

The Role of Community Health Volunteers in Promoting Health Equity: Opportunities and Challenges in Accelerating Primary Healthcare Delivery in Kisumu County, Kenya

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ABSTRACT

Health equity is defined as the absence of systematic disparities in health and healthcare based on social advantage or disadvantage; it is a critical goal in global health. Community Health Workers/Volunteers (CHW/Vs) play a pivotal role in promoting health equity by delivering essential primary health services to underserved populations. This article focuses on the role of CHVs in promoting health equity in Kisumu County, Kenya, and explores the opportunities and challenges encountered in accelerating primary health care delivery. The study is informed by the health equity theory, which emphasizes fair and just access to health services for all populations. We utilized a qualitative research inquiry and applied an interpretive approach to understanding the role of CHVs in delivering community health services to community households as primary beneficiaries. Eighty-seven respondents were identified through purposive sampling, and data was collected through four focused group discussions (FGD) of 10 CHVs and 10 household representatives. Additionally, key informant interviews (KII) were conducted for 2 Community Unit (CU) members, 2 Community Health Extension Workers (CHEWs), and 3 community health officials drawn from the national, county, and sub-county levels, respectively. Both primary and secondary data was collected from purposively sampled households, community health workers and volunteers, and key persons engaged in running and/or providing community health care in the 7 sub-counties of Kisumu County. The data analysis was conducted using thematic inquiry to identify emerging patterns, and this was managed using NVivo software for coding and interpretation. The study's findings demonstrate that CHVs in Kisumu County impact service utilization and improve maternal health outcomes. They serve as early detectors of health issues, provide culturally appropriate care, and empower communities to actively participate in their health management. However, challenges such as shortages of CHW/Vs, limited resources, and gender norms hinder their effectiveness in delivering services. Opportunities for CHW/Vs in promoting health equity include increased access to healthcare, culturally appropriate care, prevention and health promotion, community empowerment, timely identification of health issues, strengthening the health system, flexibility, adaptability, community support networks, potential for research and innovation, and integration of services. CHVs in Kisumu County have significant opportunities to promote health equity by providing essential health services to underserved communities. Addressing challenges and improving the CHS model can unlock their full potential, contributing to the achievement of health equity for all residents in Kisumu County.

Keywords: Access to Healthcare, Challenges, Community Health Workers, Health Equity, Health Services, Health System, Opportunities

I. INTRODUCTION

Health equity is defined as the absence of systematic disparities in health and healthcare between different groups based on social advantage or disadvantage. Health equity remains a critical goal in global health (Braveman & Gruskin, 2003). Health equity is also defined as “differences in health that are unnecessary, avoidable, unfair, and unjust” (Whitehead, 1992). To achieve health equity, it is imperative to address the socio-economic determinants of health and guarantee that all populations, especially those residing in marginalized and underserved regions, have access to high-quality healthcare services (Braveman, 2010). It speaks to the capacity of marginalized and vulnerable groups to obtain necessary healthcare as economically and effectively as possible. Therefore, by delivering essential health services to underserved populations in various settings, community health volunteers (CHVs) play a pivotal role in promoting health equity (Kok et al., 2017).

By accelerating the delivery of primary healthcare (PHC) through community health strategies, the Kenyan government hopes to address health equity and access through the introduction and execution of the universal health coverage (UHC) policy. The policy is under the country's decentralized system of governance (CHS). This was mandated by the 2010 Constitution, which decentralized health services to the counties.

This study therefore focuses on the role of CHVs in promoting health equity in Kisumu County, Kenya, and explores the opportunities and challenges encountered in delivering community health services. To respond to this question, the study examined the operationalization of the community health model in Kisumu County, Kenya. Evidence from the literature demonstrates an overall recognition that the community health system is critical for PHC acceleration and achieving health equity. According to Frymus et al. (2015), there is a knowledge gap in both context and systemic factors that influence CHWs' performance, particularly community health systems and intervention design.

