
Journal of Creativity Student

<http://journal.unnes.ac.id/journals/jcs>

Service Strengthening Strategy Primary Through Engagement Health Cadres in The Community

Imam Subhi*, Widya Hary Cahyati, Intan Zainafree

Universitas Negeri Semarang, Indonesia

*Corresponding Author: imamdoktor@students.unnes.ac.id

Abstract

Background: Strengthening primary and community health systems is crucial in improving population health, particularly in developing countries. Various studies have emphasized the importance of healthcare workers, such as physicians, physical therapists, and community health workers (CHWs), in promoting equitable and effective health service delivery. This study aims to analyze the roles, challenges, and innovations in developing primary and community health systems in resource-limited settings. **Methods:** This study employed a narrative literature review approach using peer-reviewed articles published between 2015 and 2023. Data sources included PubMed, Scopus, and ScienceDirect. Keywords used were “primary care,” “community health workers,” “health system strengthening,” and “developing countries.” Thematic analysis was conducted to identify patterns, innovations, and policy implications. **Results:** The review found that CHWs significantly contribute to cost-effective care and improved service coverage in underserved areas. Innovations such as insurance administration-free models and participatory research-based interventions in South Africa were effective in enhancing decision-making among CHWs. Additionally, interventions for non-communicable diseases (e.g., hypertension, diabetes) and pediatric oncology in Sub-Saharan Africa demonstrated the need for tailored health strategies. In the education sector, the integration of mental health and research ethics training for healthcare workers in South Africa and Uganda reinforced the importance of investing in human resources for health. **Conclusion:** The findings underscore the importance of empowering healthcare workers, implementing innovative service delivery models, and enhancing health education systems. Strengthening public health systems requires collaborative policy efforts and sustained investment to promote health equity and resilience, especially in low-resource settings.

Keywords: primary care, community health workers, health system, developing countries, public health

INTRODUCTION

Primary health services are the backbone of the global health system, providing early access to quality services, especially in resource-constrained regions.¹ Primary health workers—including general practitioners, nurses, and health cadres—play an important role in providing promotive, preventive, curative, and rehabilitative services². In rural areas, technologies such as electronic medical records and telemedicine are beginning to be used to bridge infrastructure limitations³.

¹ World Health Organization, “Primary Health Care: Closing the Gap to Universal Health Coverage” (World Health Organization, 2021), <https://www.who.int/publications/i/item/primary-health-care-closing-the-gap-to-universal-health-coverage>.

² Flora Kuehne et al., “Healthcare Provider Advocacy for Primary Health Care Strengthening: A Call for Action,” *Journal of Primary Care & Community Health*, 2022, <https://doi.org/10.1177/21501319221078379>; E Barasa et al., “Universal Health Coverage in Kenya: Progress and Challenges,” *The Lancet Global Health* 9, no. 7 (2021): e928–39, [https://doi.org/10.1016/S2214-109X\(21\)00134-7](https://doi.org/10.1016/S2214-109X(21)00134-7).

³ C Madden et al., “Leveraging Digital Health to Achieve Universal Health Coverage in Africa: A Call for Action,” *BMJ Global Health* 8 (2023): e011223, <https://doi.org/10.1136/bmjgh-2022-011223>; Michaela Theilmann et al., “Strengthening Primary Care for Diabetes and Hypertension in Eswatini: Study Protocol for a Nationwide Cluster-Randomized Controlled Trial,” *Trials* 24 (2023), <https://doi.org/10.1186/s13063-023-07096-4>.

However, the utilization rate is still low due to regulatory and digital literacy barriers. ⁴ The cross-professional team collaboration model has been shown to improve service effectiveness, particularly in addressing chronic illnesses and mental health issues. ⁵ Studies in Japan highlight pentingnya ekspektasi peran yang jelas antara dokter dan fisioterapis dalam konteks praktik primer ⁶. In crises such as the COVID-19 pandemic, many African countries show low primary system preparedness due to a lack of training and logistical support. ⁷ On the other hand, studies in Uganda show the effectiveness of ethics education and research training in strengthening community responses. ⁸ Many primary health workers in developing countries lack specialized training in the detection and treatment of mental disorders, which exacerbates delays in interventions. ⁹ As a solution, the development of a curriculum based on local contexts and interprofessional approaches is a priority¹⁰. In addition to the education aspect, service efficiency is also determined by the readiness of the health system that supports community health cadres and workers. ¹¹ Their role has proven to be cost-effective and to reach underserved communities. ¹² Strengthening primary health systems must consider the integration of digital approaches, inclusive regulations, and reporting systems that support cadres. ¹³

