the drugs are kept and thus even when you are called you cannot be accessed hence not serving its purpose" (V1).

Recommendations

Submitting data summaries on your phone: the earlier section on 'electronic data submission and response to VHTs' highlighted that many respondents saw benefits to this approach. There were however general concerns about maintaining phones, having access to all functionality and the screen being able to convey messages appropriately.

Suggestions / recommendations: adopt the perspective of the strategy representing on opportunity rather than a set of restrictions when communicating it to users.

Key discussion points: how free should VHTs and supervisors (if given phones) be to access

the full functionality of program phones? Should they be able to, for instance load their own credit for personal use, take pictures and listen the radio?

B: receiving reminder messages on your mobile phone that the monthly data are due and requesting you to enter and send the information. Useful?

• Some felt this may help them keep to the submission schedule (V2).

"Am a human being who can forget sometimes but if I get these reminders, then I can be able to perform my tasks better" (V2)

Not useful?

• Others felt that being sent a reminder to do something they were already obliged to made little sense (V1, V2, V3). Indeed some felt it sent a message that they were not trusted to fulfil their obligations.

"I know that I have to submit data and that is my responsibility. If this reminder is sent to me it would mean that I am not doing my job well" V016. (2)

Motivational?

n/a

Not motivational?

• Similar reasons were cited when explaining how such an approach would be de-motivating as were put forward when explaining how it was not useful. For many it implied that they did not know how to do their job which was de-motivating (V1, V2, V3).

"This monthly text that reminds me is also least motivating because I know my duties well" (V2)

Problems or challenges

n/a

Recommendations

Receiving reminder messages on your mobile phone that monthly data are due and requesting you to enter and send the information: some saw this as a handy reminder while others as a reflection that they were not doing the job properly.

Suggestions / recommendations: if implemented ensure the purpose of the approach is well communicated – i.e. that it is to act as an aid rather than intended as an indicator to VHTs that their performance is inadequate.

Key discussion points: are the benefits to be gained from this activity sufficient to risk making VHTs feel they are thought of as underperforming? How best can this risk be avoided?

C: receiving a message to thank you for submitting data after you have sent them. Useful?

• Thanks were seen by many as acknowledging the work they do. This was seen as useful due to th impetus it provides to maintain effort – i.e. motivation. This notion is explored further in the 'most motivating' section below (B6).

"If I am thanked it makes me feel that someone is recognizing my work and that is important when I am doing my work" (B6)

Not useful?

 Some VHTs felt that being thanked for performing your role as expected was unnecessary. Others felt that as an automatic response not based on the content of what was submitted, it had little value. Te praise was seen as potentially hollow as it would come regardless of the quality of the completed work. In addition some felt it would be far more useful t get specific feedback on work completed rather than general, standardised praise (V1, V2, V4, S9).

"The supervisor may send a thank you message not because you have done great but it is a formality" (V2)

"Since I already know what I have done, then it wouldn't be useful to send me a thank you because it not something that I have to reflect on in relation to my work. I would rather get a message explaining my work in addition to the thank you" (V4)

Motivational?

• As described above, many VHTs found appreciation of their efforts to be motivating. For many this was especially so due to the voluntary nature of their roles.

"To me, receiving a thank you message is very motivating because I feel my efforts are appreciated" (V3) "Since VHT work is voluntary, then, a thank you message is very necessary because it will motivate them to work harder" (S9)

Not motivational?

• Some VHTs cautioned that the positive impact of a thank you message would only be experienced if it was received immediately following data submission (V7).

"Receiving a message to thank me for sending data will not be very motivating if I send the report today and receive the acknowledgement report the next day. It will only be motivational if I get the thank you report immediately after my data is received" (V7)

Problems or challenges

 The main challenge put forward with this activity was that a thank you alone, without constructive and specific feedback, would only be partially useful and may represent a missed opportunity. Indeed some felt if constructive feedback was not provided at the same time VHTs may feel that all they are doing is perfect and any mistakes would continue (B5, S8, I12).