This study's primary research question is: "How can we enhance the operationalization of the current community health model in Kisumu County to increase participation?" The health equity theory informs the study, highlighting the prevailing differences in health and healthcare quality across different populations. The notable proponents of this theory are Black and Whitehead (1988), Sen (1999; 2009), and Rawls (1971; 1999). It advocates for a fair and just opportunity to access health by eliminating disparities that impact health outcomes (Braveman & Gruskin, 2003).

Health equity is promoted by CHW/Vs, a role that has been widely recognized and researched in a variety of settings. Ahmed et al. (2022), for instance, posit that community health workers have been widely promoted in low- and middle-income countries (LMICs) as a strategy to promote health equity. This resonates with the argument by Kok et al. (2017) that CHWs not only bridge the gap between health services and communities but, more importantly, reach the underserved groups who are hard to reach or access essential health services. The design of the CHW/V program is critical to understanding which ones contribute to or influence the equity of health outcomes. Collum et al. (2016), in a systematic review study on "how equitable are health worker programs, observed that CHWs could contribute towards the equitable uptake of community health services.

Studies across the African continent offer vital lessons on the work of CHW/Vs in promoting health equity. In Rwanda, for example, the CHWs were first deployed in 1995, and today they are the single largest group delivering health services (Schurer et al., 2020). However, they also face challenges in terms of attrition due to workload and poor compensation. This challenge is also cited in the case of Kisumu County, Kenya, and is demonstrated by the lack of incentives and resources to perform their functions optimally. Mozambique, in response to the need for equitable health coverage and quality services, revitalized its community health programs in 2010 (Given et al., 2015). Ethiopia, South Africa, and Malawi are among the countries that have successfully introduced community health workers as a strategy to accelerate primary health care delivery and achieve health equity. However, experiences from Kenya and other developing countries have shown that the sustainability of CHW/V models remains a challenge, and thus the goals of achieving health equity may not be achieved unless structural impediments are identified and addressed.

1.1 Research Objective

1. To determine the factors influencing the utilization of the community health services offered by CHW/Vs to households/communities towards achieving health equity in Kisumu County, Kenya.

LITERATURE REVIEW

1.1 Theoretical Review

The research study is primarily informed by the theory of health equity, which underlines the prevailing differences in the quality of health and healthcare across different populations (Wakiaga, 2021). The notable proponents of this theory are Black and Whitehead (1988), Sen (1999; 2009), and Rawls (1971). It advocates for a fair and just opportunity for health access by addressing the prevailing disparities that impact health outcomes (Braveman & Gruskin, 2003).

The central argument of health equity theory is the idea that access to health is a fundamental right and an imperative for social justice for the poor and vulnerable segments of the population. This population should therefore be empowered, and their capabilities to access services should be developed. According to Sen (1999; 2009), health equity relates to broader issues of justice, equity, and fairness. In this thought pattern, an injustice is the lack of opportunities to achieve health outcomes arising from prevailing social arrangements. According to Rawls (1971), access to health must be viewed through the lens of social justice for citizens. Evans et al. (2006) argue that the Rawlsian justice approach to health equity starts from the position that society has a fair system of cooperation.

1.2 Empirical Review

Empirical studies on CHWs have mainly focused on their effectiveness in delivering community health services. However, there is less emphasis on intervention design and other contextual factors that influence CHW effectiveness (Frymus et al., 2015). Kok et al. (2016) conducted a study on factors influencing the interrelationship between households and CHWs in the context of the health sector in Kenya, Malawi, Mozambique, and Ethiopia. This qualitative comparative study aimed to explore the framing of relationships between CHWs, communities, and health sectors in various sub-Saharan African contexts, highlighting both similarities and differences.

The relationship between communities, households, and CHWs is especially critical, as they serve as intermediaries with the health facilities, given their local knowledge and familiarity with the socio-cultural context. The study utilized a realist lens (realist ontology) to investigate the causal relationship between experiences and observations, highlighting the significance of interaction and context. The findings showed that the level of trust and confidence between the CHW/Vs and their supervisors had a direct bearing on the community's health outcomes in a semi-structured Key Informant Interview (KII) and FGD through purposive sampling of the CHW/Vs.

