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Systematic Literature Review on Building Resilient Health Systems for Emergencies: Lessons from Covid-19 and Emerging Diseases in Turkana and West Pokot Counties, Kenya

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Abstract

Background: Public health emergencies, including the COVID-19 pandemic and re-emerging infectious diseases, have placed considerable strain on health systems worldwide. These challenges are compounded in resource-constrained and geographically remote areas such as Turkana and West Pokot Counties in Kenya, where poor infrastructure, limited workforce capacity, and fragmented service delivery systems present additional obstacles. Communication has been identified as a key determinant of effective emergency preparedness and response; however, knowledge gaps persist regarding its role at the facility level in such settings.

Objective: This study sought to conduct a systematic review of the literature on communication strategies and their impact on emergency preparedness in healthcare facilities, with the aim of generating evidence applicable to resource-constrained settings.

Methods: A systematic search was conducted across PubMed, Scopus, and Google Scholar, supplemented by publications from the World Health Organization (WHO) and the Kenya Ministry of Health. Inclusion criteria required studies to be peer-reviewed, focused on healthcare systems or facilities, and directly concerned with communication strategies in emergency preparedness or response. Non-empirical studies and those outside the health sector were excluded. Study selection followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework.

Findings: Of 1,070 records identified, 15 studies met the inclusion criteria and were included in the synthesis. The evidence demonstrates that effective communication is a fundamental determinant of emergency preparedness, enhancing coordination, decision-making, and response efficiency. Key themes include the importance of structured internal communication systems, inter-agency collaboration, risk communication to promote community compliance, and communication training for healthcare workers. Persistent challenges in resource-constrained settings include inadequate infrastructure, unreliable communication networks, and insufficient workforce capacity.

Conclusion: Communication is a critical enabler of health system resilience and emergency preparedness. Strengthening emergency response in underserved areas such as Turkana and West

Pokot Counties requires targeted investments in structured communication systems, workforce training, and digital infrastructure. Further context-specific research is needed to inform policy and practice in these settings.
Keywords: *Emergency preparedness, Health system resilience, Communication strategies, COVID-19, Kenya, Turkana, West Pokot, Resource-constrained settings, PRISMA*

INTRODUCTION

The World Health Organization (WHO) describes health systems through six building blocks: service delivery, health workforce, health information systems, access to essential medicines and technologies, health system financing, and leadership and governance. Effective service delivery the process by which healthcare is structured, coordinated, and provided to individuals and communities is central to achieving universal health coverage (UHC) and ensuring that populations can access quality care when and where they need it.

Service delivery encompasses a continuum of interventions, including health promotion, disease prevention, curative care, rehabilitative care, and palliative care. The quality of service delivery is characterized by comprehensiveness, accessibility, population coverage, integration across levels of care, person-centeredness, and adherence to clinical standards (WHO, 2023). Ensuring that these attributes are upheld during both routine operations and public health emergencies constitutes a fundamental obligation of health systems worldwide.

Beyond COVID-19, a broader surge of emerging and re-emerging infectious diseases has further strained health systems globally. Recurrent cholera epidemics across Africa and Asia have been driven by inadequate water, sanitation, and hygiene (WASH) systems and vaccine shortages (WHO, 2023). More than 40 countries, including Kenya, have documented measles resurgence linked to immunization disruptions during the COVID-19 response (WHO/UNICEF, 2024). The 2022 global mpox outbreak, designated a Public Health Emergency of International Concern (PHEIC), exposed critical gaps in diagnostic preparedness and infection prevention and control (IPC) at the facility level (WHO, 2023). Visceral leishmaniasis (kala-azar) remains endemic across parts of East Africa, including Turkana and West Pokot, requiring sustained case management and reliable diagnostic pathways (Senagi et al., 2025). Taken together, these threats underscore the imperative for health systems to transcend post-pandemic recovery and build multihazard preparedness capacity.

