

Review Article

A Critical Paradigm Analysis of Community Health System Strengthening to Reduce Neonatal Mortality in Rural Zimbabwe

Meggie Gabida^{1,3*}, Eustarckio Kazonga^{1,2}, Kasonde Bowa²

¹School of Postgraduate Studies, University of Lusaka, Lusaka, Zambia

²Department of Public Health, School of Medicine and Health Sciences, University of Lusaka, Lusaka, Zambia

³Provincial Medical Directorate, Ministry of Health and Child Care, Mashonaland West, Zimbabwe

Article History

Received: 02.07.2026

Accepted: 25.08.2026

Published: 07.09.2026

Journal homepage:

<https://www.easpublisher.com>

Quick Response Code



Abstract: Despite near-universal antenatal care and facility-delivery coverage, neonatal mortality in Zimbabwe rose between 2019 and 2023–24, exposing a gap between service contact and newborn survival. A cluster-randomised trial in Mashonaland West Province found that institutionalising three community health system "vital signs" (trained village health workers, functional community governance, and participatory women's and men's learning and action groups) reduced neonatal deaths by 57%. The women's and men's groups protected newborns only once attendance was sustained over multiple meeting cycles, consistent with a cumulative participatory social-change mechanism rather than an effect of assignment alone. Policy should formalise village health workers, grant community governance structures real financial and operational authority, and sustain participatory groups over the years, directing investment toward the most under-governed and underserved communities.

Keywords: Neonatal Mortality, Health Equity, Community Health Systems, Village Health Workers, Low and Middle-Income Countries.

Copyright © 2026 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

INTRODUCTION

Zimbabwe's health system provides a puzzle that conventional neonatal health programmes struggle to explain. The country has achieved near-universal antenatal care coverage (96%) and high facility-delivery rates (86%), yet neonatal mortality rose from 31 to 37 deaths per 1,000 live births between 2019 and 2023–24 [1]. Coverage has increased while newborns continue to die. Seen through a purely clinical lens, this looks like a technical shortfall: more clinics, more skilled attendants, more supplies. We argue that this framing is itself part of the problem.

Community-level primary health care persists as the weakest layer of most low- and middle-income health systems, even though roughly 97% of maternal, newborn, and child deaths happen in these settings, not in hospitals [2]. In Zimbabwe, village health workers have operated since 1980, yet remain unpaid volunteers on a quarterly stipend, with incomplete geographic coverage and weak ties to community leadership [3–5]. This community layer is recognised in national policy but sits outside routine funding, supervision, and accountability [3]. The question is not whether

community health programmes work; that is well established [6]. It is why health systems keep failing to build them into permanent, funded parts of the system.

Globally, an estimated 2.3 million newborns died in 2024, almost half of all under-five deaths, with sub-Saharan Africa and South Asia bearing more than 80% of this burden [7]. The usual response has been to expand clinical services and count how many people use them. But counting contact measures reach, not survival: a baby can be born in a facility, recorded as covered, and still die in the first three days for reasons grounded in how power and resources are distributed in the community the newborn returns to [8].

The Argument: Institutionalisation, Not Activity, Is the Constraint

We call this a critical paradigm: an approach that treats preventable newborn deaths not as random biological events but as outcomes determined by decisions about health system design, governance, and resource deployment [9]. What a health system chooses to measure and prioritise is never neutral. Seen this way, the failure to build on community-based approaches that have already been shown to work is not technical

*Corresponding Author: Meggie Gabida

School of Postgraduate Studies, University of Lusaka, Lusaka, Zambia

Provincial Medical Directorate, Ministry of Health and Child Care, Mashonaland West, Zimbabwe

oversight; it is a policy choice with real consequences for who survives.

The three-part intervention described below is not a stand-alone community project bolted onto the health system. Each part maps directly onto core functions the World Health Organisation says any functioning health system needs [10], as Table 1 shows: functions that can be funded, supervised, and held accountable like any other part of the system, rather than optional extras that disappear when a project ends.