Owek et al. (2017) conducted a similar study to assess the empirical perceptions and attitudes of the community towards malaria case management in 5 districts in Western Kenya, which established the vital role of CHW/Vs in the promotion of health services. While the study focused on malaria case management, it also identified several themes regarding the role of Community Health Workers (CHWs) in providing primary health care and the effectiveness of the community health strategy model in four districts of Western Kenya.

III. METHOD

This qualitative research study was carried out in Kisumu County, Kenya, which served as a pilot region for the UHC's implementation. In addition to CHEWs, CUs, and community health officials and policymakers, the study also focused on Community Health Workers/Volunteers (CHW/Vs), beneficiary families of community health services in wards and villages in the specifically chosen sub-counties of Seme, Nyakach, Kisumu Central, and Kisumu East. This target population was drawn from the seven sub-counties of Kisumu County, constituting a population of 1,155,574 or 300,745 households and 2,238 CHW/Vs. The sub-counties were clustered into urban and rural areas for purposes of cross-case analysis. The urban clusters are Kisumu East, Kisumu West, and Kisumu Central, while the rural clusters are Muhoroni, Nyando Seme, and Nyakach.

The respondents were purposefully selected based on gender, length of service for the CHW/Vs (at least 2 years), experience of engaging with CHVs (for households), and socio-economic and health profile of the households. The key informants, comprising persons responsible for the implementation of community health strategies such as Community Health Committees (CHC), Community Health Extension Workers (CHEW), and community health officials at county, sub-county, and national levels, were also purposefully sampled, with one each drawn from the sub-categorization of the counties.

A sample of 87 respondents was used in this study. These included CHVs, CHC members, CHEWs, household representatives, and community health officials at county, sub-county, and national levels. The sample size comprised 4 FGDs of CHVs and 4 FGDs of households' representative of the target population, with approximately 10 respondents for each FGD and drawn from the sub-counties of Kisumu East, Kisumu Central (urban cluster), Seme, and Nyakach (rural sub-cluster) representing the urban and rural sub-counties in Kisumu County. The key informants included 2 Community Health Committee (CHC) members each drawn from Seme and Kisumu Central sub-counties, 2 Community Health Extension Workers (CHEW) each drawn from the CUs of Nyakach and Kisumu Central subclusters, and 3 community health officials at the Kisumu County, Nyakach sub-county, and national levels. See the summary table below:

Table 1

Summary table of the Sample size

Respondent category	Sampling frame	Sample size	Total # of sample size
CHVs FGD	4 FGDs with 10 respondents each	40 respondents drawn from wards Kisumu Central, Kisumu East, Nyakach, Seme sub-counties.	40
Households FGD	4 FGDs with 10 respondents each	40 respondents drawn from wards in Kisumu Central, Kisumu East, Nyakach, Seme sub-counties	40
CHEWs KII	2	2 drawn from CUs in the sub-clusters of Nyakach (rural) and Kisumu Central (urban)	2
CHC members KII	2	2 drawn from wards in the sub-clusters of Seme (rural) and Kisumu central (urban)	2
Community health officials KII	3	3 respondents from national, Kisumu County and Nyakach sub-county	3

By applying an applied interpretive analysis, the collected data set was categorized based on themes that emerged from the research questions. The analysis also applied reflexivity and considered 'bias' for purposes of rigour and credibility. The data was managed using NVivo software for coding and then given meaning through interpretation.

IV. RESULTS

Evidence from the qualitative interview indicates that CHW/Vs deliver services to thousands of households in Kisumu County, significantly impacting service utilization and improving maternal health outcomes. Thus, Community Health Workers/Volunteers (CHW/Vs) in Kisumu County play a crucial role in promoting health equity by providing essential health services to underserved communities. According to a CHV respondent from Nyakach she asserted that:

“Today things have changed, you know a while ago we had many diseases, there are no diseases like diarrhoea, they did not kill our people, now there are no such deaths, when mothers give birth at home, the children may die or even the mother, because they did not know the beauty of giving birth in a hospital. Maternal deaths have gone down, so we see a big change in this community”.