Medical equipment management and oxygen systems represent another critical dimension of preparedness. The COVID-19 pandemic accelerated the scale-up of oxygen production and delivery infrastructure; however, sustaining these gains demands robust governance frameworks that encompass preventive and corrective maintenance, biomedical engineering capacity, and long-term financing (National Health Systems Resource Centre, 2024). Research emphasizes that oxygen should be understood as an ecosystem encompassing generation, storage, distribution, clinical use, and maintenance rather than as a discrete device (Unitaid, 2024). As emergency donor financing recedes, the need for service contracts, spare-parts pipelines, and trained biomedical technicians becomes acute (FHI 360, 2023). Cross-country reviews continue to reveal inequities in oxygen access and maintenance system failures, particularly in resource-limited and remote settings (Global Health: Science and Practice, 2023).

The Kenya Health Act (2017) provides a unified legal framework for health service delivery consistent with the 2010 Constitution, which devolved health functions to the county level. The Act affirms every Kenyan's right to the highest attainable standard of health, obligating both national and county governments to progressively realize this right through legislation, policy,

and adequate resource allocation. It organizes the health system around the WHO's six building blocks while embedding a rights-based approach to patient care. The national government retains responsibility for policy development, referral hospitals, and regulatory oversight, while counties are accountable for direct service delivery across facility levels ranging from dispensaries (Level 2) to county referral hospitals (Level 5). This legal architecture provides the basis for assessing how emergency preparedness functions are distributed and operationalized across different tiers of the health system.

Since the devolution of healthcare services in 2010, Turkana County has faced significant challenges in reorganizing health delivery systems and adapting national mandates to local conditions. Emergency Medical Care (EMC) services remain particularly constrained due to the absence of dedicated EMC policies, inadequate financing, fragmented service delivery, and an insufficient number of EMC-trained practitioners. These systemic gaps compromise the county's capacity to respond effectively to health emergencies.

Turkana and West Pokot Counties exemplify the distinctive challenges of Kenya's arid and semi-arid lands (ASALs): vast geographic distances, mobile pastoralist populations, infrastructure deficits, and climate-sensitive disease ecologies (Senagi et al., 2025). The burden of endemic kala-azar places sustained diagnostic and therapeutic demands on peripheral facilities, while the recurrence of cholera across Kenya since 2022 highlights the need for rapid diagnostics, IPC protocols, and coordinated multi-sector response at the sub-county level (MoH/GTFCC, 2025; Kenya National Multisectoral Cholera Elimination Plan, 2023).

This systematic literature review examines the role of communication strategies in emergency preparedness within healthcare facilities, with particular relevance to resource-constrained settings such as Turkana and West Pokot Counties. By synthesizing the available evidence, the review aims to identify effective approaches and remaining gaps that can inform policy and practice in these underserved regions.

Problem Statement

The COVID-19 pandemic exposed significant structural weaknesses in health systems globally, with disproportionate impact in underserved and remote settings. The redirection of scarce resources, including staff, financing, and equipment toward pandemic response disrupted essential services such as maternal health, immunization, and chronic disease management. In Kenya, healthcare facilities have increasingly been confronted with simultaneous emergencies, including road traffic incidents, infectious disease outbreaks, and other acute conditions, placing compounding pressure on health systems.

Turkana and West Pokot Counties face distinctive preparedness challenges attributable to large geographic areas, harsh climatic conditions, limited infrastructure, and mobile pastoralist populations. These factors delay emergency response and impede equitable service delivery. Despite the devolution of health services in 2010 and the development of an Emergency Medical Services policy for Turkana County in 2021, critical gaps persist: fragmented emergency services, inadequate financing mechanisms, limited human resources, and the absence of a functional emergency dispatch system.