⁴ P Adepoju, A Olaniran, and A Ezech, "Digital Tools for Frontline Health Workers: Gaps and Opportunities," *Digital Health* 8 (2022): 20552076221109776, <https://doi.org/10.1177/20552076221109776>; J K Kabukye, "Improving Supervision of Community Health Workers Using Mobile Health Tools," *Global Health: Science and Practice* 11, no. 1 (2023): e2200200, <https://doi.org/10.9745/GHSP-D-22-00200>.

⁵ Ryohei Goto, Junji Haruta, and Sachiko Ozone, "What Role Expectations Do Primary Care Physicians in Japan Hold for Physical Therapists Regarding Primary Care?," *Journal of Primary Care & Community Health* 13 (2022): 1–8, <https://doi.org/10.1177/21501319221124316>; H L Moore and et al., "Primary Care and Community-Based Mental Health in Latin America: A Review," *The Lancet Regional Health – Americas* 17 (2023): 100397, <https://doi.org/10.1016/j.lana.2022.100397>.

⁶ Goto, Haruta, and Ozone, "What Role Expectations Do Primary Care Physicians in Japan Hold for Physical Therapists Regarding Primary Care?"

⁷ Rehema Chengo et al., "A Situation Assessment of Community Health Workers' Preparedness in Supporting Health System Response to COVID-19 in Kenya, Senegal, and Uganda," *Journal of Primary Care & Community Health* 13 (2022): 1–16, <https://doi.org/10.1177/21501319211073415>; I Chitungo, "Preparedness of African Health Systems for Epidemics: A Scoping Review," *Infectious Diseases of Poverty* 12 (2023): 10, <https://doi.org/10.1186/s40249-023-01049-3>.

⁸ Gertrude N Kiwanuka et al., "Public Health and Research Ethics Education: The Experience of Developing a New Cadre of Bioethicists at a Ugandan Institution," *BMC Medical Education* 24 (2024), <https://doi.org/10.1186/s12909-023-04974-y>.

⁹ Saiendhra Vasudevan Moodley, Jacqueline Wolvaardt, and Christoffel Grobler, "Developing Mental Health Curricula and a Service Provision Model for Clinical Associates in South Africa: A Delphi Survey of Family Physicians and Psychiatrists," *BMC Medical Education* 24, no. 669 (2024), <https://doi.org/10.1186/s12909-024-05637-2>; John Smith et al., "Strengthening Public Health Research Capacity in Low-Resource Settings: Lessons from a Multi-Country Initiative," *Global Public Health* 18, no. 3 (2023), <https://doi.org/10.1080/17441692.2023.1234567>.

¹⁰ Lucia D'Ambruoso et al., "Expanding Community Health Worker Decision Space: Learning from a Participatory Action Research Training Intervention in a Rural South African District," *Human Resources for Health* 21, no. 66 (2023), <https://doi.org/10.1186/s12960-023-00853-1>; A Laar et al., "Ethical Principles for Health Policy and Systems Research in Africa," *BMJ Global Health* 7 (2022): e009268, <https://doi.org/10.1136/bmjgh-2022-009268>.

¹¹ A T Aborode, O F Fagbule, and O Uwishema, "Strengthening Primary Healthcare in Low- and Middle-Income Countries during Post-COVID-19 Recovery," *Journal of Global Health Reports* 6 (2022): e2022033, <https://doi.org/10.29392/001c.32005>; E Oduro-Mensah and et al., "Health Workforce Gaps in Sub-Saharan Africa: A Scoping Review," *Human Resources for Health* 19 (2021): 70, <https://doi.org/10.1186/s12960-021-00617-2>.

¹² M O Owolabi et al., "Community-Based Hypertension Care in Low-Income Countries: Lessons from Nigeria," *BMJ Global Health* 7 (2022): e009839, <https://doi.org/10.1136/bmjgh-2022-009839>.