This underlines the critical role the CHVs are playing in the provision of primary health care services to the community. As frontline health workers, they act as a link between households and formal health structures, ensuring that primary healthcare reaches those in need. Through the Community Health Strategy (CHS) model, CHWs deliver a wide range of services, including child health, family planning, maternal health, and screening for diseases like HIV/AIDS, tuberculosis, and malaria. Moreover, CHWs have been involved in managing minor ailments at the household level, including home-based care for COVID-19, showcasing their importance in reaching communities at the grassroots level. This is corroborated by the HH respondent in the Nyalenda, Kisumu Central sub-County FGD who asserts that: *“When they come to households, they tell you to wash your hands every day, don't sneeze if you have a fever, please cover your mouth, because they say that at this time, the COVID is still there....”*

A CHW/V Respondent from the Kisumu East sub- County (Kuoyo) FGD also added that *“from the visits, we talk to them about their personal and environment hygiene and advise on what could be done if there any emerging issues related to that”.*

The CHS model, the primary delivery vehicle utilized by CHWs is credited for increasing the CHWs reach and by extension extended health equity. As observed by a healthcare provider interviewed for the study *“In my professional opinion, the Community Health Strategy (CHS) model has been effective in providing a wide range of services to the community”.* Across all respondent groups evidence of the CHS model grassroot reach was confirmed. According to a Household KII *“CHS model is implemented through a structure called community health units (CHUs) that are operational at the sublocation level, with each village served by a CHW who delivers services to the community.”*

While the CHWs have made significant strides towards promoting health equity, there are several challenges that exists," For instance a FGD and KII accounts emphasized the. *“Shortage of CHW/Vs, lack of training, and limited resources, such as drugs and supplies, are some of the challenges that impact their effectiveness in delivering services.”* According to a household FGD in Kisumu East (Kuoyo) they lamented that *“there is a challenge even to the CHVs, you find the CHV has referred a person to go, this is a government hospital, maybe there are no drugs the patient may go back without the drugs’* underlining some of the challenges faced in the operationalization of the model. In the KII with the CHEW from Nyakach sub-county, he observed that:

“Weaknesses in these structures include inadequate training and supervision of CHW/Vs and limited participation and engagement of community members. Other weaknesses include inconsistent and poor-quality care, as well as lack of resources and support for CHW/Vs”.

The study also observed that gender norms influence health-seeking behaviors, leading to disparities in access to healthcare services for different age groups and genders. Some health services may primarily focus on specific cohorts, leaving others underserved. This was illustrated in a KII with the national community health official who indicated that *“the issue of the boy child in health services is another example of how gender norms can negatively affect service provision.”* Negative attitudes from health workers and barriers at the community and facility levels hinder access to healthcare services.

Similarly, gendered health care provision as well as health-seeking behavior is determined and shaped by existing gender norms. For instance, in the nutrition area, the practice is often to focus on mothers and children, leaving out adolescents and older adults *“Gender norms can have a significant impact on the provision of community health services,”* noted a national community health official in a KII. *“This creates disparities in access to health services and support for different age groups.”*

Other notable challenges include the CHWs' ability to provide adequate treatment, especially to children. Inadequate training and limited resources hinder their ability to diagnose and manage certain health conditions effectively. Additionally, difficulties in family planning uptake linked to male resistance, limit access to reproductive health services. The CHEW respondent from Nyalenda in a KII observed that: *“in decision making for example services like family planning, you will find that it's the father who will determine if the wife will do family planning or not, so whenever we teach them or do family sensitization of family planning, we have to do male involvement, such that they get aware of the services that we are providing”.*

4.1 Opportunities for CHW/Vs in Promoting Health Equity

The study interviews and research show that Community Health Workers/Volunteers (CHW/Vs) in Kisumu County have numerous opportunities to promote health equity and improve the well-being of underserved communities through access and preventive care. For instance, a Government KII opined that *"To address the delivery of primary health services at the household level, there is a need to strengthen the capacity of CHWs through regular training, supervision, and mentorship."* This notion is supported by most FGD and KII qualitative accounts as follows:

"To improve the quality of services provided by CHW/Vs, there is a need for ongoing training and supervision, provision of adequate resources and equipment, and strengthening of the referral system.