Evidence from a Cluster-Randomised Controlled Trial

A cluster-randomised controlled trial in Mashonaland West Province (PACTR202607591142118), conducted as the lead author's doctoral research, followed 973 mother–infant pairs across 52 communities (2020–2021), testing what happened when three community health elements were put in place together: trained village health workers with newborn-care skills, functional community governance, and modified participatory women's and men's discussion groups [4, 5]. In communities receiving all three, neonatal mortality fell from 110.1 deaths per 1,000 live births (a baseline representing the concentrated risk in the rural, high-burden communities studied) to 44.8 per 1,000 live births, a 57% reduction (adjusted risk ratio 0.43), compared with communities that received none of them [4, 5]. In practical terms, for roughly every 16 births in communities receiving the full package, one additional newborn death was prevented.

Having a skilled birth attendant at delivery was not, on its own, associated with fewer newborn deaths — a finding that warrants caution, since assessing the quality of that care was beyond the scope of the analysis. But in a setting that has already achieved high facility delivery, this is the heart of the puzzle: the marginal newborn life is saved not by one more clinical contact but by the accountability systems (community-led

reviews of newborn deaths, emergency transport, feedback between clinics and communities), that turn contact into care that actually works [11]. Community-level and community factors were independent predictors of newborn survival alongside biological factors [4, 5], pointing investment toward governance and workforce infrastructure as a genuine complement to clinical care.

The three elements work together on the well-known “three delays” that drive preventable deaths in childbirth: deciding to seek care, reaching care, and receiving adequate care once there [12]. Trained village health workers shorten the first two delays by helping households recognise danger signs early and by mobilising transport and referral [6-11]. Functional governance addresses the third through the audits and monitoring loops that hold clinics accountable [13]. Health workers without community governance oversight have no way to correct a failing system; governance without trained health workers has no frontline eyes and ears. This is why combining all three produced a larger effect than earlier women's group trials that lacked a governance component and involvement of men [14].

The discussion groups show what this evidence can and cannot claim. They were protective overall, but only once participants attended four or more meeting cycles (approximately 14 meetings), at which point the odds of a newborn death fell by 29% (adjusted odds ratio 0.71), the pattern expected if groups work by gradually shifting norms and household decisions, and consistent with wider evidence that such groups reduce newborn deaths by roughly one-third once participation is sustained [14]. Nor is governance too vague to fund or measure in the trial; it was scored with a concrete indicator (at least monthly documented meetings with clear terms of reference) that could sit on a district scorecard exactly as coverage statistics do today [13].

Table 1: Mapping the three community health system vital signs to the WHO health system building blocks, with institutionalisation indicators and the pathway to neonatal survival

Vital sign	WHO building block(s)	Institutionalisation indicator	Pathway to neonatal survival
Recognised VHW / community health workforce	Health workforce; service delivery	Documented job descriptions, training completion, supervisory visits, referral linkage, and postnatal home-visit coverage	Shortens delays 1 and 2: builds household danger-sign recognition and facilitates referral
Functional community governance (HCC/VHC)	Leadership and governance; health financing	Binary cluster indicator: $\geq$ monthly documented meetings, formal terms of reference, recorded community–facility outputs	Addresses delay 3: mobilises emergency transport, death audits and community–facility feedback loops to correct facility readiness
Modified women's and men's learning and action groups	Service delivery; health information	Adapted curricula, session frequency, sex-disaggregated attendance, and formal linkage to VHW follow-up	Shifts social norms and care-seeking; raises newborn-care knowledge and practice over time

HCC (Health Centre Committee); VHC (Village Health Committee); VHW (Village Health Worker). Building-block framework after WHO [10].

Policy Implications

From this perspective, the policy question changes. Rural Zimbabwe's health system is not failing to reach communities; without functional local governance, reaching them does not protect newborns. The risk of a newborn dying is highest in the poorest, most remote, least literate communities, which are also those with the weakest local governance and thinnest village health worker coverage. This is not a coincidence about individual risk; it is the visible mark of decades of underinvestment concentrated in the same places.

If functional governance makes the difference, fairness requires directing sustained, funded investment toward local governance in the most disadvantaged communities, including artisanal mining settlements and households far from any clinic, rather than expanding services further where they are already well served. In practice, this means formally recognising and paying village health workers as primary healthcare workers rather than volunteers [15], giving Village Health Committees, the locally elected bodies that oversee accountability between clinics and communities, real operational and financial authority and a direct line to district health teams [13], and sustaining discussion groups for years, not months [14]. Ethiopia's experience reinforces the point: it was institutionalisation (a paid workforce, embedded governance, domestic funding) rather than the mere existence of community programmes that separated lasting gains from short-lived ones [15]. District scorecards that measure how well local governance functions, rather than only how many services are delivered, could shift accountability in the same way [16].

