

# The Influence of Community Health Volunteers Practices on Advancing Social Accountability in Nairobi County, Kenya \* Corresponding Author: Malkia Moraa Abuga, Email: [malmoraa815@gmail.com](mailto:malmoraa815@gmail.com) Department of Health System Management Kenya Methodist University, Nairobi, Kenya

MALKIA MORAA ABUGA

[malmoraa815@gmail.com](mailto:malmoraa815@gmail.com)

Kenya Methodist University Nairobi Campus <https://orcid.org/0000-0002-5856-5042>

**Wanja Mwaura Tenambergen**

Kenya Methodist University

**Kezia Muthoni Njoroge**

Kenya Methodist University Nairobi Campus

---

## Research Article

**Keywords:** Social Accountability, Community Health Volunteers, Community Health Systems

**Posted Date:** June 30th, 2022

**DOI:** <https://doi.org/10.21203/rs.3.rs-1722305/v1>

**License:**  This work is licensed under a Creative Commons Attribution 4.0 International License.

[Read Full License](#)

---

# Abstract

**Abstract Background:** Community Health Volunteers position in the health system allow them to act as community mouthpieces, fighting inequities and advocating for community rights and needs to government structures. However, questions about how they carry out this role, specifically how they present community concerns to the health system and vice versa, remain unanswered. The purpose of this study was to evaluate the practices of community health volunteers that promote social accountability. **Methods:** The study used a cross-sectional research design across two sub-counties that were purposefully chosen due to their health indicators status. The quantitative data sample size was 180 Community Health Volunteers (Embakasi North 90, Embakasi Central 90) who were sampled using stratified sampling. Focus group discussions, key informant interviews and document review were used to collect qualitative data. **Results:** In Embakasi North and Embakasi Central, respectively, the study found that 66 (73.3 %) and 64 (71.1 %) of Community Health Volunteers rarely recorded complaints, 68 (75.6 %) and 53 (58.9 %) of Community Health Volunteers always reported complaints to the Community Health Assistant, and 67 (74.4 %) and 47 (52.2 %) of Community Health Volunteers always provided feedback to clients on the complaints raised. **Conclusion:** There was sub-optimal and inconsistent implementation of social accountability practices by the Community Health Volunteers in the two sub-counties. This was influenced by inadequate information on their mandate in social accountability, a lack of reporting indicators targeting social accountability and a lack of awareness about formal channels of complaint handling mechanisms at community health systems. **Keywords:** Social Accountability, Community Health Volunteers, Community Health Systems

## Background

The overall goal of the health system is to improve health and health equity, in ways that are responsive [9]. Social Accountability (SAc) refers to strategies in which citizens express their concerns about the quality of services or the performance of service providers, who are then required to respond and account for their actions and decisions [16]. The model incorporates a number of innovations that encourage health clients to express their views on health services, particularly when there are barriers to doing so.

According to studies, health clients face obstacles in the health system that necessitates expression. In the United States, for example, one out of every six women is mistreated by the health-care system [40]. Similarly, women in India have complained about being mistreated by health-care providers [33, 42]. Women in Kenya have reported mistreatment and humiliation during childbirth, which has been linked to their socioeconomic status [10, 28]. According to [39], there is a 20% prevalence of disrespect and violence during childbirth in Kenya.

Even when there is evidence of various types of mistreatment, still health clients have difficulty voicing or expressing their concerns due to a variety of factors. Women in Nepal, for example, did not complain about maternal care because they lacked the authority to do so directly to the health facility. Instead,

they turned to other networks, such as female community health volunteers (FCHVs), to talk about their maternal health issues, health-care experiences and concerns [41, 26]. Gender relations and other socio-cultural considerations influence how complaints are raised in Kenya [21], in addition to socioeconomic status, power and knowledge imbalances [10, 28].

The consequences of failing to include the voice of health clients in service delivery cannot be ignored. A study in Congo established that by women not expressing their concerns resulted to increased maternal mortality [25]. In Kenya, [6] a study discovered that dissatisfied patients are less likely to comply with care in Kenya, so it is critical to have systems in place to deal with patient expectations [39].

Understanding client concerns contributes to improved service quality, which is a critical component of achieving universal health coverage and sustainable development goals 3, which is an immediate priority [17]. These findings call for more research on how to encourage health clients to speak up about their concerns, as silence has a negative impact on health-seeking behaviour.

Community Health Volunteers (CHVs) are people chosen from the community to help bridge the gap between the community and the health system [23]. The hope is that they will inform the health system about community needs and issues, and vice versa. This, however, might not always be the case. Even as the literature on the performance of CHVs expands, some questions remain unanswered. Questions about how CHVs present community concerns in the health system and vice versa, how they implement SAc, how communities interact with health providers, and how they demand accountability remain unanswered, particularly regarding the role of CHVs as initiators of such relationships [4, 27].

Several studies conducted in community health systems indicate that the social accountability component is weak and ineffective, particularly in Community Health Volunteers programs [27]. Country case studies in Bangladesh, Ethiopia, Indonesia, Kenya, Malawi, and Mozambique revealed a lack of effort by CHVs in influencing health service priorities based on their identification of local needs, implying that a collaborative effort may be required [24]. This study aimed to establish community health volunteer practices on social accountability advancement in Nairobi County, Kenya.