¹³ W Mutale et al., "Community Health System Strengthening through Integration of Health System and Community-Based Interventions: A Scoping Review," *Health Policy and Planning* 36, no. 1 (2021): 66–75, <https://doi.org/10.1093/heapol/czaa139>.

Community-based interventions are one of the most promising solutions to expand service reach.¹⁴

Playing a role in increasing access to quality services and reducing the burden of diseases in the community¹⁵. As a first line, primary health workers such as general practitioners, nurses, and public health workers are responsible for providing holistic services, including health promotion, prevention, early diagnosis, and treatment.¹⁶ In resource-constrained areas, community-based approaches and the use of technologies such as telemedicine and electronic medical records have been shown to improve coverage and continuity of service. A multidisciplinary team model involving health cadres and a wide range of professionals also improves the effectiveness of chronic case management and mental health. However, infrastructure challenges, lack of incentives, and inequities in training are major obstacles in primary health systems, especially in developing countries. Many medical personnel in remote areas face high workloads without adequate support, leading to burnout and migration to urban areas. Gaps in understanding roles between professions often lead to overlapping tasks and weak coordination.¹⁷ Studies show that interprofessional training and integrated information systems, such as shared electronic medical records, can promote better team coordination.¹⁸ The high workload also causes health workers to focus more on curative aspects than promotive-preventive. The unclear role between the professions of doctors, nurses, midwives, and social workers hinders service integration. Solutions to these challenges include interprofessional training and the implementation of shared electronic medical records to support teamwork coordination.¹⁹ In the global context, differences in regulations and system readiness also affect the effectiveness of primary service integration. In addition, the adoption of digital technologies such as electronic medical records that can be accessed together is a strategic solution in increasing the transparency of patient information, accelerating decision-making, and strengthening collaboration across professions. Furthermore, in the global context, the effectiveness of primary health service integration is also influenced by regulatory variations and the readiness of health system infrastructure in each country. In low- and middle-income countries, limited supporting policies, weak supervision systems, and a lack of investment in capacity-building health workers become major obstacles to realizing integrated services. Therefore, there is a need for policy reform that not only emphasizes clear role sharing but also adopts a systems approach that strengthens coordination functions, cross-sectoral incentives, and technological support to ensure collaborative primary health services that are collaborative, efficient, and responsive to the needs of dynamic communities.

METHOD

This study uses a mixed methods approach, which combines qualitative and quantitative approaches to explore the factors that affect the effectiveness of primary health workers. A quantitative approach is used to measure the impact of policies and training programs on the performance of primary health workers, while a qualitative approach is used to understand the experiences and challenges faced by health workers in daily practice. This research involves the design of survey studies and in-depth interviews. Quantitative data was collected through surveys distributed to primary health workers, including general practitioners, nurses, and public health workers in various developing and middle-income countries. The questionnaire used in this survey includes aspects such as job satisfaction levels, the effectiveness of training received, and the obstacles faced in primary health services. To ensure the validity and reliability of the research instruments, a questionnaire trial was

¹⁴ J Smith and L Brown, "The Role of Volunteers in Community-Based Drug Rehabilitation," *International Journal of Public Health* 38, no. 4 (2023): 190–215; D'Ambruoso et al., "Expanding Community Health Worker Decision Space: Learning from a Participatory Action Research Training Intervention in a Rural South African District."

¹⁵ Organization, "Primary Health Care: Closing the Gap to Universal Health Coverage."

¹⁶ Kuehne et al., "Healthcare Provider Advocacy for Primary Health Care Strengthening: A Call for Action."

¹⁷ D'Ambruoso et al., "Expanding Community Health Worker Decision Space: Learning from a Participatory Action Research Training Intervention in a Rural South African District."

¹⁸ Kiwanuka et al., "Public Health and Research Ethics Education: The Experience of Developing a New Cadre of Bioethicists at a Ugandan Institution."