"You may be thanked but with a 'but...' is what is crucial just like it is done in schools where they write you have done well but you need to improve in this or that area. That is what I also want" (B5)

"In our areas people are used to knowing that once you thank them, it means they are doing well. So saying thank you to a VHT when h/she has some mistakes in the way they do the work will make them continue making the same mistakes and the supervisor will keep on getting the same mistakes" (S8)

Recommendations

Receiving a message to thank you for submitting data after you have sent them: many saw this activity as useful and motivating as it would acknowledge the work of VHTs – considered especially important in light of their voluntary status. Some felt that an automatic acknowledgement would b perceived as a blanket endorsement and may enshrine faulty VHT behaviours. Others felt to be effective it would need to be received very soon after data submission and that it should be constructive ad personalised to the content sent.

Suggestions / recommendations: explore personalising thank you messages to the content submitted. For example maybe there could be a suite of thank you messages with the content of the data submitted – complete, partial or incomplete – activating different messages.

Key discussion points: would tailoring thank you messages to VHTs change the thrust of this activity?

D: receiving summaries of the data you have submitted on your mobile phone. Useful?

• Some felt receiving such summaries confirmed receipt of the submitted data and that it was understood (V7, S9).

"Receiving summaries of the data I have submitted will enable me understand that whatever I sent was understood by my supervisor hence most useful of all V061". (7) V084 "It shows them that the message sent has reached, and a copy has been sent back for remembrance or reference".(S9)

Not useful?

Many VHTs, supervisors and implementers felt strongly that there was little value in this activity
as the information in any summaries would be contained in the registers anyway and therefore
accessible to VHTS. Others felt that it would be seen as duplication of work having already been
completed V3, B5, S8, S9, I10, I12).

"These VHTs have the data already in the registers so sending a summary would be a waste of time" (I12)

• Some implementers considered it may lead VHTs to believe their work has been rejected as it has been sent back.

"Some may think that their data has been rejected that's why it was sent back to them" (112)

Motivational?

• Again, some VHTs considered that such a summary would confirm that their report has been received and nothing was missing and that this would be motivating (V7).

"It motivates so much because I will know that my report has been delivered and nothing is missing" (V7)

Not motivational?

 Some VHTs found the notion of information they saw as duplication being sent back to them as de-motivating. From this perspective data summaries are nonsensical and therefore any strategy utilising such an approach would need to be well introduced and explained (V2, V3, B5).

"To me, the data summaries are least motivational because I already have the totals in my VHT register" (V3)

• Some also felt that if there were to be a delay between data submission and receipt of the summary then this could adversely impact VHT motivation.

"I send these reports on time but receive fed back after a long time. This reduces my morale to send timely reports" (V7)

Problems or challenges

• There were some concerns that sending back an abbreviated version of what had been submitted may not be understood by VHTs. Worse, some felt that the short version or summary could be interpreted as a rejection of the data submitted (V7, B6, S8 S9).

"When I submit these reports, they are in detailed form. But if I receive a response in summaries, then I might fail to understand what they mean" (V7) "According to me it is a repetition and on the side of the VHT h/she may think that the data h/she submitted was incomplete or something is missing and that is why it is sent back" (S8)

• Summaries were thought by one implementer group as unlikely to be understood unless accompanied by an interpretation of the results (I10).

"It might not make a lot of meaning to individual VHTs unless the summaries are analyzed [by data personnel] and presented in form of an interpreted message [meaningful statement]" (110)

• Some supervisors suggested that lack of understanding of the purpose of such summaries combined with a lack of proficiency with mobile phones may lead to VHTs simply deleting the summaries (S11).

"There are VHTs who are not used to different functions of the phone so instead of receiving the summaries on the phone they may instead delete them unknowingly" (S11)

• Some viewed it as a redundant activity due to the information being contained in the VHT registers. Some implementers warned that it was likely to be viewed by VHTs in this way and there may be some resistance to participating in or embracing such an activity as a result.

"The challenge here is that people might think that you are redundant that is why you are sending data that has already been given to you and of which people already have in their registers" (I12)

Recommendations

Receiving summaries of the data you have submitted on your mobile phone: some VHTs feel that summaries would confirm receipt and indicate that the reports were complete. Others thought it represented senseless duplication as the data was available readily in the registers. Supervisors and implementers were concerned that the purpose of such

summaries may not be clear to VHTs which may result in the perception that their data has been rejected. It was thought explaining the summary would be beneficial.