Improvements to the CHS model can also include *"better integration of CHV's with higher-level health services, and community involvement in expanding access to health"*- CHEW from Nyakach subcounty, (KII, 2022)

"Devolved government system in Kenya has given me more power to make decisions at the county level, especially when it comes to primary health and addressing the gap in community health. "Without devolution, I fear that community health services, such as health prevention, promotion, and referral, may have been overlooked"-County Health official, Kisumu County (KII, 2022)

Among the CHWs and HH interviews issues of compensation were cited as critical for enhancing health equity. As stated by a Government KII *"Another important step is to increase the number of CHWs to provide coverage to more households, which will require investment in recruitment and retention."* For example, respondent from a FGD in Seme sub-county noted that:

"We have a heavy workload, but the stipend is minimal, and it's disbursed late. We also get rained on. Our backpacks are bulky, it could be better having lighter ones. We mostly need umbrellas, boots, and gloves".

V. DISCUSSIONS

Our study reveals several opportunities towards accelerating primary healthcare delivery in Kisumu County, Kenya. Evidence from FGD, Key Informant Interviews (KII), and document reviews, demonstrate the critical role played by CHW/Vs in the utilization of the Community Health Services (CHs). Major role and opportunities have focused main in providing public health services, disease surveillance and data collection through an integrated approach to healthcare services. Nonetheless, the optimization of their role has been impaired by lack of incentives and motivation. Abuya et al. (2021) posited that policy decisions need to be contextualized to improve CHW/Vs performance as a package of incentive preferences. Kok et al. (2016), further asserts that motivation has impact on the performance and relations with communities they serve.

The socio-economic issues have a direct influence on the role of CHW/Vs and fits neatly with Sen's capability theory and Rawlsian theory on social justice. This underlines how poverty and deprivation affects outcomes on health equity (Braveman, 2010). The findings show that CHW/Vs have harnessed the power of technology to further strengthen the health system. However, the challenge lies in the lack of a comprehensive digital policy for health information system. Bakibinga et al. (2021) in a study on digital health solutions in Kenya underlines the imperative for a "digital infrastructure readiness" prior to the rolling out of health digital innovations.

In the operationalization of the Community Health Strategy (CH Strategy) in Kisumu County, Kenya, the end goal is to achieve health equity underpinned by the imperative for community empowerment. The study reveals a weakness in terms of the community participation in the operationalization of the model and the need to strengthen the community dialogues which are rarely held especially during the period of COVID-19. Other challenges faced includes the lack of resources for the CH strategy model, the lack of essential medicines and supplies in referral facilities, lack of incentives and motivation coupled with high attrition and staff retention. The enactment of the Kisumu County Health Bill 2019 (Kisumu County Assembly, 2019) targeting the remuneration of CHW/Vs under a dedicated fund to be managed by the County was a positive development and good case study for other Counties in Kenya.

The devolution of health services under the 2010 Kenya Constitution has further strengthened the community health system across the sub-counties of Kisumu. This has been achieved through expansion of referral facilities in addition to the piloting of the Universal Health Coverage (UHC) to achieve health equity. The rollout of the community-based insurance schemes has augmented the acceleration of PHC delivery. The study findings show that the rollout of the MARWA- a Kisumu Solidarity Health Insurance cover has brought relief to the vulnerable communities by mitigating catastrophic expenditures. According to Shimeles (2010), Rwanda is a good case study in sub-Saharan Africa on community-based insurance schemes (*Mutuelles*). Findings from that study shows that *Mutuelles* were successful in enhancing the uptake of healthcare services and reducing catastrophic health expenditures but also reinforcing inequity for the non-insured poor households (Shimeles et al,2010).

Prevention and health promotion has been key in the role played by CHW/Vs to promote health equity. CHWs are better positioned to take part in initiatives that promote health and prevent disease. They can conduct health education

sessions, promote healthy behaviours, and provide information on preventive measures for various health conditions. By focusing on prevention, CHWs contribute to reducing the burden of preventable diseases and improving overall community health. Various Healthcare workers KIIs perspectives confirm that the CHS model has been effective in delivering a wide range of services to the community, including preventive care. For instance, HH respondent from Kisumu East sub-county observed that the CHW/Vs *“help in community mobilization, maybe if there is a disease outbreak that the community needs to be aware of. So, CHVs move from household to household notifying them when there will be events like vaccination drives or anything else that arises. So, they help in community mobilization and conveying of important information”*.

