BMC Health Services Research

RESEARCH

Open Access

The impact of the Lesotho health reform in the re-structuring of the village health workers program

Afom T. Andom[1*], Hannah N. Gilbert[2], Courtney M. Yuen[2,3], Mapoho Mokoroane[5], Melino Ndayizigiye[1], Mpopo Tsoele[6], Masebeo Koto[5], Retsepile Tlali[1], Makena Ratsiu[1] and Joia S. Mukherjee[2,3,4]

Abstract

Background Community Health Workers locally known as Village Health Workers (VHW) in Lesotho are key members of the primary health workforce, and has been playing a significant role in building primary health systems in many countries and they can fill significant gaps in human resources as low and middle income countries work towards universal health coverage in the era of Sustainable Development Goals (SDGs). The 2014 Lesotho health reform restructured the VHW program to compensate, professionalize, and integrate VHWs into primary care services. We sought to document the ways in which the VHW program changed as a result of the health reform and the perceived impact of those changes.

Methods In 2018, we conducted a qualitative research study with an inductive content analysis approach in the four pilot health reform districts of Lesotho. We conducted 26 in-depth interviews with health workers practicing in the community and in primary health facilities, as well as district health authorities, and Ministry of Health officials.

Results We found that the Lesotho health reform program was observed that it helped to professionalize the VHW program by introducing clear roles and responsibilities, regular monitoring, and supervision. The initiation of performance-based payment of VHWs and regular monitoring and reporting was thought contribute to overall improvement; in performance, strengthened links between communities and facilities, and promoted uptake of services.

Conclusion The Lesotho Health Reform program was felt to be highly effective in re-structuring the VHW program in Lesotho, suggesting that when VHWs are well-incentivized, monitored, and supervised they can better fulfil their essential role as the backbone of the primary health workforce.

Keywords Village health workers, SDG, Health workforce, Reporting, Supervision, Incentives, Roles and responsibilities

*Correspondence:
Afom T. Andom
aandom@pih.org
Full list of author information is available at the end of the article

Background

Community Health Workers called Village health workers (VHWs) in this manuscript have been part of the health system of many countries for decades, and have been increasingly considered an integral part of the health workforce in lower and middle-income countries [1].The role of VHWs became a very prominent agenda since the world conference on primary health care at the Alma Ata meeting in 1978 [2]. Strengthening health care and bringing it closer to people were among the main principles outlined in the declaration of Alma Ata, and remain critical today [3]. VHWs who are trained, supervised, and well-distributed play a critical role in reaching communities, and delivering both preventive and curative care [3, 4]. Village Health workers can narrow the gaps of shortage of human resources for health in developing countries [4].In the era of Sustainable Development Goals, VHWs can play a key role in improving primary health care and attaining universal health coverage to achieve health for all [2].

The availability of skilled and adequate human resources for health is critically important for the success of health programs [5]. The production, distribution, and retention of human resources for health have remained one of the key bottlenecks of health systems in many low income countries [5]. This shortage of skilled health workers and inequitable distribution of available health workforce is particularly true in sub-Saharan Africa [6]. On the continent, when compared to WHO standards, only 39% of needed workers are available: 14.5% of physicians and 36.7% for nurses and midwives [7]. The shortages are even more concerning when distribution is considered, leaving 29–53% of posts unfilled in rural areas [7]. Task shifting is one method of addressing these large gaps [8]. Many developing countries have therefore trained their VHWs to address some of the major health issues at the community level [9].

Lesotho, like many developing countries in sub-Saharan Africa, has a gross shortage of skilled and trained health workers [10, 11]. The number of doctors per 10000 is 0.9 and the number of nurses per 10000 is 10.2 [12]. The country does not have a medical school to produce more doctors and, as a result, most of the health facilities are run by nurses. Lesotho uses task shifting to cover the shortage of workforce in their health systems. VHWs in Lesotho have been part of the health system since the 1970s [13]. They play a critical role in improving the health system of the country, particularly at the primary health care level. The role of the VHWs in Lesotho has been evolving through many decades, and the structure and professional work of the VHWs have been growing over time [14]. The VHWs started in Lesotho as volunteers with no incentives. However, over the years the government of Lesotho has accomplished commendable work in revising the roles and responsibilities of the VHWs, providing incentives, and efforts to integrate them into the mainstream of health workers through developing VHW policies. Like many countries have been implementing the VHW programs to fill the gaps in human resources, VHW programs have some common weaknesses in Lesotho. They are often volunteer-based, lack monitoring, clear roles and responsibilities, and are supported by vertical time-bound programs, if they are funded at all. These time-limited programs may be poorly integrated into the health system [15]. In addition, VHWs may not be well supervised, lack a clear reporting structure, and receive irregular incentives [16–18].