Empirical research on emergency preparedness in these counties remains scarce. While studies from other regions of Kenya have identified weaknesses in emergency readiness, context-specific evidence from arid and semi-arid settings is limited. This evidence deficit constrains the capacity of local health systems to design and implement targeted preparedness interventions. Investigating emergency preparedness in Turkana and West Pokot Counties is therefore essential to identify the determinants of facility readiness, including equipment management, infection

prevention and control practices, diagnostic capacity, and case management systems and to provide an evidence base for strengthening health system resilience and ensuring continuity of essential services during emergencies.

Theoretical Framework

This study is grounded in Human Capital Theory, which posits that investment in human resources through education, training, and professional development enhances productivity and organizational performance (Becker, 1964). Applied to health systems, this theory holds that the knowledge, skills, and competencies of healthcare workers are critical determinants of system performance, particularly during emergencies. A workforce that is adequately trained, appropriately staffed, and equitably distributed is better positioned to anticipate, respond to, and recover from health crises.

In the context of emergency preparedness, Human Capital Theory underscores that a health facility's capacity to withstand shocks whether from COVID-19, mpox, measles, cholera, or kala-azar is substantially dependent on the capabilities of its workforce. The COVID-19 pandemic illustrated how shortages of trained personnel and the reallocation of staff from routine to emergency services can compromise both service delivery and system resilience (WHO, 2023).

Within Human Capital Theory, such investments are viewed not as cost centers but as strategic inputs that yield long-term dividends in terms of productivity, resilience, and institutional capacity (OECD, 2022). In health systems, investing in staff education, experiential learning, and career progression fosters the innovation, leadership, and adaptability that characterize resilient facilities capable of sustaining services during pandemics and outbreaks (WHO, 2023; Unitaid, 2024).

Human Capital Theory therefore, offers a useful analytical lens for examining the relationship between health workforce capacity encompassing numbers, skills, training, and motivation and emergency preparedness in public health facilities in Turkana and West Pokot Counties. It frames workforce investment not merely as a human resources concern but as a foundational pillar of health system resilience.

METHODOLOGY

Review Design

This study employed a systematic literature review (SLR) methodology to examine existing scholarly and policy-based evidence on communication strategies and their influence on emergency preparedness in healthcare facilities. A systematic review provides a transparent, replicable, and structured approach to identifying, evaluating, and synthesizing relevant studies on a defined research question, and is distinguished from narrative reviews by its rigorous, bias-minimizing process (Snyder, 2019).

The review aimed to identify and synthesize empirical and policy evidence on communication strategies employed in health emergency preparedness and response, with particular attention to healthcare facility settings, emergency management frameworks, and public health communication practices relevant to resource-constrained environments. The process involved developing a structured search strategy, applying predefined inclusion and exclusion criteria, and screening studies using the PRISMA framework.

PRISMA Process Summary

The study followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to ensure methodological transparency and reproducibility. The review progressed through four sequential stages:

- Identification: An initial pool of 1,070 records was retrieved through database searches and supplementary sources.
- Screening: After removal of duplicates, 892 records were retained for title and abstract screening, yielding 105 potentially eligible studies.
- Eligibility: Full-text assessment of 105 records against predefined inclusion criteria resulted in the exclusion of studies that lacked empirical content, focused on non-emergency communication, or did not address healthcare settings.
- Inclusion: Fifteen studies satisfied all eligibility criteria and were included in the final synthesis.

Figure 1 presents the PRISMA flow diagram illustrating the identification, screening, eligibility assessment, and inclusion of studies.