## **Method**

### **Study Design**

This was a cross-sectional survey that used a mixed method approach to answer the research question. The study combined both qualitative and quantitative approaches of data collection. In this research convergent parallel mixed method was used to collect data. In this case, both quantitative and qualitative data was collected and examined to determine the findings of the study as illustrated in Fig. 1.

### **Study Setting**

The study was conducted in the Community Health Units (CHUs) in informal settlement in Nairobi County, Kenya. According to UN Habitat [36], approximately 58 % of Nairobi's population lives in informal

settlements, and the city is home to approximately 55, 000 refugees and asylum seekers [20]. With this in mind, it is critical to have mechanisms in place that can strengthen the voice of its health users, particularly those in informal settlements and other marginalized settings. We assessed the social accountability practices of CHVs in two sub-counties in Embakasi Central and Embakasi North, in Nairobi County. The sub-counties were purposively selected due to the over-population and limited support from non-governmental organizations. At the time of study, the selected CHUs had 270 and 200 CHVs respectively.

## Study Population

Participants in the study included CHVs, Community Health Assistants (CHAs) and health facility in-charge. A total of 180 CHVs from the two sub-counties were interviewed. Key informants (KI) and participants in focus group discussions (FGDs) were purposefully chosen. Three focused group discussions were held with 24 CHVs. In-depth interviews with the eight KI were used to gather more information. Previous monthly reports for CHVs were reviewed to see if there were any documented complaints or compliments.

## Sample Size and sampling technique:

The study sample size was calculated using the formula below, considering the formula is suitable for surveys as discussed by [14].

Where:

$$np = 1 (z_{\alpha} + z_{\beta})^2 \sigma^2 = 90$$

**[ ES ]**

= Design effect of 1 for stratified sampling

= $Z_{\alpha}$  is the significance level 1.96

= $Z_{\beta}$  is the Power value of 0.842

= $\sigma$  is the standard deviation/event rate of 50%

=effect size of 70%

The sample size per sub-county was 90 Community Health Volunteers.

Two sub-counties out of 17 were selected purposively. Stratified sampling technique was used to select the CHUs to participate in the study. In this study CHUs represented the strata. In each CHU simple random sampling was used to select approximately 3 to 4 CHVs to be interviewed. The selected CHVs

were invited to participate voluntarily. Key informant and FGD participants were chosen on the basis of their role and knowledge in community health.

## **Data Collection**

Quantitative data was collected using a questionnaire that assessed the social accountability practices of the CHVs. The questions were related to the general characteristics of the CHVs like age, level of education, number of years worked by the CHV, and their exposure to social accountability training. The questionnaire had 13 questions that assessed their practices in social accountability. The practices were adopted from literature. The questionnaire was uploaded on Kobo collect and administered through telephone interviews.

Focus group checklist and key informant interview guides were used to collect qualitative data. In addition, document review was used to collect information on CHV practice of recording complaints and compliments.

Pretesting of tools was done in Makadara sub-county that was not participating in the study. The findings from the process were used to amend and finalize the questions. This process helped in ensuring reliability and validity of the research instruments. Cronbach's Alpha was used to measure internal consistency of questionnaire items that were assessed using Likert scale. The questionnaire that had 13 items with Cronbach's Alpha of 0.865 and was considered appropriate.

## **Data Processing and Analysis**

Quantitative data was analysed using Statistical Package for the Social Sciences (SPSS Version 28). Data from the questionnaires was coded and cleaned before analysis. Descriptive statistics including percentages and frequencies were used to summarize individual variables. Chi-square test was used to show any significance difference between the groups. To the level of significance was measured by  $p \leq 0.05$ .

Qualitative data was analysed manually through thematic analysis in word. Qualitative data collected from FGDs, KI and document analysis was literally transcribed into verbatim transcripts. Responses were coded into groups that are manageable, taking into account words with similar meanings, which forms themes. To familiarize ourselves with the transcripts, the transcripts were read repeatedly. This was a crucial stage because it enabled the researcher to read in between the lines so that the codes and patterns were located. After familiarization with the transcripts, the researcher prepared the initial codes.

## **Results**

Community health volunteers involved in the study from both Embakasi Central and Embakasi North were 14 (15.6%) males and 76 (84.4%) females. In Embakasi Central, 36 (40%) of the CHVs were between 40–49 years and 21 (23%) of CHVs were between 30–39 years. Only 7% and 8% were aged between 20–29 years and 60 years and above respectively. In Embakasi North, 30 (33.3%) of CHVs were aged between 40–49 years and 17 (18.9%) were aged between 30–39 years as illustrated in Table 1.

Community Health Volunteers, highest level of education was secondary in both Embakasi Central 34 (37.8%) and Embakasi North 44 (48.9%). Most of CHVs in Embakasi Central 37(41.1%) and Embakasi North 44 (48.9%) had volunteered for 5 to 10 years. As shown in Table 1, CHVs reported working three days per week on average, with Embakasi Central accounting for 43 (47.8%) and Embakasi North accounting for 42 (46.7%). None of the CHV in Embakasi Central reported being trained in Social Accountability; however, one CHV in Embakasi North reported being trained by the Department of Social Justice.