In 2014, the Government of Lesotho together with Partners In Health, launched the Lesotho health reform program in four pilot districts to decentralize and improve the delivery of primary health care services and ultimately put the country on the path for the attainment of universal health coverage (UHC). The pilot phase of the Lesotho health reform started in 72 health facilities in the four districts of Leribe, Berea, Butha Buthe, and Mohale's Hoek which cover around 40% Lesotho's population. The reform had three core components —supply side mapping of disease burden with drugs, staff and infrastructure; the decentralization of funds and decision making to the District Health Management Team; and to compensate, professionalize, and integrate the VHW within the primary care clinics [19]. While these general principles were laid out by the health reform plan, the details of their implementation were not prespecified. Focusing on the final component of the program geared towards VHW reform, we conducted a qualitative research study to document the ways in which the VHW program changed as a result of the health reform and the perceived impact of those changes.

Methods

Study design

We conducted a qualitative research study comprising in-depth interviews with implementers and inductive thematic content analysis. Our application of qualitative research is consistent with the key functions of qualitative research in implementation science to document implementation process, encourage reflection on implementation, and provide insight into potential effectiveness or mechanism [20].

Study setting

The Kingdom of Lesotho is a lower-middle income country with a population of over 2 million and is physically enclaved within the much larger Republic of South Africa. Despite significant investment in health

in recent years by both the government and external sources, Lesotho has some of the poorest health outcomes in the world. Lesotho has the second-highest HIV prevalence (22.7%) [21] and TB incidence (664 per 100,000) [22] in the world, and among the highest rates of maternal mortality (566 deaths per 100,000 live births) [23]and infant mortality (39 deaths per 1,000 live births) [24]. The study was carried out across the four districts where the health reform program was piloted.

Data collection

We conducted in-depth, semi-structured interviews (*supplement document_2)* with health workers from across the four pilot districts, as well as representatives from the central Ministry of Health who actively participated in the rollout of the health reform program. To ensure information richness, participants were purposefully selected based on their experience with the reform [25]. To maintain variation across the sample we recruited a range of providers, including village health workers and nurses, as well as managers and leaders, including the district health management team, central ministry of health officials, and members of Partners In Health Lesotho staff. Participants were recruited with the assistance of the district health management team and Partners In Health Reform teams; research assistants contacted the prospective participants via phone and email to explain the purpose of the study. Interested potential candidates were then scheduled for an interview.

A total of 26 participants were enrolled, all were adults >18 years old. The participants of the interview were three from the central Ministry of Health, ten from district health management teams, four from the health centers, five Partners In Health staff, and four village health workers. Four candidates did not participate in the study due to scheduling conflicts. The WHO health system framework approach interview guide was used to evaluate the three components of the health reform evaluation, including the VHW component. Improvement in the VHW program over time, new changes in the VHWs program, and overall success through the Lesotho Health Reform to the VHWs program were discussed as the VHWs component of the evaluation. Participants took part in a single, in-depth interview, which lasted between 45 to 60 minutes. Interviews were conducted by two research assistants. Both were university graduates with over four years of prior research experience. The research assistants were trained on the scope of the research and piloted the interview guides. Interviews were conducted in Sesotho and English based on the preference of the participants.

Data analysis

Research assistants transcribed all interviews, and translated interviews from Sesotho into English. The study team adopted an inductive approach to data analysis, employing a thematic, conventional content analysis approach to describe key concepts that describe the role of the Lesotho health reform program in shaping the VHW program [26]. ATA (clinician) open-coded a subset of transcripts to identify an initial set of key concepts that were labelled, described and assembled into a draft codebook which was reviewed by HNG (a medical anthropologist and qualitative researcher). Discrepancies were resolved through consensus. The codebook was piloted and finalized; the final codebook contained 31 codes. Dedoose version 9.0.10 qualitative data management software was used to support the coding of the complete qualitative dataset. Using an inductive content analytic approach, ATA examined the coded data and identified a set of draft themes that were reviewed and revised by HNG. These more specific themes were grouped into increasingly general concepts, resulting in a set of five thematic categories that explain the role of the Lesotho health reform program in shaping the village health workers program. Each theme was labelled, fully elaborated, and presented with illustrative quotes from the data.

Ethics approval and consent

This study was approved by the National Health Research Ethics Committee of the Kingdom of Lesotho (ID117-2017) and by the Harvard Medical School Institutional Review Board (protocol: IRB17-19888). All people who participated in the interviews provided written informed consent and all methods were performed per relevant guidelines and regulations. .

Results

Strengthening VHWs Human Resources

a. Updated VHW Rosters

Participants perceived that under the prior system, many VHWs existed on government rosters but were unable to perform their duties. Some were inactive, or were not well accepted in their communities. Still others were too old or infirm to perform their duties. In some cases, VHWs had died but remained on the rosters, leaving communities entirely without a VHW presence. The reform introduced a process of "reselection" whereby all inactive VHWs were removed from the rosters, and replaced with those who were capable of undertaking the rigorous work of accompaniment. VHWs who were not accepted by the community were replaced following community input. Finally, all newly

recruited VHWs were trained on the roles and responsibilities of VHWs.