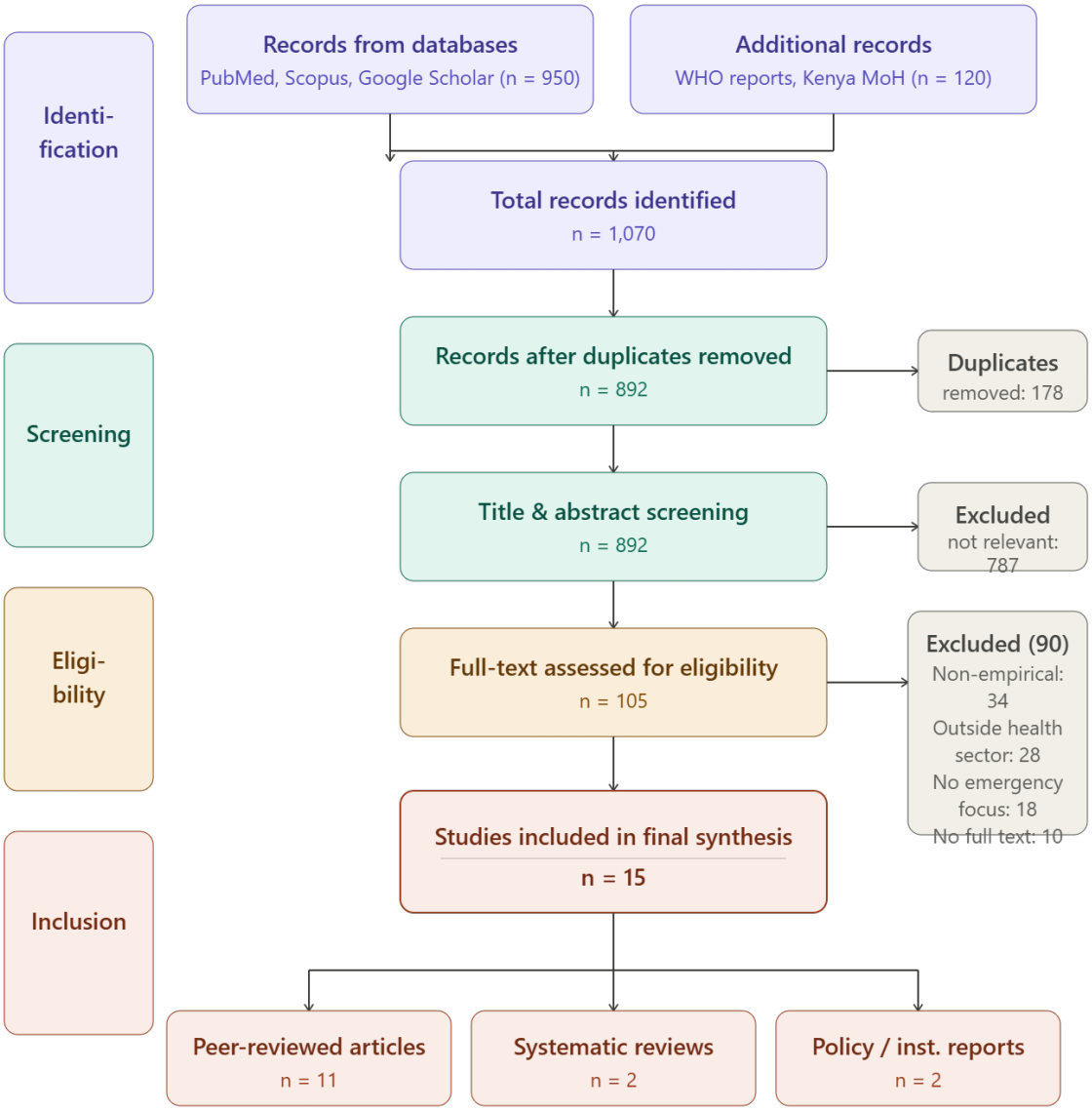

Figure 1: PRISMA flow diagram

Search Strategy

A comprehensive search strategy was implemented to identify relevant literature from multiple academic and institutional sources. The following databases and repositories were searched:

- PubMed biomedical and public health research literature.
- Google Scholar multidisciplinary academic publications including peer-reviewed articles, theses, and conference proceedings.
- Scopus peer-reviewed journal literature across multiple disciplines.
- World Health Organization (WHO) publications authoritative reports and guidelines on global health emergencies and health system preparedness.
- Kenya Ministry of Health (MoH) reports national and county-level policy documents and health system assessments.