Table 1  
Demographic Characteristics of CHVs

Variable	Embakasi Central		Embakasi North	
	(n = 90)	(%)	(n = 90)	(%)
<b>Age</b>				
20–29	7	7.8	8	8.9
30–39	21	23.3	17	18.9
40–49	36	40	30	33.3
50–59	18	20	29	32.2
60 and Above	8	8.9	6	6.7
<b>Gender</b>				
Female	76	84.4	76	84.4
Male	14	15.6	14	15.6
<b>Level of Education</b>				
Primary	32	35.6	31	34.4
Secondary	34	37.8	44	48.9
Tertiary Institution	24	26.7	15	16.7
<b>Marital Status</b>				
Divorced/Separated	10	11.1	8	8.9
Married/Living Together	61	67.8	64	71.1
Never Married	8	8.9	8	8.9
Widowed	11	12.2	10	11.1
<b>Years Volunteered</b>				
Less Than 5 Years	28	31.1	18	20
5–10 Years	37	41.1	44	48.9
More Than 10 Years	25	27.8	28	31.1
<b>No. of Days Volunteered in a week</b>				
1	0	0	2	2.2
2	31	34.4	32	35.6
3	43	47.8	42	46.7

Variable	Embakasi Central		Embakasi North	
4	9	10	13	14.4
5	7	7.8	1	1.1
<b>Income</b>				
Yes	66	73.3	71	78.9
No	24	26.7	19	21.1
<b>Monthly Income</b>	(n = 66)		(n = 71)	
Less than 5000	18	27.3	24	33.8
5000–9999	39	59.1	35	49.3
10000–14999	9	13.6	11	15.5
15000 and Above	0	0	1	1.4

## Community Health Volunteers Practices

Findings showed that 46 (51.1%) of CHVs in the Embakasi Central always sensitized the community, 27 (30%) sometimes and 17 (18.9%) rarely sensitized the community on their health rights and entitlement. The results were not very different to the CHVs in Embakasi North, where results indicated 46 (51.1%) always sensitized the community, 31 (34.4%) sometimes and 13 (14.4%) rarely sensitized the community on health rights and entitlement as shown in Table 2. The study had a focus in establishing if the CHVs specifically informed community members on their roles in health service delivery. Few CHVs in both Embakasi Central and Embakasi North reported to always 22 (24.4%) and 4 (3.3%) respectively, inform community members on their roles. The reasons given by participants in the FGD and KI supported these findings. For example, CHVs lack of adequate and correct information on health rights and entitlement was cited as contributing to low practice as illustrated below:

*“We have not been trained in patient rights and it is difficult to speak on something you are unsure.”***(FGD, Female participant, Embakasi North)**

*“...not only CHVs, but also the majority of CHAs, have received no training on social accountability and health-related rights, which may affect their performance.”***(Key informant, Male)**

Table 2  
CHVs practices in Social Accountability

Variable	Results	
CHVs Practices	Embakasi North Group(n = 90)	Embakasi Central (n = 90)
<b>Sensitizing the community on health rights</b>		
Rarely	13 (14.4%)	17 (18.9%)
Sometimes	31 (34.4%)	27 (30%)
Always	46 (51.1%)	46 (51.1%)
<b>Inform the community on their roles in service delivery</b>		
Rarely	52 (57.8%)	40 (44.4%)
Sometimes	34 (37.8%)	28 (31.1%)
Always	4 (3.3%)	22 (24.4%)
<b>Encouraging communities to speak up</b>		
Rarely	1 (1.1%)	2 (2.2%)
Sometimes	22 (24.4%)	28 (31.1%)
Always	67(74.4%)	60(66.7%)
<b>Listening to complaints</b>		
Rarely		2 (2.2%)
Sometimes	16 (17.8%)	11 (12.2%)
Always	74 (82.2%)	77 (85.6%)
<b>Recording complaints and compliments</b>		
Rarely	66 (73.3%)	64 (71.1%)
Sometimes	24 (26.7%)	19 (21.1%)
Always	0	7 (7.8%)
<b>Reporting clients complaints to the CHA</b>		
Rarely		8 (8.9%)
Sometimes	22 (24.4%)	29 (32.2%)
Always	68 (75.6%)	53 (58.9%)

Variable	Results	
<b>Reporting clients complaints to the health facility in charge</b>		
Rarely	50 (55.6%)	33 (36.7%)
Sometimes	40 (44.4%)	57 (63.3%)
Always	0	0
<b>Follow up clients concerns</b>		
Rarely	1 (1.1%)	14 (15.6%)
Sometimes	44 (48.9%)	32 (35.6%)
Always	45 (50%)	44 (48.9%)
<b>Feedback from the CHA</b>		
Rarely	5 (5.6%)	16 (17.8%)
Sometimes	25 (27.8)	28 (31.1%)
Always	60 (66.7%)	46 (51.1%)
<b>Feedback from the health facility in charge</b>		
Rarely	50 (55.6%)	33 (36.7%)
Sometimes	40 (44.4%)	57 (63.3%)
Always		0
<b>Feedback to the client</b>		
Rarely	2 (2.2%)	17 (18.9%)
Sometimes	21 (23.3%)	26 (28.9%)
Always	67 (74.4%)	47 (52.2%)