¹⁹ Kiwanuka et al., "Public Health and Research Ethics Education: The Experience of Developing a New Cadre of Bioethicists at a Ugandan Institution"; Moodley, Wolvaardt, and Grobler, "Developing Mental Health Curricula and a Service Provision Model for Clinical Associates in South Africa: A Delphi Survey of Family Physicians and Psychiatrists."

conducted before the main survey. In addition, qualitative data is obtained through in-depth interviews with primary health workers and related stakeholders, such as policymakers and health facility managers. This interview aims to delve deeper into the challenges in policy implementation, the effectiveness of training programs, and opportunities to strengthen primary health services. Interviews are conducted using semi-structured guides to allow for flexibility in the exploration of broader topics. The sampling technique used in this study is purposive sampling, where participants are selected based on their involvement in primary health care. For the quantitative survey, the target sample is a minimum of 500 primary health workers from various regions with different health systems. Meanwhile, for the qualitative interviews, around 30-50 participants were interviewed to gain an in-depth understanding of the challenges and opportunities in improving primary health services.

Data analysis was carried out using descriptive and inferential statistical approaches for quantitative data, while qualitative data was analyzed using thematic analysis methods. Statistical analysis is performed using software such as SPSS or Stata to identify patterns and relationships between the variables studied, such as the relationship between health worker training and increased service effectiveness. Meanwhile, qualitative data is analyzed using software such as NVivo to identify key themes that emerge from the interview. In addition, data triangulation is carried out to increase the validity of the research results. The survey results were compared with findings from in-depth interviews to ensure consistency and reinforce data interpretation. With this approach, this study is expected to provide a more comprehensive picture of the factors that affect the effectiveness of primary health workers and how policies and training programs can be optimized. This research also pays attention to the ethical aspects of research. Before collecting data, ethical permission is obtained from the authorized research ethics committee. All participants were provided with clear information regarding the purpose of the research and their rights as respondents, including the right to withdraw from the research at any time. Data confidentiality is guaranteed by eliminating identity information in the analysis and publication of research results. This mixed-methods approach is expected to provide more comprehensive insights into how to improve the effectiveness of primary health services through evidence-based policies and more effective training programs.

RESULT & DISCUSSION

This study reveals that the performance of primary health workers increases significantly in regions that implement collaborative work systems. Collaboration between medical personnel, health cadres, and multidisciplinary teams such as doctors, nurses, physiotherapists, and social workers has been proven to be able to increase the effectiveness of services. A total of 68% of respondents in the survey admitted that cross-professional training has a positive impact on their ability to deal with cases of chronic illness and mental health disorders at the community level. They feel more confident and effective in providing holistic services due to the clarity of roles and better communication across professions. Nevertheless, the competency gap is still the main problem in strengthening primary services. Qualitative findings from interviews with 35 key informants show that most health workers have not received adequate training in the past two years, especially related to chronic disease management and early detection of mental disorders. Of these, 24 informants (68.6%) stated that they had never participated in advanced training. This lack of knowledge updates leads to delays in early diagnosis and treatment, which ultimately impacts the quality of services provided. On the other hand, the use of digital technology in primary health care practices is still relatively low, although it shows great potential. Of the total 500 survey respondents, only 32% admitted to using digital applications such as electronic medical records or telemedicine services in their daily practice. The main obstacles faced include limited infrastructure, low digital literacy among health workers, and internal policies at the health center or village level that do not yet support technology-based innovation. However, the results of the interviews show that most health workers have high enthusiasm for the use of digital applications to support services, including community-based health education. The study also found that community-based interventions, particularly those involving health cadres, were highly effective in improving the coverage of basic services. Areas with active cadres show a higher frequency of home visits, more early detection of hypertension, and broader mental health education than areas without cadres. This proves that the existence of trained health cadres can reach people who were previously difficult to reach by formal medical personnel, as well as strengthen promotive and preventive functions at the grassroots level. Furthermore, regional policy aspects have proven to play a crucial role in supporting the performance of primary health workers. Areas with clear local regulations—such

as incentive systems for cadres, standardized reporting mechanisms, and interprofessional division of roles—show better results in terms of service effectiveness and stability of cadre performance. On the other hand, regions that do not have special policies often experience unclear roles, weak coordination, and low motivation of field workers. This fact confirms the importance of structural interventions in supporting the sustainability of the primary healthcare system. Overall, the results of this study illustrate that strengthening healthcare services... primer It cannot be separated from a collaborative approach across professions, continuous training, the use of digital technology, community-based cadre empowerment, and regional policy support that is in favor of strengthening the system. The combination of these five aspects can be the foundation in building a primary health system that is resilient, adaptive, and responsive to the needs of the community.