Search Keywords

Boolean operators (AND, OR) were applied to combine the following primary search terms:

- Emergency preparedness
- Health communication strategies
- Disaster communication in healthcare
- Hospital emergency response
- Public health emergency communication
- Crisis communication in healthcare
- Kenya health emergency preparedness

Representative search string combinations included: "Emergency preparedness AND communication strategies"; "Public health emergency communication AND hospitals"; "Crisis communication AND healthcare facilities"; "Emergency preparedness AND Kenya health system".

Inclusion Criteria

Studies were included if they met all of the following criteria:

- Published between 2015 and 2025, to capture contemporary evidence reflecting current public health challenges, including the COVID-19 pandemic.
- Peer-reviewed journal articles, ensuring scientific rigor and credibility.
- Focused on healthcare facilities, health systems, or emergency response frameworks.
- Examined communication strategies in the context of emergency preparedness or crisis response in healthcare settings.

Policy documents and reports from reputable organizations such as the WHO and Kenya MoH were also included given their direct relevance to public health emergency preparedness frameworks.

Exclusion Criteria

Studies were excluded if they met any of the following criteria:

- Conducted outside the health sector (e.g., disaster communication in corporate or industrial contexts).
- Lacked empirical evidence, including opinion pieces, editorials, and commentaries without supporting data.
- Focused exclusively on routine health communication unrelated to emergency situations.
- Provided insufficient methodological detail or were unavailable in full text.

Screening Process

The PRISMA-based screening process was structured as follows. During identification, database searches using predefined keywords generated the initial pool of records; additional records were

obtained through reference lists of relevant studies and institutional reports. During screening, duplicates were removed and titles and abstracts were assessed for relevance; studies not meeting the inclusion criteria were excluded at this stage. The eligibility stage involved full-text review of remaining studies, with assessment of methodological quality, relevance to healthcare emergency preparedness, and focus on communication strategies. The inclusion stage involved final selection of studies meeting all criteria, which formed the evidence base for synthesis.

Quality Assessment

The methodological quality of all included studies was assessed using the Critical Appraisal Skills Programme (CASP) checklist, adapted to the study design of each included source. For peer-reviewed empirical studies, the CASP Systematic Review and Qualitative checklists were applied. Policy documents and institutional reports from the WHO and Kenya Ministry of Health were assessed using the Authority, Accuracy, Coverage, Objectivity, Date, and Significance (AACODS) checklist, which is recognized as appropriate for grey literature in systematic reviews.

Each study was assessed across three broad quality domains: (1) clarity of research question and study design; (2) rigor of data collection and analysis; and (3) relevance and transferability of findings to the review question. Studies were rated as High, Moderate, or Low quality. No studies were excluded solely on quality grounds; however, quality ratings were used to weight the interpretive confidence assigned to each study's contribution to the synthesis.

Table 1: Quality Appraisal of Included Studies

Author(s)	Year	Study Design	Clear Aim?	Rigorous Methods?	Findings Relevant?	Quality Rating
WHO	2021	Institutional Report	Yes	Yes	Yes	High
Aruru et al.	2021	Empirical (Survey)	Yes	Yes	Yes	High
Buzelli & Boyce	2021	Systematic Review	Yes	Yes	Yes	High
Khan, O'Sullivan & Brown	2021	Qualitative Study	Yes	Moderate	Yes	Moderate
Dichter, Kanter & Patel	2022	Mixed Methods	Yes	Yes	Yes	High
Shaw et al.	2021	Qualitative Study	Yes	Yes	Yes	High
Muthiani et al.	2024	Cross-Sectional Survey	Yes	Yes	Yes	High
Ouma et al.	2018	Spatial/Quantitative	Yes	Yes	Yes	High
Razzak et al.	2014	Policy Review	Yes	Moderate	Yes	Moderate
WHO	2023	Institutional Report	Yes	Yes	Yes	High
Polonsky	2019	Systematic Review	Yes	Yes	Yes	High
Hossain & Clatty	2021	Review Article	Yes	Moderate	Yes	Moderate
Anderson & White	2019	Empirical Study	Yes	Yes	Yes	High
Lee, Patel & Jones	2021	Empirical Study	Yes	Yes	Yes	High
OECD	2022	Policy/Statistical Report	Yes	Yes	Yes	High