Suggestions / recommendations: if implemented explain the purpose well to all parties. Accompany summaries with explanations – not stand alone figures. Provide training / advice on how to interpret the summaries and apply the in VHT's own setting.

Key discussion points: what are the key ways in which such summaries would be useful to VHTs and how can the activity be designed to ensure these happen?

E: (for VHTs only) receiving information about how your village is performing on key health indicators based on the data you have submitted, compared to other villages / parishes / sub counties / districts / the nation.

Useful?

• This activity was viewed positively by many VHT groups for increasing competition between villages and VHTs. Benchmarking in such a way was seen positively by many with some venturing that to had the potential to raise standards (V1, V3, V4, V7, B5).

"Using the data to know my village performance will help me know where I stand compared to other VHTs, and also helps me to work towards passing their standards if I am below them" (V7)

• Others simply felt that such an activity would provide them with clear performance feedback which was welcomed (V4).

"The feedback given to me would help me to know where I can reform and where I have succeeded." (4)

Not useful?

 Some VHTs felt that they would prefer to understand how their own village was performing before starting to compare. Perhaps it wasn't clear that the aim was indeed to provide a sense of how villages and VHTs were performance and that a measure or measures of performance would have to be established before a comparison could be made (V7).

Motivational?

Four main motivational themes identified from the responses:

1. Receiving feedback on performance and potentially being able to identify where they have gone wrong (V1).

"What would motivate us is activity E because once a report comes back and shows us where we have gone wrong, then we can reflect upon it and adjust accordingly" (1)

2. Learning from the experiences of other, well performing villages (B5).

"Being compared to other VHTs and villages is the most motivational because if you have been not getting 100% in some activities then you can copy from your fellow VHTs and you learn how to improve and perform better" (B5)

3. Competition providing a stimulus to work harder to improve (V2, V3, V7).

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"I think that receiving information on my village position in comparison to others is motivating because if my village is performing better, it is my source of joy. If it is doing badly, then I wake up" (V3)

4. Comparison bringing recognition for the work being done (B6).

"It makes me feel recognized among other VHTs and besides the comparison makes me put more effort so as to be recognized as hard working" (B6)

Not motivational?

See 'problems or challenges' section below.

Problems or challenges

 Some VHTs were concerned that if upon comparison they discovered that they were performing badly then it may lead to them becoming discouraged and perhaps even leaving the program (V2, V3, B5).

"When compared with others and my village is doing badly, it discourages me" (V3) "If I am the one that receives data showing that my village is rated low, it could show that I am not working to the best and instead of waiting for another bad result I opt to give other people a chance to volunteer"V013. [The implied meaning was that he is volunteering so that kind of de-motivating response may make him resign immediately] (V2)

Recommendations

Receiving information about how your village is performing on key health indicators based on the data you have submitted compared to other villages / parishes / sub counties / districts / the nation: benchmarking and / or comparison was seen as potentially beneficial and motivating though it was also felt it had the potential to discourage if comparison was consistently poor.

Suggestions / recommendations: develop a strategy which encourages consistently poor performers with awareness that they could potentially become discouraged and leave if not appropriately managed.

Key discussion points: how best can consistently poor performers be boosted through comparison?

F: (for supervisors and implementers only) using the submitted data to determine how individual VHT members or the VHT team are performing compared to other villages or parishes and communicating this information to the VHTs.

Useful?

• Some implementers felt such an activity could assist district officials identify the weak VHT performers so that they could focus their support on them (I10).

"Using VHT data to determine individual performance will help us identify weak performers and find appropriate interventions to uplift the weak performers" (I10) • Other implementers held the view that the approach would promote healthy competition between VHTs as they would think they are being assessed against each other ahead of the next round of training or benefits (I10, I12).

"To me I don't see any challenge because competition is always good it motivates someone to work hard" (I12)

Not useful?