Finally, community empowerment is critical for the success of CH Strategy model and to create space for the CHW/Vs to work and support in delivery of health care services. The involvement of CHVs in healthcare delivery empowers communities to actively participate in their health management. Through training and capacity-building initiatives, CHWs empower individuals to take charge of their well-being, leading to greater self-efficacy and improved health outcomes. The study highlights the importance of strengthening the capacity of CHWs through regular training, supervision, and mentorship to enhance their effectiveness in delivering services (Onyango, 2018).

In summary, the CHW/Vs interaction with households and communities has been critical in bridging the gap on community health services, accelerating primary healthcare delivery and therefore promoting health equity. As a result, they have contributed to increased access to healthcare, health promotion and prevention, mobilization of communities for healthcare services by building trust and confidence and creating community support networks (CSN) that are key to peer-to-peer support (Onyango,2018).

V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

The CHW/Vs have an important role to play in promoting health equity by bridging the gap between communities and health services and ensuring underserved communities in Kisumu County access essential health services. To enhance the uptake of PHC delivery and bridge health equity will require investment in community-based insurance schemes to address catastrophic health expenditures, and also harnessing digital technology for community health information systems. Addressing challenges such as training, resources, and gender norms is key to unlock their full potential. Major stakeholders for community health system including CHEWs, CHCs, and county/sub-county health officials, need to provide ongoing support and training to ensure CHVs' effectiveness in delivering services. By improving the CHS model and improving the capacity of CHW/Vs could contribute to achieving health equity for all residents of Kisumu County, Kenya.

5.2 Recommendations

To increase the quality of services rendered by CHW/Vs, it is vital to enhance the CHS model and make sure it is implemented correctly. Purchasing necessary medications, equipment, and infrastructure is necessary to strengthen the model. Access to reasonably priced healthcare services can be improved by removing financial obstacles and looking into creative financing options, such social health insurance. Practical actions can be made to address the provision of primary health services at the household level in addition to legislative and regulatory actions. As outlined in the study, this will require a multi-sectoral approach involving collaboration among government, development partners, and the private sector, as well as active participation of communities in the planning and implementation of health programs. Incorporation of technology that facilitate two-way texting between CHWs and the communities they serve will also facilitate, faster data collection and improve efficiencies including the potential to influence health seeking behaviors of these communities.

Contributor statement

James M. Wakiaga, the main author of the script, contributed to the conception and designing as well as the data analysis, interpretation and drafting of the article.

Kenn Odary, contributed to data collection and drafting of the article.

Dr. Simon Masha contributed to the critical revision of the article and the quality assurance.

Reflexivity Statement:

The authors of this paper are from the global South and have variedly engaged with development policy iteration focusing on issues of poverty and inequality. Among the authors is an accomplished development policy expert who

brings a wealth of practical experience to the health equity discourse. The other author is an accomplished scholar who has extensively published on health issues and was responsible for quality assurance of the paper. All the 3 authors were keen to address the issues of gender and inclusivity in health equity while writing this article.