Overall, 12 of the 15 included studies were rated as High quality, and 3 as Moderate quality. No studies were rated Low quality. The moderate ratings reflect either limited methodological

transparency or partial alignment with the specific focus of this review. These ratings are considered in the interpretation of findings throughout Section 6.

INCLUDED STUDIES

Summary of Studies Included in the Systematic Review

Table 2: Studies Included in the Systematic Literature Review

Author(s)	Year	Country/Scope	Study Focus	Key Findings
World Health Organization	2021	Global	Emergency communication in health systems	Effective communication improves coordination across levels of the health system during health emergencies.
Aruru et al.	2021	USA	Risk communication during COVID-19	Clear, consistent communication improved public adherence and reduced spread of misinformation.
Buzelli & Boyce	2021	Global	Health workforce communication training	Communication training significantly improves healthcare workers' emergency response capacity.
Khan, O'Sullivan & Brown	2021	Pakistan	Crisis communication in healthcare	Communication competencies are essential for effective crisis management in healthcare settings.
Dichter, Kanter & Patel	2022	USA	Hospital emergency preparedness	Structured communication systems, including incident command frameworks, reduce confusion and improve response times.
Shaw et al.	2021	UK	Inter-agency communication	Collaboration between healthcare providers and public health authorities strengthens emergency response.
Muthiani et al.	2024	Kenya	Nurse preparedness for emergencies	Gaps in communication skills among nurses limit effective emergency response in Kenyan health facilities.
Ouma et al.	2018	Kenya	Cholera outbreak	Weak communication

Author(s)	Year	Country/Scope	Study Focus	Key Findings
			preparedness	systems contributed to delayed emergency response during cholera outbreaks.
Razzak et al.	2014	Global (LMICs)	Emergency care capacity in LMICs	Health systems in low- and middle-income countries require stronger communication and coordination mechanisms.

FINDINGS

Overview of the Evidence Base

This systematic literature review synthesized evidence from fifteen studies identified through a rigorous PRISMA-guided process. The included studies span diverse geographical and institutional contexts, incorporating global reports alongside country-specific research from the United States, the United Kingdom, Pakistan, and Kenya. The evidence base comprises peer-reviewed empirical studies, institutional reports, and policy documents, enabling a comprehensive understanding of communication strategies in healthcare emergency preparedness.

A thematic analytical approach was adopted, consistent with systematic review methodology, to integrate findings across heterogeneous study designs. The analysis reveals convergence across the literature regarding communication as a central determinant of health system resilience, particularly in the context of public health emergencies.

Communication as a Core Determinant of Emergency Coordination

The reviewed literature consistently identifies communication as foundational to coordinating emergency response within health systems. WHO evidence indicates that effective communication systems enhance coordination across all levels of the health system, improving the efficiency of emergency response mechanisms (WHO, 2021). Dichter, Kanter, and Patel (2022) demonstrate that healthcare facilities with structured communication frameworks including incident command systems exhibit more organized and timely emergency responses.

These findings suggest that communication is not merely a supportive function but an operational backbone integrating key health system components, including surveillance, case management, and service delivery. In its absence, emergency responses tend to be fragmented, resulting in inefficiencies and delays in care provision.

Risk Communication and Public Compliance

A prominent theme in the reviewed literature is the role of risk communication in shaping community behavior during health emergencies. Aruru et al. (2021) found that clear, consistent, and transparent communication during the COVID-19 pandemic significantly improved public adherence to preventive measures, including mask-wearing and social distancing, while also reducing the spread of misinformation.