- Some supervisors raised the issue that it wasn't clear from the activity description what would happen after the comparison (S11).
- Some supervisors felt it was de-motivating to be compared and for that reason rated the activity as last useful (S11).

"This information sent to VHTs comparing them with other Villages can be de- motivating therefore it is least useful" (S11)

Motivational?

n/a

Not motivational?

As in above 'least useful' section.

Problems or challenges

 Some implementers suggested that while comparison could be useful it depends on how it is communicated. Sometimes, it was argued, VHTs may be assessed as poorly performing when there was little else they could have done. The example cited suggested that the instances the VHT is obliged to record may not easily fit into their data entry screen and they may be scored poorly as a result.

"But also this depends on the way this feedback has been given it could be de-motivating for example there are these table where you find '0000' and if it is misinterpreted one may think that they are doing nothing" (112)

• Some villages or VHTs get more support than others and this needs to be taken into account when comparing communities or the system will not be fair.

"There are some villages that may do well in certain aspects because of the extra support from other development partners and when the information is given it shows that they are doing well and I don't think this would be reflected in this feedback why they did better than the others" (I12)

Similar as was described in the 'least useful' section above and for the previous activity, many
thought the activity was potentially demoralising and de-motivating to VHTs and may lead to
some dropping out and even feeling they are being victimised by their supervisors. It is critical in
this context that supervisors manage weak performers well which was acknowledged by
implementers who emphasised that the success of this activity would rest on how it was
implemented (S9, S10, S11, S2).

"The one challenge I see with activity C is that it may de motivate and demoralize others especially those VHTs whose performance is below average and yet it is compared with others and made known to them. They may also start underestimating those who are performing below average which will be too difficult for the3 low performers to bear and may be left with no option but dropping out since they are not paid for this work but are just volunteers" (S11).

• Some supervisors had concerns that the activity may take to long in process to be effective. They thought that by the time the data had been collected, analysed and then fed back to supervisors and VHTs any potential positive impact would be lost (S8).

"For me I can say that the entire process will take a lot of time since the data will be received at the district, the health sub district then HCIII, HCII where it will reach the supervisor and then to the VHT. This process is long" (S8)

 Another supervisor group was concerned that VHTs may be negatively influenced by the example of others. The example used was of a VHT who was doing the right things changing their behaviour to incorrectly mirror the actions of another. While this is surely a legitimate concern it may be better to concentrate on building in measures to the design which reduce the possibility of such a scenario rather than choosing to reduce the interactions between VHTs.

"I have already experienced that during the last two supervision activities, one of the VHTs was filling the register well but when she visited her colleagues she found them doing it differently and got it wrong when I supervised her the second time" (S8)

 One implementer group raised the issue of incentives suggesting that such an activity risked incentivising VHTs to falsify information to look better in the community and by comparison other VHTs. Once again, while such a scenario is a concern and measures should certainly be taken to avoid it, failing to proceed on this basis would seem to be avoiding transparency.

"When this looks like competition, some VHTs may end up giving false information to prove that they are doing well or better than the others" (112)

Recommendations

(For supervisors and implementers only) using the submitted data to determine how individual VHT members or the VHT team are performing compared to other villages or parishes and communicating this information to the VHTs: many implementers and supervisors welcomed the activity suggesting t would help management identify weaker VHTs for support and promote better performance through competition. More commonly though there were concerns. These related to VHTs becoming demoralised through comparison, being incentivised to make themselves look better by falsifying data, not being a level playing field as some VHTs are better resourced and supported and the risk of VHTs following negative examples. Many agreed that their concerns could be addressed by the nature of implementation however.

Suggestions / recommendations: consider the outlined concerns and risks in the design – especially that some VHTs may have greater capacity to perform for a variety of reasons which may lead to some always being highlighted as the best and others as the worst.

Key discussion points: how seriously should the arguments, seemingly for less transparency, be taken? Is it better to reduce VHT awareness of the performance of contemporaries or

increase it? Assuming it is increased, how best can the predicted negative consequences be avoided?

G: (for VHTs only) using the submitted data to check your performance and give you feedback. Useful?

• As discussed in previous sections, receiving feedback to improve performance was desirable to VHTs and it was so too for this activity (B5).