"We had a very low number of the village health workers; some were old; some had died. So when the Reform came in, as part of the package of the Reform, there were trainings in almost all the facilities for the new village healthcare workers. That sort of improved the healthcare system" District Health Management Team member #05

"In the old village health worker model that we had, there were some members that were already inactive, but were still being paid by government. Some were even dead, but they were still getting the money." District Health Management Team member #10

"At community level, there were very few village health workers and most of the village health workers, about 80% of the village health workers, were very old – above 80 or 90 years. I think, yes, we recorded in one… somebody who was 98, she was still a village health worker. Therefore, they could not do anything, so this is why, now when the Reform came in, it sorts of looked at the village health workers and did the reselection so that those that were below the age of 70 then could be incorporated into the program, because the program required a lot of movement by the village health workers." Partners In Health staff member #04

"New ones were chosen in the villages but if the members of the community indicated that they were still happy with a specific VHW they let them continue with being a VHW, but if members of the community showed dissatisfaction they would pick new VHWs. District Health Management Team member #17

b. Increased Coverage

Participants felt that prior to the health reform program, a single VHW was assigned to cover each village. This changed with the advent of the program when coverage was doubled, and two VHWs were assigned to each village. Participants explained that by doubling the workforce, the program ensured adequate coverage, and permitted proper rotation of VHWs when necessary. Increasing the workforce also permitted VHWs to specialize. TB/HIV and maternal/child health were identified as key priorities for the region, so one VHW was assigned to each of these key populations. Under this new system, VHWs could truly accompany their populations of focus because they did not have to split their efforts. They were also provided with training appropriate to the specific needs of their key assigned population.

"Sometimes we work with sick people and with pregnant women so we really need two VHWs per village. Because if on Wednesday… if I had accompanied a mother to a new born on Tuesday who brought the child to the clinic today I have accompanied a pregnant woman and maybe tomorrow a sick person has an appointment. The other VHW relieves me and brings the patient to the Center. Now what I was saying is that we would have a problem if we had only one VHW, but we have enough VHWs." VHW #08

"They started by dividing VHWs into HIV/TB and MMR [maternal mortality reduction] cadres one could see that the division into these two cadres would help us achieve our rotation goal which was a Millennial Goal." Health center, Nurse #09

"The other component of the Reform was to implement the dual model of the village health workers. In other health centers, the village health workers had to be recruited to cover the villages which did not have village health workers, and training had to be done for them, so that… accompaniment could be done as it was meant to be. Because according to the model, each and every patient, be a maternal or be a TB/HIV patient, had to be accompanied to the facility." Partners In Health staff member # 02

c. Performance based Incentives

Participants felt that prior to reform, VHWs received payment regardless of whether they were actively performing their duties as a VHW. Participants praised the new incentive-based payment system introduced by the reform, which aligned payment with monthly target indicators that were developed to assess the performance of each VHW. It allowed for increased monitoring of performance, and "intensified" the work of VHWs. In recognition of the significant work being performed by the VHWs, the new performance-based system included a 25% increase in VHW stipends.

"After introducing this program there… had to be a way of intensifying these village health workers. Like I said, before, they were just getting paid whether worked or not. So for this one [new program], it was performance-based. So, there were some indicators designed, which these village health workers will be incentivized based on, so that was one way of monitoring their performance. Partners In Health staff member #02

"The incentive which was tracking some indicators, because their reports are based on the indicators in TB and HIV and maternal and child. It depends on what they are reporting, how they are reporting it, now they get their incentive. So the incentive [is] performance-based incentive actually is one of the things that has made it worthwhile. Central Ministry of Health official #15

"With the Reform, also, the three-hundred Rand was increased to four-hundred Rand. Because now the village health workers were really doing a lot, we negotiated with the government to increase their stipend and it was increased to four-hundred." Partners In Health staff member #04

d. Electronic payment delivery system

Prior to the advent of the health reform VHWs were paid incentives in cash. Participants explained that this older cash-based system placed a double burden on the VHWs. To receive payment, VHWs had to travel, which was costly and time-consuming. They also had to carry a month's worth of salary in cash on their person, which was viewed as unsafe. The reform eliminated these two concerns by switching to an electronic payment system (known as M-pesa).

"Yeah, like I said, initially, we were paying them cash. But then we realized it wasn't safe. This is why now we introduced M-Pesa." Partners In Health staff member #04

"For the village health workers, the payment was done through M-pesa, so they'd bring the forms here that indicate the names of the village health workers, their performance as set according to the indicators, and then the reimbursement would be sent through M-pesa." Partners In Health staff member #02

Strengthening the VHWs Program Structure

a. Renewed Clarity in the role of VHWs

Despite the longstanding presence of VHWs in these communities, participants explained that the roles and responsibilities of VHWs were never clearly defined. The health reform program delineated the roles and responsibilities of the VHWs and outlined a set of a clear VHW responsibilities. This delineation of tasks formalized the work of VHWs, in some cases expanding activities to better meet key community needs. Tasks included accompanying patients to the health facility, locating and assisting patients who had gone missing from care, and promoting health and wellness through village-level education sessions.