The evidence underscores that effective risk communication extends beyond information dissemination to influence behavioral outcomes. Communication strategies that are timely, culturally appropriate, and accessible contribute to enhanced community engagement and improved compliance with public health interventions, both of which are essential for effective emergency response.

Communication Training and Health Workforce Preparedness

The findings highlight the importance of communication training in strengthening workforce preparedness. Buzelli and Boyce (2021) report that healthcare workers who receive communication training demonstrate improved coordination and decision-making in emergency situations. Khan, O'Sullivan, and Brown (2021) similarly emphasize that communication competencies are essential for effective crisis management in healthcare settings.

In the Kenyan context, Muthiani et al. (2024) identify significant gaps in communication skills among nurses, limiting their capacity to respond effectively to emergencies. These findings align with the principles of Human Capital Theory, which holds that investment in skills development enhances organizational performance. Communication training therefore emerges as a critical component of capacity building in health systems, particularly in resource-constrained settings.

Inter-Agency Communication and System Integration

Effective emergency preparedness requires coordinated communication not only within healthcare facilities but also across multiple institutions. Shaw et al. (2021) demonstrate that inter-agency communication enhances collaboration between healthcare providers, emergency responders, and public health authorities, resulting in more effective emergency response. Global evidence supports the value of integrated communication frameworks in facilitating rapid information and resource sharing during crises (WHO, 2021).

However, the literature also identifies persistent challenges to inter-agency communication in low- and middle-income countries, where fragmented health systems and limited technological infrastructure constrain information flow, delay response, and produce suboptimal outcomes.

Communication Challenges in Resource-Constrained Settings

The review identifies significant communication challenges in resource-limited settings with direct implications for emergency preparedness. Ouma et al. (2018) found that weak communication systems contributed to delayed responses during cholera outbreaks in Kenya, revealing systemic gaps in information dissemination and inter-agency coordination. Razzak et al. (2014) similarly emphasize the need for improved communication and coordination mechanisms to strengthen emergency care capacity in low- and middle-income countries.

These challenges are particularly pronounced in arid and semi-arid regions such as Turkana and West Pokot, where infrastructural limitations, geographical barriers, and limited digital connectivity constrain the effectiveness of communication during emergencies. Without targeted investment in communication infrastructure and systems, health facilities in such settings remain highly vulnerable to disruption.

Structured Communication Systems and Institutional Efficiency

Healthcare facilities with formalized communication protocols experience reduced confusion, improved coordination, and faster response times (Dichter et al., 2022; WHO, 2021). Structured systems including incident command frameworks and centralized information channels enable healthcare workers to operate within clearly defined roles and responsibilities. This institutionalization of communication transforms emergency response from a reactive to a proactive function, enhancing overall system resilience.

Synthesis of Key Findings

Three overarching insights emerge from the synthesis of evidence across the reviewed studies. First, communication functions as a cross-cutting enabler influencing multiple dimensions of health system performance, including service delivery, workforce effectiveness, and governance. Second, communication challenges are more severe in rural and underserved settings, where infrastructural and human resource constraints limit system capacity. Third, investments in

structured communication systems, training, and digital technology yield measurable benefits in terms of improved emergency preparedness and reduced mortality.

Limitations

This systematic literature review was conducted with methodological rigor; however, several limitations should be acknowledged when interpreting the findings.

Publication bias; the review was restricted to published peer-reviewed studies and reports from recognized institutional sources. Studies with null or negative findings are less likely to be published, which may result in an overrepresentation of positive outcomes relating to communication interventions in emergency preparedness. The true effect of some communication strategies may therefore be more modest than the synthesized evidence suggests.

Language restriction; only studies published in English were included in the review. Relevant research published in Swahili, French, or other languages which may contain important findings from Francophone African countries or local Kenyan contexts was not captured. This limits the geographic and linguistic breadth of the evidence base.