Community health volunteers were asked if they encouraged community members to always speak up and 60 (66.7%) of CHVs in Embakasi Central reported to encourage community members to always speak up about health services concerns, compared to 67 (74.4%) in Embakasi North. In addition, CHVs were asked if they listen to clients complaints and majority of CHVs 77 (85.6%) in Embakasi Central, reported to always listen compared to 74 (82.2%) in Embakasi North. There was a relation between community awareness on rights and being able to speak up as cited below:

*“It will be easier to encourage community to speak up if they know the rights to health”.*(FGD, Female, Embakasi Central)

Finding revealed that CHVs actively encouraged community members to speak up during 'home visits' as quoted below:

*"During home visits, we ask clients if they were satisfied with the services they received at the health facility. This enables us to identify the strengths and weaknesses of our health facilities as well as those of service providers."***(KI, Male)**

Most CHVs in Embakasi Central 64 (71.1%) and North 66 (73.3%) reported to rarely record complaints and compliments. The findings were consistent with those from the document review, in which the reporting tools of Ministry of Health (MOH) 514 and 515 were reviewed and there was minimal evidence of any complaint or compliment documented. The results from FGD and the KI attributed low documenting of complaint and compliments to lack of designated complaint and compliment indicators in the MOH 514 and MOH 515 reporting tools, as shown below:

*"The reporting tool does not include a section for complaints and compliments."***(FGD, Male, Embakasi North)**

*"Unfortunately, the Community MOH reporting tool lacks indicators for complaint and compliment collection; therefore, gathering this information cannot be accomplished simply by looking at our reporting tool."***(KI, Female, Embakasi Central)**

These prompted suggestions to modify or revise the 'MOH 514' and 'MOH 515' to include complaint and compliment indicators, as shown below:

*"We can have a column in our service logbook (MOH 514) for complaints or compliments from that household"***(FGD, Female, Embakasi Central)**

In Embakasi Central and Embakasi North 53 (58.9%) and 68 (75.6%) of CHVs always reported clients concerns to the CHA while 57 (63.3%) and 40 (44.4%) sometimes reported to the health facility in charge respectively. Because of the CHA's direct supervisory role, more CHVs reported complaints to the CHA than to the Health Facility in-charge. Some of the reasons why not all CHVs reported complaints were a lack of awareness about the "formal channel" and "fear," which resulted in some of them "keeping silent," as stated below:

*"You just keep quiet." You can't face that man (health care provider)"***(FGD, female, Embakasi Central)**

*"I'd say we're not aware of any productive channels for reporting complaints."***(FGD, male, Embakasi North)**

In Embakasi North, most CHVs 67 (74.4%) reported to always provide feedback to clients on issues reported compared to 47 (52.2%), in Embakasi Central as illustrated in Table 2. CHVs stated that feedback was only possible if the CHA or facility in charge was willing to share information about the action taken after a complaint or compliment was submitted:

*"We respond to client complaints if the CHA or facility in charge informs us of the action they have taken to resolve the issue."*(FGD, Female, Embakasi Central)

Another issue that CHVs faced when dealing with complaints was ' *fear of discrimination,*' because some complaints involved health providers. CHVs were afraid of being excluded from activities that provided a token. This is exemplified by the following quote:

*"Another issue, I believe, is that many CHVs are afraid. They do not speak out"*.(FGD, Female, Embakasi North)

*"The fear that CHVs have is that if they speak up, they will be discriminated in activities that have a monetary reward, such as a stipend"*.(KI, Male, Embakasi Central)

## Discussion

The purpose of this study was to assess the influence of community health volunteer's practices in advancing social accountability. Prior studies have shown that CHVs serve as a link between the community and the health system [15, 23, 29] which provides them with an opportunity to influence health system responsiveness and priorities [38]. For example a study in Nepal showed that Female Community Health Volunteers collected concerns from the community and reported them during regular meeting with the health providers [33]. The next sections reflect on the CHVs practices (information sharing, documentation of complaints/compliments and providing feedback) and their influence on social accountability.

### Information Sharing

According to these study findings, CHVs informed the community about their health rights and entitlements, but not adequately. For instance, majority of the CHVs did not inform the community the role they play in improving service delivery. This practice was limited by CHVs lack of awareness on social accountability, similar to [32] findings. As a result of CHVs' lack of social accountability capacity, community members may be unaware of their health rights and entitlements. Limiting how they express their concerns, as most informal settlement household members rely on intermediary structures such as CHVs to empower them in health-related matters [23]. Findings from this study are consistent with those of [24] which stated that if CHVs feel empowered, they will be able to empower the communities they serve. In addition, their performance would improve, allowing them to realize their potential as social change agents [38]. Other studies from India, Nepal, and the Democratic Republic of the Congo, have reported the impact of CHVs/FCHVs on providing the community with information on health services and educating them about the importance of reporting concerns [25, 32, 18, 33]. These studies found that community empowerment on health rights could lead to increased use of services and the ability to seek help [25, 32, 18, 33] and the reverse was it could result to poor adherence to treatment [6].