"There were existing structures of the village health workers, even though they did not know what their roles were. But the reform village health workers, the target was more oriented, there was a set goal, that is how they should work. For us to say you've performed, it is when you've managed to track certain people, when you've accompanied pregnant women." District Health Management Team member# 03

The village health workers have clear roles and responsibilities, have a monitoring framework in place, which actually can tell if a village health worker is active or not. In the past, we used never to have that." Central Ministry of Health official #15

We had VHWs [before reform] but they did not have a lot to do. They did not do what these ones [post-reform] do like accompanying pregnant women, identifying them and sending them to the health center. These tasks weren't there." District Health Management Team member #07

b. Supervisors provide direct oversight

Participants noted that prior to the launch of the health reform VHWs were working in the communities, but few people understood the nature or scope of their activities because they were unsupervised. The health reform program established the new position known as 'VHW Supervisors'. Supervisors were VHWs who received additional training and performed additional duties related to monitoring the activities of VHWs in the field. Working in close proximity to the VHWs at the village-level, supervisors were able to readily identify challenges and step in to provide support and assistance as needed.

"We never in the beginning had the village health worker supervisor. These village health workers were just there in the communities and nobody was following up on them. There was nobody who was following up on whatever activity they were doing. And we weren't very sure … what they were actually doing in the villages out there. But since the advent of the reforms, these two cadres were being supervised by a village health worker supervisor. So I liked it, because now we know exactly what is happening in the villages and we know where we have to assist if possible." District Health Management Team member #12

"Particular supervisor will supervise the VHWs in those villages to make sure that they do… their activities as expected. They can even do spot checks to assess whether they are still doing their activities

as expected, they are ones who take the report from the VHWs they supervise." Health center, Nurse# 09

Supervisors fulfilled the additional role of managing written reports that document the work of VHWs. By taking responsibility for collating all reports within their jurisdiction, the supervisors were able to ensure a more streamlined – and complete - system of reporting.

"They have what you call village health worker supervisor, who is still one of the village health workers but who is more trained and can monitor and can write reports about village health worker within his catchment." Central Ministry of Health official #15

"They introduced supervisors this is a great success because… I think the work load would be heavy. Having supervisor is a great thing and a great success because we are many VHWs and if every VHW had to bring their own work to the health centre from their own village it would be chaotic. So, having a supervisor is a great success" VHW #08

c. Coordinators complete the communication loop from Village to District

The health reform program also established the new role of 'VHW Coordinator.' Coordinators operate within the health facility, and were positively viewed by participants for their role in monitoring and centralizing the information coming from VHW Supervisors operating across the catchment area. Coordinators compiled monthly reports, which act as a lens on VHW performance, allowing coordinators to readily identify emerging problems and provide appropriate support.

"At health center level, they have a coordinator who coordinates all village health workers and therefore there is a clear linkage between what the village health worker is doing and what the health center requires. Somebody is monitoring this process very well. And at each and every level, the supervisor reports, the coordinator reports, they all write reports. And then, you can tell where the system is weakest." Central Ministry of Health official #15

"We also have a coordinator based at the health facility level. This coordinator, like the word is saying, they coordinate or they report. What they do is they compile the reports from the supervisors in the villages and then they come up with a compiled report from all the village health workers. They will also do spot checks in the villages to say that the village health workers are actually reporting what they are doing. And those reports from the supervisors are going to be collated by this coordinator who is based in the health facility, and then there will be a report from the health facility at large. And we never had that before..." District Health Management Team member #12

Participants explained that Coordinators helped to streamline the integration of VHWs and the health facilities. Prior to the development of VHW Coordinators, all reports related to VHW activities had to be managed by a nurse at the facility. Assigning this task to Coordinators improved data reporting and reduced the nurses' administrative load thereby freeing them up to perform more specialized nursing care. Under the previous system, nurses were the primary point of contact for VHWs at the facility, and during busy periods nurses were unavailable due to clinical responsibilities. Under the new system, the Coordinator emerged as a central and ever-available point of contact for VHWs who came to the facility, ensuring that any VHW would be readily received at the facility.

"Yes, having a VHW Coordinator to whom VHWs report to, that has really reduced the nurse in charge's work load because previously VHWs would report straight to the Health Center's nurse in charge." Health center, Nurse #09

"We bring reports to her [the Coordinator] and this makes the nurses jobs much easier because they get the reports from the different villages from the coordinator I think this is a success because there is no congestion brought about by bringing reports one by one." VHW #08

"The health services at the health centers/clinics have improved and this is because of the presence of the Coordinator which has brought about good change. When VHWs come to the facility there is always someone to welcome them even when the nurses are busy there is someone ready to receive them. District Health Management Team member # 07

This structured system of central reporting was thought to ensure a strong line of communication across the primary health care system, from the village to the district level, resulting in what participants viewed as a more connected, transparent, and robust primary health care system.