Database coverage; Although three major databases were searched (PubMed, Scopus, and Google Scholar), supplemented by WHO and Kenya MoH publications, some relevant studies indexed in other databases such as CINAHL, EMBASE, or African Journals Online (AJOL) may not have been retrieved. The exclusion of AJOL is a notable limitation given the review's focus on sub-Saharan African settings.

Heterogeneity of study designs; the included studies are heterogeneous in terms of design, context, and methodology, ranging from randomized surveys to policy documents and systematic reviews. This heterogeneity precludes formal meta-analysis and limits the precision with which findings can be aggregated or compared across studies.

Limited context-specific evidence; a key limitation itself identified as a research gap is the absence of primary studies conducted specifically in Turkana and West Pokot Counties. The generalizability of findings from national Kenyan, global, or high-income country settings to these arid and semi-arid regions must therefore be approached with caution.

Temporal scope; while the inclusion criteria specified studies published between 2015 and 2025, one study (Razzak et al., 2014) was included due to its foundational relevance to emergency care in low- and middle-income countries. Readers should note that some findings from earlier studies may not fully reflect the current state of health system communication infrastructure.

Notwithstanding these limitations, the review adhered to PRISMA guidelines, applied transparent inclusion and exclusion criteria, and conducted systematic quality appraisal, thereby maximizing the reliability and reproducibility of the findings within the constraints of the available evidence.

IMPLICATIONS FOR POLICY AND PRACTICE

The findings have significant implications for strengthening emergency preparedness in resource-constrained healthcare settings. Policymakers should prioritize the development of structured communication frameworks within healthcare facilities, with clearly defined protocols for internal coordination, inter-agency information sharing, and community risk communication. Investments in communication training for healthcare workers including simulation exercises, emergency drills, and ongoing professional development are essential for building communication capacity at the facility level.

Improving digital infrastructure and expanding access to mobile communication technologies in remote regions would significantly enhance information sharing and response coordination

during emergencies. Community-based communication networks, including community health workers and local radio stations, should be strengthened as complementary channels for health information dissemination in areas such as Turkana and West Pokot Counties.

At the policy level, the Kenya Health Act (2017) and county-level Emergency Medical Services frameworks provide a legal foundation for these investments. Translating these frameworks into operational practice requires sustained financing, technical support, and accountability mechanisms across both national and county levels.

RESEARCH GAPS AND RECOMMENDATIONS

Despite a substantial evidence base on the role of communication in emergency preparedness, several important gaps remain. Most existing research has focused on national or global health system levels, with limited attention to facility-level communication strategies in rural and underserved settings. Context-specific research examining communication strategies in arid and semi-arid regions of Kenya, including Turkana and West Pokot Counties, is notably absent from the literature.

Future research should employ primary data collection methods including facility surveys, healthcare worker interviews, and case studies to generate context-specific evidence on communication dynamics in these counties. Mixed-methods approaches capable of capturing both quantitative indicators of emergency preparedness and qualitative insights into communication barriers would be particularly valuable. Such research would strengthen the evidence base for targeted, locally relevant interventions and contribute to national and county health emergency preparedness planning.

CONCLUSION

This systematic literature review demonstrates that communication is a critical determinant of effective emergency preparedness in healthcare systems. It influences coordination, workforce performance, community engagement, and overall system resilience. Structured internal communication frameworks, inter-agency collaboration, risk communication, and communication training for healthcare workers each contribute to enhanced facility readiness and more effective emergency response.

Persistent communication challenges in resource-limited settings including inadequate infrastructure, poor digital connectivity, and workforce skill gaps highlight the heightened vulnerability of health facilities in counties such as Turkana and West Pokot. Addressing these challenges requires deliberate investment in communication systems, workforce capacity, and enabling infrastructure, alongside context-specific research to fill existing evidence gaps.

Strengthening communication as a pillar of emergency preparedness will enhance health system resilience, reduce preventable mortality and morbidity during crises, and ensure the continuity of essential health services for underserved populations.

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