This argument has real limits: the evidence comes from a single province and needs testing elsewhere, and the hardest-to-reach communities may be undercounted in ways that, if anything, make the equity argument too conservative. None of this undermines the central claim; it defines the conditions under which the claim should now be tested at scale.

CONCLUSION

The rise in newborn deaths in rural Zimbabwe, despite rising coverage, is not a data error or an unavoidable feature of poverty. It is the result of health systems that have expanded contact with communities without investing in the governance and institutional arrangements needed to turn that contact into survival. Putting community governance, a recognised village health workforce, and sustained participatory women's groups in place together cut neonatal mortality by 57%; communities that received none of these saw no comparable improvement.

The implications reach beyond Zimbabwe. Many low- and middle-income countries now show the same pattern (high coverage on paper, stagnating newborn survival in practice), suggesting the real

constraint is increasingly structural rather than clinical. Ending preventable newborn deaths requires a shift in emphasis: from simply expanding reach to building and sustaining the governance and workforce communities need to convert reach into survival, backed by domestic funding, political commitment, and a deliberate focus on the communities reached last and served least.

DECLARATIONS

Ethics Approval and Consent to Participate

The cluster-randomised trial on which this article is based received ethical approval from the University of Lusaka Institutional Review Board (UNILUS; IORG0010092-082) and the Medical Research Council of Zimbabwe (MRCZ/A/2558). Written informed consent was obtained from all participants or their legal guardians. This article presents no new primary data and does not require a separate ethics review.

Trial Registration

The underlying cluster-randomised trial is registered with the Pan African Clinical Trials Registry (PACTR202607591142118). Registration was completed retrospectively on 7 July 2026, after trial completion, as part of the registry's initiative to capture trials already in progress or completed.

Patient and Public Involvement

Patients and the public were not formally engaged as research partners in designing this analysis or the protocol of the underlying cluster-randomised trial; the trial was investigator-led and powered to detect a system-level mortality effect, and patients were not involved in selecting its outcome measures. Community engagement was, however, structurally embedded in the intervention under study: Health Centre Committees and Village Health Committees held standing community-facility liaison roles throughout the trial, and the modified women's and men's learning and action groups were themselves participatory platforms through which attendees' priorities around newborn care and household decision-making shaped session content and delivery over the trial period. Patients and the public were not asked to formally assess the burden or time commitment of participation before the trial began; routine attendance and retention data collected during the trial provide an indirect indication of acceptability. Participants were not involved in recruitment beyond standard community mobilisation conducted by village health workers. Trial findings were disseminated to the Provincial Health Team for Mashonaland West at a stakeholders' meeting convened under the leadership of the Provincial Medical Director, providing a direct route from the research to the district and provincial decision-makers responsible for community health system planning in the study setting. Feedback to participating communities and trial mothers is planned through the existing Village Health Committee and Health Centre Committee structures described in this analysis, which already provide a

standing community–facility liaison channel for routine reporting back to villages.

Consent for Publication: Not applicable.

Data Availability Statement

No new data were generated or analysed for this article; it presents a secondary conceptual analysis of findings already reported in the underlying cluster-randomised trial [4, 5]. In line with the informed consent obtained from participants and the conditions of ethical approval granted by the University of Lusaka Institutional Review Board (IORG0010092-082) and the Medical Research Council of Zimbabwe (MRCZ/A/2558), individual participant-level data were restricted to use by the study investigators for the purposes of this study, and de-identified individual participant data will not be made available for external sharing. Summary trial results are reported in the peer-reviewed article presenting the trial [4], with the full account available in the doctoral thesis [5].

Competing Interests: The authors declare that they have no competing interests.

Funding: This work received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Authors' Contributions

MG conceived the argument, conducted the underlying doctoral research, and drafted and revised the manuscript. EK supervised the underlying research, conceptualised the argument, and reviewed the manuscript. KB supervised the underlying research and reviewed the manuscript. All authors read and approved the final manuscript.

Acknowledgements

The authors thank the women of Mashonaland West Province who participated in the study, the district health teams, and the postgraduate coordinators at the University of Lusaka.