"What Reform did was to revamp the primary healthcare system, revamping it in such a way that, at community level, the village health workers,

which I said are the strong bone of primary healthcare, were now being supervised by their own peers who are called village health worker supervisors. And then the supervisors were being supervised by the village health worker coordinators at health center level. Previously, the nurses were the ones that were supervising the village health workers, and with more patients coming in, the village health workers had actually no supervision." Partners In Health staff member #04

"The village health workers were just reporting, but now that we had the people that were seeing that whatever is being reported is a true reflection of whatever is happening. So that one is being very transparent, and you know exactly where the gaps are, so that we can address them as quickly as we can." District Health Management Team member #12

"The Reform was actually reviving the village health workers and strengthening their supervision and also for, in that way, they would become a strong link between the village and the health center. Before Reform, what was also lacking was the health center did not know what is happening at the village, because there was the absence of that link of village health workers. So I think what the Reform did was trying to revive that such that the health center knew what was happening at the community and would address issues at community level … so I think it was actually strengthening the primary healthcare." Partners In Health staff member # 04

3. Impact on Systems and Service Uptake

Some participants shared their impressions that with the advent of the VHW reform program, the number of patients seeking care at the health facilities increased. They noted that increased VHW coverage, and the proximal work that VHWs were performing in the communities helped bring more patients to the facilities to receive primary care.

"They [patients] used to come in small numbers but now VHWs are closer to the patients and their number has increased. VHW # 11

"VHWs have been introduced in different villages and have brought about a change because sick people are now able to come to the clinic for different services better than they did before." District Health Management Team member #07

"Before, statistically, our numbers were very low since we had a low number of VHWs. But after Reform since the number of VHWs increased the same way the input also improved. We had our immunization coverage also improved because there were people who can accompany these mothers to facility, who can identify children who have not completed their immunizations. Also maternal health also improved because these VHWs could do door-to-door visit to identify those mothers in yearly pregnancies which we did not do before and accompany them then after when they discover that a particular person is pregnant then they accompany her to the facility as early as before three months which was not happening before. The VHWs, those people they suspect to be TB of course coughers they would identify them and then also accompany them to the facility so that they could be confirmed whether they are TB cases or not. That is the improvement that has been happening after Reform, which was not happening before." Health center, Nurse # 09

For participants, one of the key achievements of the health reform was the full integration of VHWs into the mainstream of primary health care delivery. This formal and structured integration instituted by the reform magnified their visibility, and reinforced their role as the "backbone" of the primary health care system in Lesotho.

"I think some of the key successes of the Reform is bringing the village health workers into the mainstream care delivery infrastructure. I think that is very critical, like it brought visibility – a lot of visibility – to the village health workers and what they do, their importance, their role, the value it adds to care delivery. And then for the village healthcare workers, it brought them more recognition and proper attention that I believe will lead to them being managed properly. So I think that was one of the key, like that whole accompaniment model, like it started the conversation very aggressively and it kind of made them a politically significant group of people, especially in the – when it comes to healthcare delivery. So that was one great thing that the Reform did." Partners In Health staff member # 13

Discussion

In this study, our interviews uncovered several key actions that improved the VHW program in Lesotho through the Lesotho Health Reform program. These included: expanding and professionalizing the VHW workforce; dual model of VHWs (for maternal and child health; and for HIV and TB care) based on Lesotho burden of diseases; deploying VHW coordinators and

supervisors, and establishing delineated roles and lines of communication; and monitoring performance over time. These key actions were perceived to expand health care service coverage, and raised community awareness about public health concerns and available health services. Furthermore, our findings illustrated that the expanded VHW model was felt to impacted health service delivery by strengthening links between communities and facilities, enhancing the monitoring of health at the village level, and promoting the uptake of services (see Fig. 1).

Our findings show that well-defined roles and responsibilities, tracking of patients, and accompaniment of patients to the health facilities was observed to create a significant change in the uptake of health services. Similar to our findings, a study conducted in Nigeria showed that having clear roles and responsibilities for VHWs including home visits to improve antenatal check-up visits, health education, and accompaniment of pregnant women to the health facility helped to improve access to maternal care [27]. In contrast, other studies have shown that confusion occurs when VHWs roles and responsibilities are not clear [28]. Clearly defined roles and responsibilities of tasks of VHWs is critically important in optimizing the contribution of VHWs in addressing health disparities and social determinants of health.

Introducing regular supervision through the new structure of the VHW supervisor and VHW coordinators was a particularly important in helping to professionalize the VHW program. These new structures allowed close monitoring of the work of VHWs at the village level, enabling task-shifting of activities from nurses to VHWs so that nurses are able to focus on other priorities. Other studies have found that implementation and effectiveness of supportive supervision and monitoring of VHWs widely varied across different countries and local contexts. In some cases, despite the clear intention of the policy, the implementation of supervision was informal, confused by multiple reporting lines, or compromised by insufficient resources [29–32]. Challenges have also arisen when supervision is delegated to nurses who are busy with many responsibilities [30]. Our experience shows that well-organized and standardized VHWs monitoring, reporting, and supervision can help to closely support VHWs to smoothly carry out their duties and responsibilities and to provide access to health services for the remote and peripheral communities.