Xxx saw activity as the most useful using a proverb that "Omubumbi aikarra ha muhanda kuhebwa amagezi" (translated as a porter sits along the road to be advised). (Therefore to her being advised was very useful as it led to improved performance) (B5)

Not useful?

n/a

Motivational?

 Again the notion of feedback to improve performance was embraced by some VHTs as motivational (V7).

is very motivational because when I am replied, I will get to know my strengths and weaknesses" (V7)

Not motivational?

n/a

Problems or challenges

 Some VHTs were concerned with the tone of communication suggesting that if it was consistently negative – or in the form of rebukes - it would indicate that they were not appreciated. Concerns were raised that this feedback should not be received when with patients (V7).

"In relation to using submitted data to check my performance and give feedback, when the supervisor comes and does not appreciate my work, and every time gives me negative comments, it shows to me that I am not appreciated or I am being told to stop my work" (V7) "I would not take a supervisor abusing me in front of the patients. It's better to put me aside other that letting everyone hear the rebukes" (V7)

Recommendations

(For VHTs only) using the submitted data to check your performance and give you feedback: while not many VHTs responded to this activity indicating it did not inspire strong responses either negative or positive, it was nevertheless viewed positively as an opportunity for providing performance based feedback. Concerns related to the tone in which the feedback is communicated.

Suggestions / recommendations: ensure the tone of feedback is balanced and delivered in a polite, respectful and constructive way.

Key discussion points:

H (supervisor and implementer groups only): supervisors receiving text messages with individual performance indicators for each of the VHTs they supervise so they can identify who needs extra support and the type of support needed.

Useful?

 Some supervisors and implementers thought this activity would be useful as it would provide supervisors with information relating to how VHTs were performing which ultimately would help ensure that those who require the most support received it which may improve outputs from VHTs (S8, S9 S11, I10, I12).

"I think that when supervisors receive text messages of individual VHT performance so as to know who needs support, it helps identify which particular VHT needs extra support so that his/her confidence and self reliance can be built to enable them perform better" (I10) "I want to see my VHTs perform well, and the only way I can know that is by getting to information on who performs better or not and be able to give support where necessary" (S9)

• It was thought by some supervisors that by targeting supervision to the VHTs who need it the most there could be financial savings for the program (S11).

"...as a result of identifying and getting individual performance indicators for each of the VHTs they supervise, then mistakes and advice is given and in turn costs related to trainings, meetings will all be reduced after guiding the low performing VHTs identified" (S11)

Not useful?

n/a

Motivational?

n/a

Not motivational?

n/a

Problems or challenges

• There was some concern that VHTs may come to understand what sort of submitted data would lead to positive feedback and falsify their submissions to get such a response. Others suggested that if VHTs received positive responses they may get complacent (S11).

"Different VHTs may start to forge data especially those ranked as poor performers as they do not want to be seen as failures and this may lead to getting wrong information" (S11) "These VHTs who perform better than the others and know themselves may begin feeling proud and boastful and may end up not doing their work efficiently like prior to rating" (S11)

• Others were concerned that it may be too time consuming to provide such targeted support (S8, S9).

"It will need a lot of time on the part of the supervisor because you have to make a call and go there to visit the person face to face" (S8)

• Some implementers were worried about the interpretation of 'extra support' in the activity description. They felt this may be seen as all encompassing 'support' which includes financial support as well as goods and raise expectations among VHTs to unsustainable levels (I12).

"It may lead to 'extra in everything' since it is extra support they may need extra allowances, extra fuel and extra every other thing" (I12)

• There were some concerns expressed that unless there is an existing relationship between VHTs and their supervisor that is strong the activity is unlikely to be a success. It was felt that the activity had potential for exploitation through supervisors being vindictive towards VHTs and, even if this is not the case, VHTs interpreting constructive criticism as vindictive (I10).