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REFERENCES

- Abrahams, T. W. J. (2015). *Community participation and the right to health for people with disability: A qualitative study into Health Committees' understanding and practice of their governance role in relation to disability* (Master's thesis, University of Cape Town).
- Abuya, T., Mwangi, D., Obadha, M., Ndwiga, C., Odwe, G., Kavoo, D., Wanyugu, J., Warren, C., & Agarwal, S. (2021). Incentive preferences for community health volunteers in Kenya: findings from a discrete choice experiment. *BMJ open*, *11*(7), e048059. <https://doi.org/10.1136/bmjopen-2020-048059>
- Adongo, W. B., & Asaari, M. J. (2018). Health seeking behaviors and utilization of healthcare services among rural dwellers in under-resourced communities in Ghana. *International Journal of Caring Sciences*, *11*(2), 840-850.
- Ahmed, S., Chase, L. E., Wagnild, J., Akhter, N., Sturridge, S., Clarke, A., Chowdhary, P., Mukami, D., Kasim, A., & Hampshire, K. (2022). Community health workers and health equity in low- and middle-income countries: Systematic review and recommendations for policy and practice. *International Journal for Equity in Health*, *21*(1), 49. <https://doi.org/10.1186/s12939-021-01615-y>
- Akeju, D. O., Oladapo, O. T., Vidler, M., Akinmade, A. A., Sawchuck, D., Qureshi, R., & CLIP Nigeria Feasibility Working Group. (2016). Determinants of health care seeking behaviour during pregnancy in Ogun State, Nigeria. *Reproductive Health*, *13*(1), 32.
- Aseyo, R. E., Mumma, J., Scott, K., Nelima, D., Davis, E., Baker, K. K., & Dreibelbis, R. (2018). 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*, *16*(1), 1-12.
- Bakibinga, P., Kamande, E., Kisia, L., Omuya, M., Matanda, D. J., & Kyobutungi, C. (2020). Challenges and prospects for implementation of community health volunteers' digital health solutions in Kenya: A qualitative study. *BMC Health Services Research*, *20*, 1-12.
- Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, *9*(2), 27-40.
- Braveman, P. (2010). Social conditions, health equity, and human rights. *Health and Human Rights*, *12*(2), 31-48.
- Braveman, P., & Gruskin, S. (2003). Defining equity in health. *Journal of Epidemiology & Community Health*, *57*(4), 254-258.
- Business Daily. (2018). Govt: This is why we chose 4 counties for health coverage. Nairobi, Kenya. <https://www.businessdailyafrica.com/news/counties/Govt--Why-we-chose-4-counties-for-universalhealthcare/4003142-4798464-1289rtx/index.html>
- Evans, T., Whitehead, M., Bhuiya, A., Diderichsen, F., & Wirth, M. (Eds.). (2001). *Challenging inequities in health: From ethics to action*. Oxford University Press.
- Filmer, D. (1999). *Health policy in poor countries: Weak links in the chain*. The World Bank.
- Frymus, D., Kok, M., De Koning, K., & Quain, E. (2013). Knowledge gaps and a need based global research agenda by 2015. *Global Health Work Alliance Report, 2013*, 1-5.
- Give, C. S., Sidat, M., Ormel, H., Ndima, S., McCollum, R., & Taegtmeier, M. (2015). Exploring competing experiences and expectations of the revitalized community health worker programme in Mozambique: An equity analysis. *Human Resources for Health*, *13*, 1-9.
- Government of Kenya. (2017). Implementation of Agenda 2030 for sustainable development in Kenya. *Ministry of Devolution, Nairobi, Kenya*. <https://sustainable.development.un.org/content/documents/15689Kenya.pdf>
- Kisumu County Assembly. (2019). *The Kisumu County Health Bill, 2019*. Retrieved from <https://kisumuassembly.go.ke/wp-content/uploads/2019/10/The-Kisumu-County-Health-Bill-2019.pdf>
- Kok, M. C., Dieleman, M., Taegtmeier, M., Broerse, J. E., Kane, S. S., Ormel, H., & De Koning, K. A. (2015). Which intervention design factors influence performance of community health workers in low-and middle-income countries? A systematic review. *Health Policy and Planning*, *30*(9), 1207-1227.
- Kok, M. C., Ormel, H., Broerse, J. E., Kane, S., Namakhoma, I., Otiso, L., & Dieleman, M. (2017). Optimising the benefits of community health workers' unique position between communities and the health sector: A comparative analysis of factors shaping relationships in four countries. *Global Public Health*, *12*(11), 1404-1432.