In order for VHWs to be effective in their duties a reasonable standard of incentives and integration of VHWs in to the regular work is critical. The scope and coverage of the work of the VHWs and performance based payment is critically important for VHWs to be effective and efficient in their role. Several studies showed that following the implementation of regular and performance-based payment, health services uptake significantly improved over a number of indicators, including monitoring and reporting and accountability [33–35].

One strength of this study was documenting the multiple perspectives of healthcare professionals operating

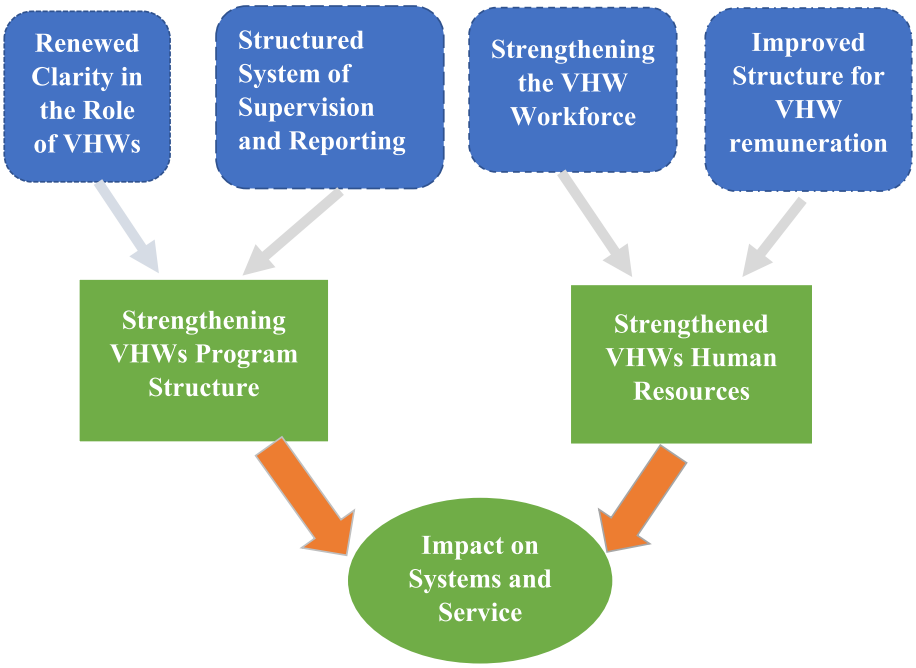

Fig. 1 Shows a visual representation of our thematic categories that illustrate relationships across our findings

at various levels across the VHW program, including those central to the roll out the health program as well as community-based VHWs. However, this study has some limitations. The study did not include the perspective of patients who received care of the VHWs. Therefore, the opinion of patients who received care from VHWs was important for the improvement of the work of VHWs in strengthening primary health care services. Secondly, given the qualitative nature of inquiry, this study did not formally measure changes in health services uptake or performance resulting from the VHW program reform. Therefore, qualitative perceptions of program impact cannot be compared to quantitative or objective measures. However, the results described here can be leveraged for future quantitative examinations of health services uptake.

Conclusion

To attain universal health coverage and sustainable development goals, countries need to fill the shortage of health workforce, especially in lower and middle-income countries. Well-supervised, trained and incentivized VHWs can play a key role in filling the gaps in the health workforce in lower and middle-income countries. Through strengthening and integrating VHWs into the main structure of the health workforce, countries can reach the most marginalized and underserved communities and no one can be left behind in the era of sustainable development goals. VHWs can serve as a bridge of care between the health facilities and the communities. Expanding the role of VHWs and providing them with all the necessary support can strengthen primary health care as large segments of the population in lower and middle-income countries live in rural and semi-urban areas. There is therefore an urgent need to revitalize VHW programs to reach the vast majority of people who lives in rural communities.

Abbreviations

VHW	Village Health workers
MOH	Ministry of Health
PIHL	Partners In Health Lesotho
WHO	World Health organization
UHC	Universal Health Coverage
SDG	Sustainable Development Goals

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s12913-025-12259-x.

Supplementary Material 1.

Supplementary Material 2.

Acknowledgements

The authors extend their gratitude to the Ministry of Health of Lesotho leadership. Partners In Health Lesotho team for immense work in implementing the health reform program, particularly Mrs. Likhapha Ntlamelle Partners In Health Lesotho community director for her leadership in leading the village health workers program. Additionally, we would like to acknowledge the support provided by the Skoll Foundation, and Wagner Foundation, for funding the implementation of the health reform program. We are thankful to all Partners In Health Boston colleagues who actively work for the implementation of the Lesotho health reform program.