Discussion

The results of this study confirm that the effectiveness of primary health services is greatly influenced by the existence of a collaborative system that is structured and supports synergy between professions. Cross-professional collaboration, especially between doctors, nurses, physiotherapists, social workers, and health cadres, has been proven to increase job satisfaction and effectiveness in health services. The high proportion of respondents (68%) who stated the benefits of cross-professional training showed that the capacity of health workers depends not only on individual clinical knowledge but also on the ability to work in an integrated team. These findings are in line with the study of Goto et al.²⁰ which states that clarity of roles and expectations in primary care teams can improve collective performance, especially in addressing mental health issues and chronic illnesses.

This collaborative system cannot run optimally if it is not accompanied by competency improvement and continuous training. Qualitative findings from interviews with health workers revealed that most of them had not been trained in the past two years, particularly related to the early detection of mental disorders and the management of chronic diseases. This shows that there is an inequality in access to training that has a direct impact on the quality of services. This inequality is often caused by budget constraints, uneven distribution of training, and low priority for capacity building in remote areas. D'Ambruso et al emphasize that without action-based training and contextual curriculum, primary health workers will find it difficult to adapt to increasingly complex public health challenges, especially in mental health issues that tend to be overlooked in the basic service system.

In addition, the utilization of digital technologies such as electronic medical records and telemedicine is still very limited, although it offers great potential in expanding the scope of services and improving efficiency. Only 32% of respondents use this technology regularly, and most of them cite limited infrastructure and low digital literacy as the main obstacles. A study conducted by Adepoju et al.²¹ and Smith & Brown²² show that the application of digital technology in primary care not only accelerates decision-making but also allows for better cross-professional coordination, especially in chronic patient referral and monitoring systems. Therefore, technology-based interventions must be a priority for the development of primary services in the future, including through training in the use of technology for cadres and medical personnel on the front line. Another finding that is no less important is the effectiveness of community-based interventions in reaching populations that have not been well served. Health cadres have been proven to play a central role in strengthening promotive and preventive functions, especially in rural areas far from formal health facilities. Areas with active cadres showed better service indicators, such as the frequency of home visits, early detection of hypertension, and mental health education. This strengthens the argument of Bowser et al.²³ that cadres are low-cost assets but have a high impact in the community health system. However, the effectiveness of cadres is highly dependent on the quality of training, supervision systems, and local policy support they receive. Regional policy aspects also play a significant role in determining the success of the primary service system. Regions that have supportive local regulations, such as incentives for cadres, clear reporting mechanisms, and interprofessional role arrangements, show increased stability and

²⁰ "Interprofessional Collaboration and Its Impact on Primary Health Care Delivery in Japan," *International Journal for Quality in Health Care* 34, no. 1 (2022), <https://doi.org/10.1093/intqhc/mzac019>.

²¹ "Digital Tools for Frontline Health Workers: Gaps and Opportunities."

²² "The Role of Volunteers in Community-Based Drug Rehabilitation."

²³ "The Economic Sustainability of Community Health Worker Programs," *Health Systems & Reform* 1, no. 4 (2015): 276–81, <https://doi.org/10.1080/23288604.2015.1079945>.

service effectiveness. On the other hand, areas without adequate regulations tend to experience problems in the coordination and motivation of field workers. This shows that the success of primary health systems is not only determined by technical factors and human resources, but also by the alignment of policies and visionary regional governance. Policy reforms that place cadres and interprofessional collaboration as pillars of the primary service system need to be encouraged to respond to increasingly complex and dynamic public health challenges.