In this study CHVs reported to actively encourage the community members to speak up and they would listen to their issues during household visits. This study did not exhaustively investigate the factors that influence or limit health clients from speaking up even when they have issues to complain about [37] but social economic status [10, 28], knowledge and power asymmetries [41] have been documented to influence how they raise health concerns. By not proactively seeking the opinion, expectations or complaints about health services, could result to the voice of the vulnerable and marginalized in the society being left out in health system decision making. Lodeistein [16] reported intermediaries like Health Facility Committees not to proactively seek health users' opinions or complaints about health services while Accredited Social Health Activists in India [5] concentrated in achieving service delivery targets like immunization coverage compared to their advocacy role. Successful social accountability mechanisms should deliberately encourage health clients to speak up and encourage responsiveness, if we are to achieve person-centred services.

### **Documentation of Complaints and Compliments**

The CHVs practice of recording complaints and compliments was very low in both areas of study. Discussions revealed that verbal reporting was commonly used to express concerns from the community. Lack of complaint and compliment indicators on the Ministry of Health community reporting tools was one of the reasons for no documentation. When health concerns are not documented, they may have an impact on accountability because health authorities will lack a reference point for information. Documenting complaints and compliments can help in tracking health concerns and how they are handled. Evidence of this study on documenting complaints corroborate with those from Democratic Republic of Congo [25], and Nepal [38]. Their studies established that by not having proper systems for recording and analysing complaints resulted to community concerns not being addressed. A study in India [1] established that CHVs' ('Matinins') practice of submitting written complaints to officials for action improved how health authorities handled issues that could not be resolved through mediation.

Studies [16] have proposed the need for instruments that allow for more systematic data collection and documentation after identifying gaps with health facility committees collecting complaints and getting lost due to lack of documentation. A good documentation system that enables systematic methods of collecting, analyzing and responding to complaints/compliments is required for effective use of data. Complaints must be documented in order to understand their frequency and nature [12, 19], increasing the community's voice in health-care management significantly. Documentation will also demonstrate which mechanisms are more suitable and effective [41].

### **Feedback to Health System and Community**

These study findings showed inconsistency in CHVs practice of reporting complaints/compliments to the CHA or facility in-charge for action. The reasons could have been lack of awareness on formal channels of complaint handling and fear by the CHVs. Informing CHVs on formal channel of complaint/compliment handling mechanisms in the community health system, would help in ensuring there is a standardized and systematic way of handling community concerns of the health system. Lack

of formal systems at local health centres or a representative of the population to present complaints or concerns to health providers were reported to be lacking in Democratic Republic of Congo by [25]. In addition, their study reported community groups lacked the capacity and expertise to express their concerns or exert pressure on public officials or health care providers.

Findings from this study showed not all CHVs provided feedback to clients after they had raised a complaint. The decision to provide clients with feedback was dependent on if the CHVs were informed on action taken after the complaint was raised. The findings demonstrated lack of formal complaint handling mechanisms with clearly defined feedback loops in community and facility systems. Feedback is an important component of social accountability because it could increase customer satisfaction [20] and enhance enforceability and answerability [31]. Citizen feedback must be communicated to relevant actors or decision-makers who can act on the information and/or who may incur costs as a result of the information [31]. Well-functioning feedback loops necessitate a response capacity (which can be improved through social accountability) to ensure that reported issues are noted and action is taken to resolve problems as they arise, preferably with regular communication from relevant higher authorities to frontline service providers about resolution plans and timelines [3].

Feedback to the health system and clients can promote transparency, performance, fairness and respect especially by the health providers [8]. Positive feedback provided directly by the clients to the health providers or indirectly through intermediaries can elicit feelings of happiness, achievement and accomplishment. However, negative feedback, on the other hand, elicits feelings of incompetence and demotivation [20]. Whichever the outcome, the benefits outweigh the risks; therefore social accountability mechanisms should strengthen the feedback component. Social accountability approaches can improve service providers' responsiveness to service users' needs and their understanding of the challenges they face, foster better government-citizen relationships, and provide valuable feedback on the status of basic service delivery in a given country [35].

## **Limitation**

First limitation was the questionnaire was administered to a small sample size compared to the total number of CHVs in Nairobi County which could affect generalization. However this bias was minimized by use of mixed methods, which aided in the in-depth understanding of the CHVs practices in social accountability and thus the findings, can be used in similar settings. The second limitation was social desirability bias. This bias was reduced by triangulating the data sources and validating the findings with study participants at the end.