Authors' contributions

Conceptualization and design of the work: ATA, HNG, and CMY. Data collection: ATA, MN,MR,RT. Data analysis and interpretation: ATA, HNG, CMY, JSM. Writing original draft: ATA. Writing review and editing of the manuscript: All the authors. All authors have read and approve the final manuscript

Funding

Skoll Foundation (grant number 19–44478) (JM) and the Wagner Foundation (project code AVA0436) supported the study's funding. The authors are solely responsible for its content. The funders had no role in the study design, data collection and analysis, decision to publish, or preparation of the manuscript.

Data availability

Data supporting this work are available in the manuscript text and supplementary information files.

Declarations

Ethics approval and consent to participate

This study was approved by the National Health Research Ethics Committee of the Kingdom of Lesotho (ID117-2017) and by the Harvard Medical School Institutional Review Board (protocol: IRB17-19888). All people who participated in the interviews provided written informed consent and all methods were performed per relevant guidelines and regulations.

Consent for publication

Not applicable

Competing interests

The authors declare no competing interests.

Author details

[1]Partners In Health – Lesotho, House No. 233, Cnr. Lancers & Caldwell Rd., Maseru West, Private Bag A391, Maseru 100, Lesotho. [2]Department of Global Health and Social Medicine, Harvard Medical School, Boston, MA, USA. [3]Division of Global Health Equity, Brigham and Women's Hospital, Boston, MA, USA. [4]Partners In Health, Boston, MA, USA. [5]Lesotho Ministry of Health, Maseru 100, Lesotho. [6]Lesotho Prime Minister Office, Maseru 100, Lesotho.

Received: 6 September 2024 Accepted: 10 January 2025
Published online: 23 January 2025

References

1. Kuule Y, Dobson AE, Woldeyohannes D, et al. Community health volunteers in primary healthcare in rural Uganda: Factors influencing performance. Front Public Health. 2017;5:62. https://doi.org/10.3389/fpubh.2017.00062.
2. Singh P, Sachs JD. 1 million community health workers in sub-Saharan Africa by 2015. The Lancet. 2013;382(9889):363–5. https://doi.org/10.1016/S0140-6736(12)62002-9.
3. Tulenko K, Mgedal S, Afzal MM, et al. Community health workers for universal health-care coverage: From fragmentation to synergy. Bull World Health Organ. 2013;91:847–52. https://doi.org/10.2471/BLT.13.118745.
4. World Health Organization. Health policy and system support to optimize community health worker programmes for HIV, TB and malaria services: An evidence guide. World Health Organization; 2020. Accessed July 11, 2023. ISBN 978-92-4-001808-2.