"There has to be a good working relationship for this activity not to be a problem. If the relationship for any reason is bad, then the supervisor may use the opportunity to get to the VHT in revenge, or the VHT rejects the extra support on grounds that the supervisor is taking advantage to get to him/her as an individual" (110)

Recommendations

(Supervisor and implementer groups only) supervisors receiving text messages with individual performance indicators for each of the VHTs they supervise so they can identify who needs extra support and the type of support needed: supervisors and implementers identified the positives in terms of targeting those VHTs for supervision who need it the most both in terms of anticipated performance improvement and cost saving. There were concerns expressed relating to VHTs falsifying their submissions or becoming complacent as well as that the activity may be too time consuming and even open to exploitation and / or misinterpretation by VHTs.

Suggestions / recommendations: brief supervisors and VHTs on the purpose of the activity and provide example scenarios of how it might usefully play out to avoid later misinterpretation.

Key discussion points:

I (for VHTs) using the submitted data to determine how much face to face supervision you need (i.e. those who perform well get less supervision):

Useful?

• Some VHTs anticipated this activity would help them anticipate their supervisory meetings and be better prepared for the (V7).

"Using the submitted data to determine how much face to face contacts I need with my supervisor will help me programme myself to meet him" (V7)

Not useful?

Some VHTs saw little point in meeting to discuss data that had already been submitted. It may
have been the case that these VHTs did not necessarily understand the purpose of targeting
supervision which highlights the need to not only explain such activities if adopted but also to
highlight their positives (V7).

"When I submit the data and I get feedback, then it is not necessary for the supervisor to check on me face so as to determine whether I am performing well" (V7)

• Other VHTs seemed a little confused about the purpose suggesting that supervisors should come monthly or whenever here is need and using that argument as a basis for suggesting the

proposed activity was not useful. Again this highlights the need to promote understanding of and the benefits of the proposed activity (B6).

"For me I see that the least useful is using the submitted data to determine how much face to face supervision I need because the supervisor should come and check on my work any time there is need and as his monthly visits" (B6)

Motivational?

n/a

Not motivational?

n/a

Problems or challenges

n/a

Recommendations

(For VHTs) using the submitted data to determine how much face to face supervision you need (i.e. those who perform well get less supervision): while some VHTs saw the benefits of this activity in terms of helping them prepare for supervision meetings, others seemed confused as to the purpose and usefulness of targeted supervision.

Suggestions / recommendations: clearly explain the purpose and application of targeted supervision and the role of submitted data in the process.

Key discussion points:

J (For supervisors and implementers only) supervisors receiving aggregated data every 3 months from VHT submitted data to feed into quarterly group supervision meetings: Useful?

• This was seen as a potentially useful resource by some supervisors helping both in discussions with and about specific VHTs and for future reference (S9).

"If I receive aggregated data, then I can discuss about the performance of each VHT during quarterly meetings or even I (can) use the data for future reference about each VHT performance" (S9)

Not useful?

• Some supervisors felt that quarterly was not a rapid enough timeframe to be useful for supervision as mistakes would have a better chance of becoming entrenched (S11).

"This that 3 months will be a long time to wait and receive Data as by then these VHTs would be repeating the same mistakes if not corrected and advised timely" (S11)

Motivational?

n/a

Not motivational?

n/a

Problems or challenges

 One implementer group raised the concern of aggregated data potentially losing some of its meaning through being too distilled and losing some of its nuances or even key variables. Some supervisors also expressed a lack of faith in the accuracy of data aggregated over a three month period (I12, S9).

"The more you aggregate data the less the variable. This may lead to some variables being dropped on the way and yet they are useful" (112) "This aggregated data of 3 months, how can one be sure that the machine compiling it will not send us wrong data? It needs us to rely on our hard copies to be sure" (S9)

• Several groups (both supervisors and implementers) expressed concerns relating to the long timeframe for feedback as previously discussed in the above section (S8, S11, I12).

"If there is a challenge, by the time a supervisor comes back to the community with the aggregated data, it would already be late and may be the challenges would have increased to handle" (S11)

• One supervisor group expressed concerns about the expense of quarterly meetings where they anticipated VHTs would expect allowances which there is no budget for (S8).