## **Conclusion**

These study findings illustrate that CHVs position in the health system, provides them with the opportunity to enhance social accountability. These findings support the importance of CHVs in health service responsiveness because they serve as a bridge between the health system and the community. Therefore, these structures must have a clear legal mandate to ensure health sector accountability in

order to function optimally. More emphasis should be placed on training CHVs on social accountability. To improve the practice of documentation, clear complaints/compliment indicators should be provided in community health reporting systems. Furthermore, for standardization of social accountability practice in community health systems, there must be clear complaint/compliment handling mechanisms that are known to CHVs, community members and all health stakeholders. These findings will assist policymakers and other stakeholders at the national and county levels in developing social accountability approaches aimed at the improving community health system.

## **Declarations**

### **Ethical Approval and Consent to Participate**

Written and verbal informed consent was obtained from all participants. Prior to the commencement of the study, approval was obtained from the Kenya Methodist University's Scientific Ethics and Research Committee (KeMU/SERC/HSM/36/2021), National Commission for Science, Technology and Innovation (NACOSTI/P/21/12157) and Nairobi Metropolitan Health Department. This enabled permissible access to all information that was necessary for the research. The participants who voluntarily consented were involved.

### **Consent for Publication**

Not Applicable

### **Availability of data and materials**

The dataset analysed during this study is available from the corresponding author on reasonable request.

### **Competing Interest**

The authors declare that they have no competing interests.

### **Funding**

No funding

### **Authors Contribution**

Malkia Moraa Abuga: main author, data collection, analysis, report writing, and manuscript. Wanja Mwaura Tenambergen and Kezia Muthoni Njoroge: project support, supervision, revising report, manuscript revision and approval. The final manuscript has been read and approved by all of the authors.

### **Acknowledgement**

Special thanks go to the Nairobi Metropolitan Health Department for allowing us to conduct this research in the selected sub-counties. We are grateful to the Community Health Volunteers and health workers who were open to sharing their experiences with us during this research.

## Abbreviations

CHV	Community Health Volunteers
CHU	Community Health Unit
CHA	Community Health Assistants
FCHVs	Female Community Health Volunteers
FGD	Focus Group Discussion
KI	Key Informant
MOH	Ministry of Health
SAC	Social Accountability

## References

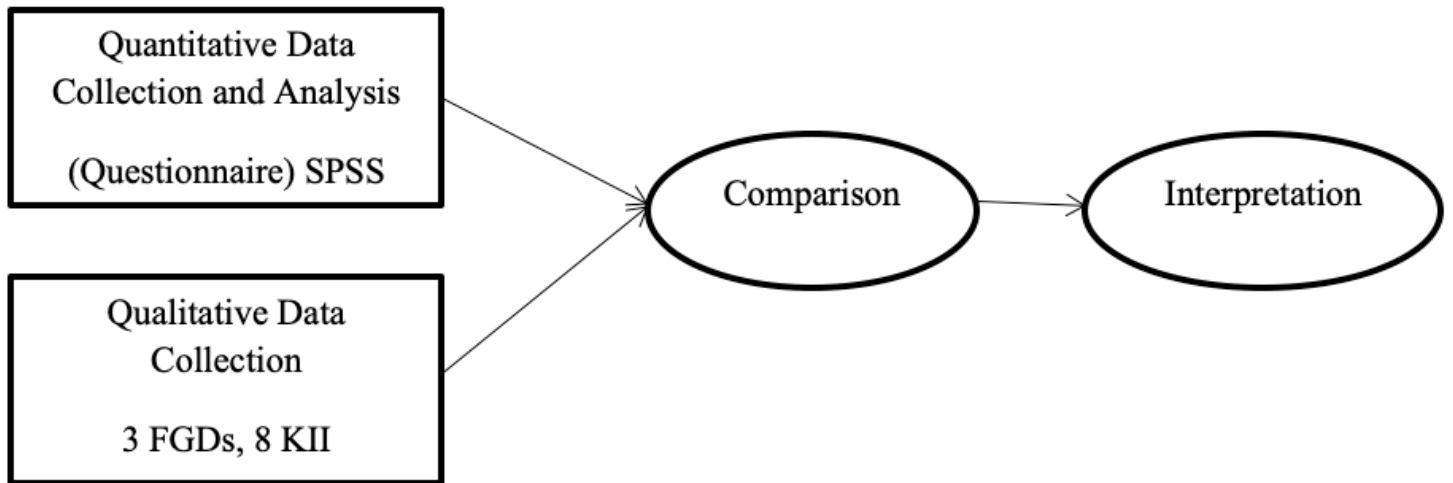
1. Nandi S, Schneider H. Addressing the social determinants of health: a case study from the Mitaniin (community health worker) programme in India. *Health Policy and Planning*. 2014 Sep 1;29(suppl\_2):ii71–81.
2. Gibbs GR. *Analyzing Qualitative Data* [Internet]. 1 Oliver’s Yard, 55 City Road London EC1Y 1SP: SAGE Publications Ltd; 2018 [cited 2022 Jun 3]. Available from: <https://methods.sagepub.com/book/analyzing-qualitative-data-2e>.
3. Pieterse P. Citizen feedback in a fragile setting: social accountability interventions in the primary healthcare sector in Sierra Leone. *Disasters*. 2019 Mar 1;43.
4. Schaaf M, Fox J, Topp SM, Warthin C, Freedman LP, Robinson RS, et al. Community health workers and accountability: reflections from an international ‘think-in’. *Int J Equity Health*. 2018 May 25;17(1):66.
5. Saprii L, Richards E, Kokho P, Theobald S. Community health workers in rural India: analysing the opportunities and challenges Accredited Social Health Activists (ASHAs) face in realising their multiple roles. *Hum Resour Health*. 2015 Dec;9(1):95. 13(.