5. World Health Organization. Global Strategy on Human Resources for Health: Workforce 2030. World Health Organization; 2016. Accessed July 11, 2023. https://apps.who.int/iris/handle/10665/250368.
6. Miseda MH, Were SO, Murianki CA, Mutuku MP, Mutwiwa SN. The implication of the shortage of health workforce specialist on universal health coverage in Kenya. Hum Resour Health. 2017;15(1):80. https://doi.org/10.1186/s12960-017-0253-9.
7. Asamani JA, Akogun OB, Nyoni J, Ahmat A, Nabyonga-Orem J, Tumusiime P. Towards a regional strategy for resolving the human resources for health challenges in Africa. BMJ Glob Health. 2019;4(Suppl 9): e001533. https://doi.org/10.1136/bmjgh-2019-001533.
8. Campbell C, Scott K. Retreat from Alma Ata? The WHO's report on Task shifting to community health workers for AIDS care in poor countries. Glob Public Health. 2011;6(2):125–38. https://doi.org/10.1080/17441690903334232.
9. Maher D. Leaving no-one behind: How community health workers can contribute to achieving the Sustainable Development Goals. Public Health Action. 2017;7(1):5. https://doi.org/10.5588/pha.17.0022.
10. Asamani JA, Zurn P, Pitso P, et al. Health workforce supply, needs and financial feasibility in Lesotho: A labour market analysis. BMJ Glob Health. 2022;7(Suppl 1): e008420. https://doi.org/10.1136/bmjgh-2021-008420.
11. Smith S, Deveridge A, Berman J, et al. Task-shifting and prioritization: A situational analysis examining the role and experiences of community health workers in Malawi. Hum Resour Health. 2014;12(1):24. https://doi.org/10.1186/1478-4491-12-24.
12. Bryden B, Bryden M, Steer-Massaro J, Malope S. Family medicine training in Lesotho: A strategy of decentralized training for rural physician workforce development. Front Med. 2021;7. Accessed July 30, 2023. https://www.frontiersin.org/articles/https://doi.org/10.3389/fmed.2020.582130
13. Ramathebane MM, Makatjane TJ, Thetsane RM, Mokhethi M. Assessment of tuberculosis knowledge among Lesotho village health workers and utilisation of their tuberculosis services by the communities they serve. Afr J Prim Health Care Fam Med. 2019;11(1). https://doi.org/10.4102/phcfm.v11i1.1944
14. Seutloali T, Napoles L, Bam N. Community health workers in Lesotho: Experiences of health promotion activities. Afr J Prim Health Care Fam Med. 2018;10(1). https://doi.org/10.4102/phcfm.v10i1.1558
15. De Neve J-W, Garrison-Desany H, Andrews KG, et al. Harmonization of community health worker programs for HIV: A four-country qualitative study in Southern Africa. PLoS Med. 2017;14(8): e1002374. https://doi.org/10.1371/journal.pmed.1002374.
16. Ormel H, Kok M, Kane S, et al. Salaried and voluntary community health workers: exploring how incentives and expectation gaps influence motivation. Hum Resour Health. 2019;17:59. https://doi.org/10.1186/s12960-019-0387-z.
17. Agarwal S, Sripad P, Johnson C, et al. A conceptual framework for measuring community health workforce performance within primary health care systems. Hum Resour Health. 2019;17(1):86. https://doi.org/10.1186/s12960-019-0422-0.
18. Afzal MM, Pariyo GW, Lassi ZS, Perry HB. Community health workers at the dawn of a new era: Planning, coordination, and partnerships. Health Res Policy Syst. 2021;19(3):103. https://doi.org/10.1186/s12961-021-00753-7.
19. Ndayizigiye M, Allan-Blitz LT, Dally E, et al. Improving access to health services through health reform in Lesotho: Progress made towards achieving universal health coverage. PLOS Glob Public Health. 2022;2(11): e0000985. https://doi.org/10.1371/journal.pgph.0000985.
20. National Cancer Institute. Qualitative Methods in Implementation Science. 2018. https://cancercontrol.cancer.gov/sites/default/files/2020-09/nci-dccps-implementationscience-whitepaper.pdf
21. Columbia University. Lesotho population based HIV impact assessment; Columbia University: New York, NY, USA, 2020.
22. World Health Organization. Global tuberculosis report. Geneva: World Health Organization; 2024.
23. Internationally comparable MMR estimates by the Maternal Mortality Inter-Agency Group (MMEIG): WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division.
24. Ministry of Health. Lesotho Demographic and Health Survey 2023-2024.2024, edition. Government of Lesotho.
25. Patton MQ. Qualitative Evaluation and Research Methods. 3rd ed. Thousand Oaks, CA: Sage; 2001.
26. Hsieh HF, Shannon S. Three approaches to qualitative content analysis. Qual Health Res. 2005;15:1277–88. https://doi.org/10.1177/1049732305276687.
27. Al-Mujtaba M, Shobo O, Oyebola BC, et al. Assessing the acceptability of village health workers' roles in improving maternal health care in Gombe State, Nigeria a qualitative exploration from women beneficiaries. PLoS ONE. 2020;15(10): e0240798. https://doi.org/10.1371/journal.pone.0240798.
28. Glenton C, Javadi D, Perry HB. Community health workers at the dawn of a new era: 5. Roles and tasks. Health Res Policy Syst. 2021;19(3):128. https://doi.org/10.1186/s12961-021-00748-4
29. Tseng Y hwei, Griffiths F, De Kadt J, et al. Integrating community health workers into the formal health system to improve performance: A qualitative study on the role of on-site supervision in the South African programme. BMJ Open. 2019;9(2):e022186. https://doi.org/10.1136/bmjopen-2018-022186
30. Assegaai T, Schneider H. National guidance and district-level practices in the supervision of community health workers in South Africa: a qualitative study. Hum Resour Health. 2019;17(1):25. https://doi.org/10.1186/s12960-019-0360-x.
31. Ndima SD, Sidat M, Give C, Ormel H, Kok MC, Taegtmeyer M. Supervision of community health workers in Mozambique: A qualitative study of factors influencing motivation and programme implementation. Hum Resour Health. 2015;13(1):63. https://doi.org/10.1186/s12960-015-0063-x.
32. Zelee Hill, Mari Dumbaugh, Lorna Benton. Supervising community health workers in low-income countries – a review of impact and implementation issues. Glob Health Action 2014, 7: 24085 - https://doi.org/10.3402/gha.v7.24085
33. Zheng C, Musominali S, Chaw GF, Paccione G. A performance-based incentives system for village health workers in Kisoro, Uganda. Ann Glob Health. 85(1):46. https://doi.org/10.5334/aogh.2400
34. Kok MC, Dieleman M, Taegtmeyer M, et al. Which intervention design factors influence performance of community health workers in low- and middle-income countries? A systematic review Health Policy Plan. 2015;30(9):1207–27. https://doi.org/10.1093/heapol/czu126.
35. Singh D, Negin J, Otim M, Orach CG, Cumming R. The effect of payment and incentives on motivation and focus of community health workers: Five case studies from low- and middle-income countries. Hum Resour Health. 2015;13(1):58. https://doi.org/10.1186/s12960-015-0051-1.

Publisher's Note