Reflexivity Statement

The lead author is a Zimbabwean public health researcher who designed and conducted the underlying trial. This positionality shaped the argument's framing as one of structural justice. Reflexivity was maintained through engagement with diverse community perspectives, incorporation of local stakeholder feedback, and systematic documentation of assumptions and analytic decisions.

REFERENCES

1. Zimbabwe National Statistics Agency (ZIMSTAT) and ICF. Zimbabwe Demographic and Health Survey 2023–24. Harare and Rockville: ZIMSTAT and ICF; 2024.
2. Saleem S, McClure EM, Goudar SS, Buzdugan R, Wu L, et al. A prospective study of maternal, fetal and neonatal deaths in low- and middle-income countries. *Bull World Health Organ*. 2014;92(8):605–12.
3. Schneider H. The governance of national community health worker programmes in low- and middle-income countries: an empirically based framework of governance principles, purposes and tasks. *Int J Health Policy Manag*. 2019;8(1):18–27.
4. Gabida M, Kazonga E, Bowa K, Dhege C, Chiurunga P. Predictive Modelling and Community Health System Factors for Reducing Preventable Neonatal Deaths in Mashonaland West Province, Zimbabwe, 2020–2021. *East African Scholars Multidiscip Bull*. 2025;8(2):28–50. DOI: 10.36349/easjmb.2025.v08i02.003.
5. Gabida M. Effect of institutionalising community health system vital signs on preventable neonatal deaths in Mashonaland West Province, Zimbabwe, 2020–2021: a mixed methods approach [doctoral thesis]. Lusaka: University of Lusaka; 2026. Trial registration: PACTR202607591142118.
6. Gilmore B, McAuliffe E. Effectiveness of community health workers delivering preventive interventions for maternal and child health in low- and middle-income countries: a systematic review. *BMC Public Health*. 2013; 13:847.
7. UNICEF. Neonatal mortality. UNICEF Data; 2026. Available at: <https://data.unicef.org/topic/child-survival/neonatal-mortality/> (accessed 10 June 2026).
8. Schneider H, Olivier J, Orgill M, Bradley H, Gilson L, Atun R. The multiple lenses on the community health system: implications for policy, practice and research. *Int J Health Policy Manag*. 2022;11(1):9–16.
9. Burke NJ, Joseph G, Pasick RJ, Barker JC. Theorising social context: rethinking behavioural theory. *Health Educ Behav*. 2009;36(5 Suppl):55S–70S.
10. World Health Organisation. Monitoring the building blocks of health systems: a handbook of indicators and their measurement strategies. Geneva: WHO; 2010.
11. Aboubaker S, Qazi S, Wolfheim C, Oyegoke A, Bahl R. Community health workers: a crucial role in newborn health care and survival. *J Glob Health*. 2014;4(2):020302.
12. Thaddeus S, Maine D. Too far to walk: maternal mortality in context. *Soc Sci Med*. 1994;38(8):1091–110.
13. Ved R, Scott K, Gupta G, Singh R, Srivastava P, Bhattacharyya S, et al. How are gender inequalities facing India's ASHAs being addressed? *Hum Resour Health*. 2019; 17:3.
14. Prost A, Colbourn T, Seward N, Azad K, Coomarasamy A, Copas A, et al. Women's groups practising participatory learning and action to improve maternal and newborn health in low-

- resource settings: a systematic review and meta-analysis. *Lancet*. 2013;381(9879):1736–46.
15. Ruducha J, Mann C, Singh NS, Gemebo TD, Tessema NS, Baschieri A, et al. How Ethiopia achieved Millennium Development Goal 4 through multisectoral interventions. *Lancet Glob Health*. 2017;5(11): e1142–51.
16. Khatri RB, Endalamaw A, Erku D, Wolka E, Nigatu F, Zewdie A, et al. Contribution of health system governance in delivering primary health care services for universal health coverage: a scoping review. *PLoS One*. 2025;20(2): e0318244.

Cite This Article: Gabida, M., Kazonga, E., & Bowa, K. (2026). A Critical Paradigm Analysis of Community Health System Strengthening to Reduce Neonatal Mortality in Rural Zimbabwe. *East African Scholars Multidiscip Bull*, 9(4), 80-84. <https://doi.org/10.36349/easjmb.2026.v09i04.003>