6. Karanja DMS, Ogutu M, Omedo MO, Alaii J, Matey EJ, Awiti A, et al. Community Health Workers' Experiences and Perspectives on Mass Drug Administration for Schistosomiasis Control in Western Kenya: The SCORE Project. *Am J Trop Med Hyg.* 2012 Dec;5(6):1065–72. 87(.
7. Creswell JW, Plano Clark VL. *Designing and conducting mixed methods research.* Los Angeles: SAGE Publications; 2011.
8. Ho LS, Labrecque G, Batonon I, Salsi V, Ratnayake R. Effects of a community scorecard on improving the local health system in Eastern Democratic Republic of Congo: qualitative evidence using the most significant change technique. *Confl Health.* 2015;9:27.
9. World Health Organization. *Everybody's business: strengthening health systems to improve health outcomes: WHO's framework for action.* Geneva: World Health Organization; 2007.
10. Oluoch-Aridi J, Smith-Oka V, Milan E, Dowd R. Exploring mistreatment of women during childbirth in a peri-urban setting in Kenya: experiences and perceptions of women and healthcare providers. *Reprod Health.* 2018 Dec 17;15(1):209.
11. Duong D, Bui H, Pham T, Doan D, Le T. Factors associated with four or more antenatal care services among pregnant women: a cross-sectional survey in eight South Central Coast provinces of Vietnam. *IJWH.* 2015 Jul;699.
12. Ha BT, Tac PV, Duc DM, Duong DT, Thi LM. Factors associated with four or more antenatal care services among pregnant women: a cross-sectional survey in eight South Central Coast provinces of Vietnam. *Int J Womens Health.* 2015;7:699–706.
13. Lister S. and S. *Fostering social accountability: from principle to practice : guidance note.* 2010 [cited 2022 Jun 3]; Available from: <https://bibalex.org/baifa/en/resources/document/453204>.
14. Malone H, Nicholl H, Coyne I. Fundamentals of Estimating sample size. *Nurse Researcher.* 2016 May 18;Volume 23:21–5.
15. Bhutta Z, Lassi Z, Pariyo G, Huicho L. *Global Experience of Community Health Workers for Delivery of Health Related Millennium Development Goals: A Systematic Review, Country Case Studies, and Recommendations for Integration into National Health Systems* WHO Global Health Workforce Alliance (GHWA) Geneva: World Health Organization 2010. Global Health Workforce Alliance World Health Organization; 2010 Jan. 1;1.
16. Lodenstein E, Dieleman M, Gerretsen B, Broerse JEW. Health provider responsiveness to social accountability initiatives in low- and middle-income countries: a realist review. *Health Policy Plan.* 2017 Feb;32(1):125–40.
17. Kruk ME, Gage AD, Arsenault C, Jordan K, Leslie HH, Roder-DeWan S, et al. High-quality health systems in the Sustainable Development Goals era: time for a revolution. *The Lancet Global Health.* 2018 Nov;6(11):e1196–252.
18. Hamal M, de Cock Buning T, De Brouwere V, Bardají A, Dieleman M. How does social accountability contribute to better maternal health outcomes? A qualitative study on perceived changes with government and civil society actors in Gujarat, India. *BMC Health Serv Res.* 2018 Aug 22;18(1):653.