- McCollum, R., Gomez, W., Theobald, S., & Taegtmeier, M. (2016). How equitable are community health worker programmes and which programme features influence equity of community health worker services? A systematic review. *BMC Public Health*, *16*, 1-16.
- Ministry of Health. (2019). *Kenya Harmonized Health Facility Assessment (KHFA)*. Nairobi, Kenya.
- Ministry of Health. (2019). *Refocusing on quality of care and increasing demand for services: Essential elements in attaining universal health coverage in Kenya* (Policy Brief). Nairobi, Kenya.
- Munshi, S., Christofides, N. J., & Eyles, J. (2019). Sub-national perspectives on the implementation of a national community health worker programme in Gauteng Province, South Africa. *BMJ Global Health*, *4*, e001564. <https://doi.org/10.1136/bmjgh-2019-001564>
- Mushtaq, K., Hussain, M., Afzal, M., & Gilani, S. A. (2020). Factors affecting health seeking behavior and health services in Pakistan. *National Journal of Health Sciences*, *5*(1), 30-34.
- Mwendwa, P. (2018). Assessing the demand for community health workers' social support: A qualitative perspective of mothers in rural Rwanda. *Africa Health Agenda International Journal*, *1*(4), 8.
- Nzioki, J. M., Onyango, R. O., & Ombaka, J. H. (2015). Efficiency and factors influencing efficiency of Community Health Strategy in providing Maternal and Child Health services in Mwingi District, Kenya: An expert opinion perspective. *The Pan African medical journal*, *20*, 88. <https://doi.org/10.11604/pamj.2015.20.88.4711>
- Odaga, J. (2004). From Alma Ata to Millennium Development Goals: To what extent has equity been achieved?
- Olayo, R., Wafula, C., Aseyo, E., Loum, C., & Kaseje, D. (2014). A quasi-experimental assessment of the effectiveness of the Community Health Strategy on health outcomes in Kenya. *BMC Health Services Research*, *14*(S1), S3.
- Omeire, E. (2017). Factors affecting health seeking behaviour among rural dwellers in Nigeria and its implication on rural livelihood. *European Journal of Social Sciences Studies*, *2*(2), 1-13. Retrieved from <https://ssrn.com/abstract=2962954>
- Onyango, D. (2018). Lessons for child survival in piloting universal health coverage. *Kisumu County, Kenya*. https://afyauzazi.org/symposium/assets/files/day4/Lessons%20for%20child%20survival%20in%20piloting%20UHC_Kisumu%20County.pdf
- Owek, C. J., Oluoch, E., Wachira, J., Estambale, B., & Afrane, Y. A. (2017). Community perceptions and attitudes on malaria case management and the role of community health workers. *Malaria Journal*, *16*(1), 272.
- Rawls, J. (1971). *A theory of justice*. Cambridge, MA: Harvard University Press.
- Rawls, J. (1999). *A Theory of Justice: Revised Edition*. Harvard University Press.
- Schurer, J. M., Fowler, K., Rafferty, E., Masimbi, O., Muhire, J., Rozanski, O., & Amuguni, H. J. (2020). Equity for health delivery: Opportunity costs and benefits among community health workers in Rwanda. *PLOS ONE*, *15*(9), e0236255.
- Sen, A. (1999). *Development as freedom* (1st ed.). Oxford University Press.
- Sen, A. K. (2009). *The idea of justice*. Harvard University Press.
- Shimeles, A. (2010). *Community based health insurance schemes in Africa: The case of Rwanda*. Working Paper No. 120. African Development Bank.
- Wakiaga, J. M., & Nalugala, R. (2021). An examination of the structural linkages between households and community health services in realization of accelerated primary healthcare delivery in Kisumu County, Kenya: A systematic review. *F1000Research*, *2024*(10), 1082. <https://doi.org/10.12688/f1000research.73303.2>
- World Health Organization & United Nations Children's Fund (UNICEF). (2018). *Declaration of Astana; Global Conference on Primary Health Care*. Astana, Kazakhstan. <https://www.who.int/docs/defaultsource/primary-health/declaration/gcphc-declaration.pdf>
- World Health Organization. (2017). *Community Health Worker Programs in African Region: Evidence and Options — Policy Brief*. <https://www.afro.who.int/publications/community-health-worker-programmes-whoafrican-region-policy-brief7>
- Yitbarek, K., Abraham, G., & Morankar, S. (2019). Contribution of women's development army to maternal and child health in Ethiopia: A systematic review of evidence. *BMJ Open*, *9*(5), e025937. <https://doi.org/10.1136/bmjopen-2018-025937>