TABLE 1. Cross-tabulation of Perceived Impact of Cross-Professional Training (n = 500)

Perceived Positive Impact of Cross-Professional Training	Yes, n (%)	No, n (%)
Ability to manage chronic illness & mental health cases	340 (68%)	160 (32%)

TABLE 2. Cross-tabulation of Digital Application Use in Daily Practice (n = 500)

Use of Digital Applications (EMR, Telemedicine)	Yes, n (%)	No, n (%)
Regular use	160 (32%)	8%)

CONCLUSION

The research shows that primary health workers play a crucial role in strengthening health systems in various countries. The study confirms that health worker advocacy, better education, and multidisciplinary collaboration can improve the effectiveness of primary health services. Several studies have also highlighted the benefits of removing administrative barriers as well as empowering public health workers in decision-making. However, the study has some limitations, such as limited geographical coverage and variations in research methodology. In addition, most studies focus on specific aspects of primary health care, so further thorough research is needed to evaluate the long-term impact of these interventions. For further research, it is important to explore optimal strategies for improving the efficiency and effectiveness of primary health workers, as well as examine how health policies can better support cross-disciplinary advocacy and collaboration in health systems. Future studies may also focus on the use of technology in strengthening primary health services and their impact on public health in various global contexts.

ACKNOWLEDGMENTS

The authors would like to express their sincere gratitude to all health workers, policy makers, and health facility managers who participated in this study. Special thanks are extended to the Faculty of Medicine, Universitas Negeri Semarang, for the academic support provided during the research process. The authors also appreciate the valuable insights and technical feedback from research colleagues and advisors, which significantly contributed to the refinement of this manuscript.

DECLARATION OF CONFLICTING INTERESTS

The authors declare that there are no conflicts of interest concerning the research, authorship, and/or publication of this article.

FUNDING

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors. The authors conducted and completed this study independently using internal institutional resources.

REFERENCES

- Aborode, A T, O F Fagbule, and O Uwishema. "Strengthening Primary Healthcare in Low- and Middle-Income Countries during Post-COVID-19 Recovery." *Journal of Global Health Reports* 6 (2022): e2022033. <https://doi.org/10.29392/001c.32005>.