19. Gal I, Doron I. Informal complaints on health services: hidden patterns, hidden potentials. *Int J Qual Health Care*. 2007 Jun;19(3):158–63.
20. Lodenstein E, Ingemann C, Molenaar JM, Dieleman M, Broerse JEW. Informal social accountability in maternal health service delivery: A study in Northern Malawi. *PLoS One*. 2018 Apr 11;13(4):e0195671.
21. Wangūi Machira Y. Integrating Social Accountability in Healthcare Delivery: Lessons Drawn from Kenya [Internet]. Washington, DC: World Bank; 2015 Feb [cited 2022 Jun 3]. Available from: <https://openknowledge.worldbank.org/handle/10986/21666>.
22. Refugees UNHCR. for. Joint statement by the Government of Kenya and the United Nations High Commissioner for Refugees: Dadaab and Kakuma Refugee Camps Roadmap [Internet]. UNHCR. [cited 2022 Jun 3]. Available from: <https://www.unhcr.org/news/press/2021/4/608af0754/joint-statement-government-kenya-united-nations-high-commissioner-refugees.html>.
23. Kenya Community Health Policy. 2020–2030 - Nurturing Care Framework for Early Childhood Development [Internet]. 2020 [cited 2022 Jun 3]. Available from: <https://nurturing-care.org/kenya-community-health-policy-2020-2030/>.
24. Kane S, Kok M, Ormel H, Otiso L, Sidat M, Namakhoma I, et al. Limits and opportunities to community health worker empowerment: A multi-country comparative study. *Social Sci Med*. 2016 Sep;164:27–34.
25. Mafuta EM, Dieleman MA, Essink L, Khomba PN, Zioko FM, Mambu TNM, et al. Participatory approach to design social accountability interventions to improve maternal health services: a case study from the Democratic Republic of the Congo. *glob health res policy*. 2017 Dec;2(1):4.
26. Panday S, Bissell P, van Teijlingen E, Simkhada P. Perceived barriers to accessing Female Community Health Volunteers' (FCHV) services among ethnic minority women in Nepal: A qualitative study. *PLoS One* [Internet]. 2019 Jun 10 [cited 2021 Jan 21];14(6). Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6557479/>.
27. Kok MC, Broerse JEW, Theobald S, Ormel H, Dieleman M, Taegtmeier M. Performance of community health workers: situating their intermediary position within complex adaptive health systems. *Human Resources for Health*. 2017 Sep 2;15(1):59.
28. Afulani PA, Phillips B, Aborigo RA, Moyer CA. Person-centred maternity care in low-income and middle-income countries: analysis of data from Kenya, Ghana, and India. *The Lancet Global Health*. 2019 Jan;7(1):e96–109.
29. Aseyo R, Mumma J, Scott K, Nelima D, Davis E, Baker K, et al. Realities and experiences of community health volunteers as agents for behaviour change: Evidence from an informal urban settlement in Kisumu, Kenya. *Human Resources for Health*. 2018 Oct 4;16.
30. Refugees UNHCRfor. Refworld | Kenya: Don't Force 55,000 Refugees Into Camps [Internet]. Refworld. [cited 2022 Jun 3]. Available from: <https://www.refworld.org/docid/50ffd7392.html>.
31. Camargo CB, Jacobs E. Social Accountability and its Conceptual Challenges: An analytical framework.:24.

32. Mafuta EM, Dieleman MA, Hogema LM, Khomba PN, Zioko FM, Kayembe PK, et al. Social accountability for maternal health services in Muanda and Bolenge Health Zones, Democratic Republic of Congo: a situation analysis. *BMC Health Serv Res.* 2015 Jun;15(1):514.
33. Hamal M, Heiter K, Schoenmakers L, Smid M, de Cock Buning T, De Brouwere V, et al. Social Accountability in Maternal Health Services in the Far-Western Development Region in Nepal: An Exploratory Study. *Int J Health Policy Manag.* 2019 Feb;17(5):280–91. 8(.
34. Lodenstein E, Mafuta E, Kpatchavi AC, Servais J, Dieleman M, Broerse JEW, et al. Social accountability in primary health care in West and Central Africa: exploring the role of health facility committees. *BMC Health Serv Res.* 2017 Jun 13;17(1):403.
35. Fox J. Social Accountability: What Does the Evidence Really Say? *World Development.* 2015 Aug 1.
36. State of the World's Cities. 2010/2011- Cities for All: Bridging the Urban Divide | UN-Habitat [Internet]. [cited 2022 Jun 3]. Available from: <https://unhabitat.org/state-of-the-worlds-cities-20102011-cities-for-all-bridging-the-urban-divide>.
37. Atela M, Bakibinga P, Ettarh R, Kyobutungi C, Cohn S. Strengthening health system governance using health facility service charters: a mixed methods assessment of community experiences and perceptions in a district in Kenya. *BMC Health Serv Res.* 2015 Jun;15(1):539.
38. Schaaf M, Warthin C, Freedman L, Topp SM. The community health worker as service extender, cultural broker and social change agent: a critical interpretive synthesis of roles, intent and accountability. *BMJ Glob Health.* 2020 Jun;5(6):e002296.
39. Abuya T, Ndwiga C, Ritter J, Kanya L, Bellows B, Binkin N, et al. The effect of a multi-component intervention on disrespect and abuse during childbirth in Kenya. *BMC Pregnancy and Childbirth.* 2015 Sep 22;15(1):224.
40. The GVtM-US, Steering Council, Vedam S, Stoll K, Taiwo TK, Rubashkin N, Cheyney M, et al. The Giving Voice to Mothers study: inequity and mistreatment during pregnancy and childbirth in the United States. *Reprod Health.* 2019 Dec;16(1):77.
41. Gurung G, Derrett S, Gauld R, Hill PC. Why service users do not complain or have 'voice': a mixed-methods study from Nepal's rural primary health care system. *BMC Health Serv Res.* 2017 Jan;25(1):81. 17(.
42. Sudhinaraset M, Treleaven E, Melo J, Singh K, Diamond-Smith N. Women's status and experiences of mistreatment during childbirth in Uttar Pradesh: a mixed methods study using cultural health capital theory. *BMC Pregnancy Childbirth.* 2016 Oct;28(1):332. 16(.

## Figures



Source: Convergent Parallel Mixed Methods Design [7]

Figure 1

Legend not included with this version.

## Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- [ChisquareresultsonCHVspractices.docx](#)
- [SocialAccountabilityPracticesQuestionnaire.docx](#)