"Additionally, every time you call a meeting the VHTs demand for allowances which as a supervisor I do not have" (S8)

• Some implementers suggested that there would need to be IT support provided to supervisors in the form of ongoing training as many do not currently have this capacity (I10)

"I am imagining that soft [electronic] information might be hard to retrieve and understand, because most supervisors are not very equipped with ICT knowledge. So there will be need for training supervisors first on using different ICT software" (I10)

Recommendations

(For supervisors and implementers only) supervisors receiving aggregated data every 3 months from VHT submitted data to feed into quarterly group supervision meetings:

Suggestions / recommendations:

Key discussion points:

Appendix 1 – interview and FGD participant information

	Interview participant information							
VHT inte	VHT interview participants							
Int No.	Age	Gender	Training	Data submission method	Geographic location	Network coverage		
1	45	Female	Basic	Paper	Urban	Good coverage		
2	27	Male	iCCM	Paper	Rural	Good coverage		
3	30	Female	iCCM	Electronic	Urban	Poor Orange good MTN		
4	40	Male	iCCM	Electronic	Rural	Good coverage		
5	39	Female	iCCM	Electronic	Rural	Good coverage		
6	36	Male	iCCM	Paper	Rural	Good coverage MTN and Airtel, poor all others		
7	36	Male	iCCM	Paper	Rural	Limited coverage MTN and Airtel, poor all others		
8	52	Female	Basic	Paper	Urban	Good coverage, all networks available		
9	37	Male	iCCM	Paper	Urban	Good MTN, poor others		
10	30	Female	iCCM	Paper	Urban	Good MTN, Airtel and Warid, poor all others		
11	34	Male	Basic	Paper	Rural	Poor coverage and unreliable for MTN and Airtel, no other networks		
12	35	Male	Basic	Paper	Rural	Only Airtel available		
13	35	Female	Basic	Paper	Rural	Poor all networks especially Airtel and MTN		
14	31	Male	iCCM	Paper	Rural and remote	MTN off and on, Vodafone from DRC expensive but available, poor all others		
15	36	Female	iCCM	Paper	Rural and remote	Good MTN and Airtel		
16	35	Male	iCCM	Paper	Rural and remote	Good MTN, no other networks available		
31	40	Female	iCCM	Electronic	Rural	Poor coverage		

Supervisor in	Supervisor interview participants						
Int No.	Age	Gender	Geographic location	Network coverage			
18	40	Male	Urban	Sporadic, MTN best			
20	28	Male	Rural	Poor			
21	42	Female	Rural	Poor, MTN best			
22	53	Female	Rural	Good			
26	36	Female Rural		Good, MTN and airtel best			
27	49	Female	Rural	Sporadic MTN, Orange and UTL			
28	36	Male	Urban	Good MTN and airtel, poor Orange			
30	42	Male	Urban	MTN good in town but weak outside where airtel is stronger			
Implementer	interview par	rticipants					
Int No.		Age	Gender	Role relevant to VHT program			
17		52	Male	NGO implementer			
19		30	Male	NGO implementer			
23	23 41		Male	District implementer			
24	24 44		Male	District implementer			
25		30	Male	NGO implementer			
29		Declined question	Male	District implementer			

FGD No.	FGD strata	FGD code for reporting	VHT group features	Mean age	Length of time as VHT	Education
1	iCCM trained VHTs in urban setting who submit data electronically	V1	 9 participants Hilly area with a scattered population of mainly pastoralists. Good MTN network coverage and sporadic Orange network mainly in trading centres where majority of the VHTs don't live 	42	1 year	Two reached primary (P) 6, four P7, one secondary (S)1, one S2 and one S3
2	iCCM trained VHTs in urban setting who submit data using paper based system	V2	7 participants - 4 men, 3 women. Hilly terrain, supervisor comes once a month and collect all the paper based reports Good network coverage	41	5 months	One reached P3, two P7, one S2 and three S4
3	iCCM trained VHTs in rural setting who submit data electronically	V3	 9 participants Hilly in some parts and with flat valleys in other places. In pastoral areas, homes are scattered. Some villages are dry with few trees due to deforestation for charcoal burning and crop farming. MTN strongest network 	43	5 months	One reached P5, three P7, one S3, two S4, one S6 and one tertiary college
4	Kiboga, rural, iCCM training, paper based data submission, poor network coverage	V4	8 participants Hilly area with small rivers running down the valley and most of the people grow maize and beans for commercial purposes Poor network coverage – MTN and Airtel only in some areas	37.5	3 years	One reached P3, one P7, on S1, one S2, one S3 and three S4.
5	VHTs with basic training in urban setting, variable network coverage	B5	9 participants - 8 female and one male. FWs suspect majority women as males were prioritised for iCCM training. Urban area with variable network coverage	39	Three for 1 year, four for 2 years and two for 5 years	Two reached P5, one P6, one P7, one S1, two S3 and two S4