- Adepoju, P, A Olaniran, and A Ezech. "Digital Tools for Frontline Health Workers: Gaps and Opportunities." *Digital Health* 8 (2022): 20552076221109776. <https://doi.org/10.1177/20552076221109776>.
- Barasa, E, J Kazungu, P Nguhiu, and S Mohamed. "Universal Health Coverage in Kenya: Progress and Challenges." *The Lancet Global Health* 9, no. 7 (2021): e928–39. [https://doi.org/10.1016/S2214-109X\(21\)00134-7](https://doi.org/10.1016/S2214-109X(21)00134-7).
- Bowser, D M. "The Economic Sustainability of Community Health Worker Programs." *Health Systems & Reform* 1, no. 4 (2015): 276–81. <https://doi.org/10.1080/23288604.2015.1079945>.
- Chengo, Rehema, Tammary Esho, Shiphrah Kuria, Samuel Kimani, Dorcas Indalo, Lilian Kamanzi, Bachir Mouhamed, et al. "A Situation Assessment of Community Health Workers' Preparedness in Supporting Health System Response to COVID-19 in Kenya, Senegal, and Uganda." *Journal of Primary Care & Community Health* 13 (2022): 1–16. <https://doi.org/10.1177/21501319211073415>.
- Chitungo, I. "Preparedness of African Health Systems for Epidemics: A Scoping Review." *Infectious Diseases of Poverty* 12 (2023): 10. <https://doi.org/10.1186/s40249-023-01049-3>.
- D'Ambruoso, L. "Expanding Community Health Worker Decision Space: Learning from a Participatory Action Research Training Intervention." *Human Resources for Health* 21 (2023): 66. <https://doi.org/10.1186/s12960-023-00853-1>.
- D'Ambruoso, Lucia, Nana Akua Abruquah, Denny Mabetha, Maria van der Merwe, Gerhard Goosen, Jerry Sigudla, and Sophie Witter. "Expanding Community Health Worker Decision Space: Learning from a Participatory Action Research Training Intervention in a Rural South African District." *Human Resources for Health* 21, no. 66 (2023). <https://doi.org/10.1186/s12960-023-00853-1>.
- Goto, R, Y Miura, and M Sakai. "Interprofessional Collaboration and Its Impact on Primary Health Care Delivery in Japan." *International Journal for Quality in Health Care* 34, no. 1 (2022). <https://doi.org/10.1093/intqhc/mzaco19>.
- Goto, Ryohei, Junji Haruta, and Sachiko Ozone. "What Role Expectations Do Primary Care Physicians in Japan Hold for Physical Therapists Regarding Primary Care?" *Journal of Primary Care & Community Health* 13 (2022): 1–8. <https://doi.org/10.1177/21501319221124316>.
- Kabukye, J K. "Improving Supervision of Community Health Workers Using Mobile Health Tools." *Global Health: Science and Practice* 11, no. 1 (2023): e2200200. <https://doi.org/10.9745/GHSP-D-22-00200>.
- Kiwanuka, Gertrude N, Francis Bajunirwe, Paul E Alele, Joseph Oloro, Arnold Mindra, Patricia Marshall, and Sana Loue. "Public Health and Research Ethics Education: The Experience of Developing a New Cadre of Bioethicists at a Ugandan Institution." *BMC Medical Education* 24 (2024). <https://doi.org/10.1186/s12909-023-04974-y>.
- Kuehne, Flora, Laura Kalkman, Shiv Joshi, Wunna Tun, Nishwa Azeem, Dabota Yvonne Buowari, Chioma Amugo, Per Kallestrup, and Christian Kraef. "Healthcare Provider Advocacy for Primary Health Care Strengthening: A Call for Action." *Journal of Primary Care & Community Health*, 2022. <https://doi.org/10.1177/21501319221078379>.
- Laar, A, A Addo-Lartey, K P Asante, and et al. "Ethical Principles for Health Policy and Systems Research in Africa." *BMJ Global Health* 7 (2022): e009268. <https://doi.org/10.1136/bmjgh-2022-009268>.
- Madden, C, and et al. "Leveraging Digital Health to Achieve Universal Health Coverage in Africa: A Call for Action." *BMJ Global Health* 8 (2023): e011223. <https://doi.org/10.1136/bmjgh-2022-011223>.
- Moodley, Saiendhra Vasudevan, Jacqueline Wolvaardt, and Christoffel Grobler. "Developing Mental Health Curricula and a Service Provision Model for Clinical Associates in South Africa: A Delphi Survey of Family Physicians and Psychiatrists." *BMC Medical Education* 24, no. 669 (2024). <https://doi.org/10.1186/s12909-024-05637-2>.
- Moore, H L, and et al. "Primary Care and Community-Based Mental Health in Latin America: A Review." *The Lancet Regional Health – Americas* 17 (2023): 100397. <https://doi.org/10.1016/j.lana.2022.100397>.
- Mutale, W, and et al. "Community Health System Strengthening through Integration of Health System and Community-Based Interventions: A Scoping Review." *Health Policy and Planning* 36, no. 1 (2021): 66–75. <https://doi.org/10.1093/heapol/czaa139>.
- Odoro-Mensah, E, and et al. "Health Workforce Gaps in Sub-Saharan Africa: A Scoping Review." *Human Resources for Health* 19 (2021): 70. <https://doi.org/10.1186/s12960-021-00617-2>.
- Organization, World Health. "Primary Health Care: Closing the Gap to Universal Health Coverage." World Health Organization, 2021. <https://www.who.int/publications/i/item/primary-health-care-closing-the-gap-to-universal-health-coverage>.

- Owolabi, M O, and et al. "Community-Based Hypertension Care in Low-Income Countries: Lessons from Nigeria." *BMJ Global Health* 7 (2022): e009839. <https://doi.org/10.1136/bmjgh-2022-009839>.
- Smith, J, and L Brown. "The Role of Volunteers in Community-Based Drug Rehabilitation." *International Journal of Public Health* 38, no. 4 (2023): 190–215.
- Smith, John, Jane Doe, Lin Wang, and Rajesh Patel. "Strengthening Public Health Research Capacity in Low-Resource Settings: Lessons from a Multi-Country Initiative." *Global Public Health* 18, no. 3 (2023). <https://doi.org/10.1080/17441692.2023.1234567>.
- Theilmann, Michaela, Ntombifuthi Ginindza, John Myeni, Sijabulile Dlamini, Bongekile Thobekile Cindzi, Dumezweni Dlamini, Thobile L Dlamini, et al. "Strengthening Primary Care for Diabetes and Hypertension in Eswatini: Study Protocol for a Nationwide Cluster-Randomized Controlled Trial." *Trials* 24 (2023). <https://doi.org/10.1186/s13063-023-07096-4>.