6	VHTs with basic	B6	7 participants - 2 female and 5 male.	Not available	Not available	Not available
	training in rural		Sparsely populated. Most of the old villages			
	setting with poor		have been divided due to the influx of many			
	mobile phone		refugees from the DRC and those who are			
	coverage and in		coming to look for work in the oil factories.			
	remote location		The area has poor network coverage especially			
			for MTN but Airtel is constant.			
7	iCCM trained VHTs	V7	7 participants.	34.5	5 months	One stated they had
	in rural setting with		Paper based and rural, good network			reached 'primary' one P7,
	poor mobile phone		On the edge of lake Albert, remote location for			two S2, one S3 and one S4.
	coverage and in		supplies.			One did not answer.
	remote location		Network coverage is very good for MTN and			
			Airtel.			
Supervisor fo	ocus group discussions			1	I	
FGD No.	FGD strata	FGD code for	Supervisor group features	Mean age	Length of time	Education
		reporting			as supervisor	
8	Urban supervisors	S8	7 participants - one male and six females with	35	One for 10	Four reache O level, two A
	with good mobile		one female being a records assistant and not		years and six	level and one had
			having supervisory responsibilities.		for 4 months.	paramedic training.
	coverage		naving supervisory responsionnes.			
	coverage		Urban area.			
	coverage					
	coverage		Urban area.			
	coverage		Urban area. The area served has good network coverage			
9	coverage Rural supervisors in	59	Urban area. The area served has good network coverage and is hilly with valleys and rivers some of	39	All for 3	Three reached tertiary
9		59	Urban area. The area served has good network coverage and is hilly with valleys and rivers some of which have no bridges	39	All for 3 months	
9	Rural supervisors in	\$9	Urban area. The area served has good network coverage and is hilly with valleys and rivers some of which have no bridges 5 participants	39		Three reached tertiary
9	Rural supervisors in remote locations	S9	Urban area. The area served has good network coverage and is hilly with valleys and rivers some of which have no bridges 5 participants Hilly, forested, swampy and with small streams	39		Three reached tertiary (nursing) and two said they
9	Rural supervisors in remote locations with poor mobile	S9 S11	Urban area. The area served has good network coverage and is hilly with valleys and rivers some of which have no bridges 5 participants Hilly, forested, swampy and with small streams and also poorly maintained roads.	39		Three reached tertiary (nursing) and two said they
	Rural supervisors in remote locations with poor mobile phone coverage		Urban area. The area served has good network coverage and is hilly with valleys and rivers some of which have no bridges 5 participants Hilly, forested, swampy and with small streams and also poorly maintained roads. Sporadic network coverage.		months	Three reached tertiary (nursing) and two said they had diploma level (tertiary)
	Rural supervisors in remote locations with poor mobile phone coverage Rural supervisors in		Urban area. The area served has good network coverage and is hilly with valleys and rivers some of which have no bridges 5 participants Hilly, forested, swampy and with small streams and also poorly maintained roads. Sporadic network coverage. 11 participants - 4 male and 7 female		months All for 7	Three reached tertiary (nursing) and two said they had diploma level (tertiary) Ten said they had reached

Implementer focus group discussions							
FGD No.	FGD strata	FGD code for	Implementer group features	Mean age	Length of time	Area of operation	
		reporting			in current role		
10	District officials	110	Four senior district level health staff	50.5	One for 4 months, one for 15 years and two for 18 years	Hoima district	
12	District officials (Kiboga)	112	Nine senior district level health staff	45.5		Four operate throughout Kiboga district and five operate within the district health office.	