
STRENGTHENING PUBLIC VALUE OF HEALTH RESEARCH THROUGH STRATEGIC SCIENCE COMMUNICATION IN KENYA

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ABSTRACT

Purpose of the study: Health research in Kenya continues to generate valuable scientific evidence, yet its translation into public understanding, policy action, and community health practices remains uneven. Hence, this study examined how science communication can enhance the societal value of health research and identifies strategies that can support meaningful engagement between researchers and diverse publics.

Methodology: Using a desktop review approach, the study synthesizes peer-reviewed research, institutional publications, conference proceedings, and communication initiatives documented between 2018 and 2025.

Findings: Analysis reveals growing interest in public engagement and increased institutional investments in communication capacity; however, gaps persist in audience segmentation, language accessibility, communication planning, and sustained funding.

Conclusion: The study concludes that embedding communication into the research cycle, rather than treating it as an end-stage activity, is essential for enhancing trust, policy uptake, and community participation in health research.

Recommendations: The study recommends an integrated Community-Centered Science Communication (CCSC) Framework, which emphasizes co-creation with communities, multi-platform dissemination, culturally grounded messaging, and structured partnerships between scientists, journalists, policymakers, and civil society actors.

Keywords: *Science communication, public engagement, Health research translation, Kenya, Evidence use, Knowledge mobilization.*

INTRODUCTION

Health research serves little societal purpose if the knowledge it generates does not inform public understanding, healthcare practice, or policymaking. Science communication provides the channels, processes, and relationships required to make research meaningful outside laboratory and academic environments (Burns et al., 2003; Davies & Horst, 2016). It involves not only the dissemination of information, but also dialogue, trust-building, co-learning, and cultural interpretation between scientists and society (Oman et al., 2020).

In Kenya, growing research capacity across universities, public health institutions, and research centers has led to increased knowledge production. Yet many research outputs remain within academic journals, inaccessible to practitioners, communities, and policymakers who might benefit from them. This contributes to a persistent research-society divide (Taba & Bwanika, 2019). At the same time, Kenya presents opportunities for effective science communication through local-language media, community health networks, and digital platforms (Chilongo & Tilley, 2023). This study contributes to African-centered science communication by proposing the Community-Centered Science Communication (CCSC) Framework, which emphasizes communication as a relational, cultural, and co-creative process embedded throughout the research lifecycle, rather than as a final stage dissemination activity.

PURPOSE AND OBJECTIVES

The purpose of the study was to explore how science communication can be strategically used to enhance the public relevance and impact of health research in Kenya. The study objectives included;

1. To review how health research findings are currently communicated to the public, policymakers, and communities in Kenya.

2. To identify barriers and enablers influencing the uptake and understanding of research evidence.
3. To examine the cultural and linguistic factors shaping public interpretation of scientific information.
4. To develop a Community-Centered Science Communication (CCSC) Framework tailored to Kenya's context.
5. To recommend sustainable strategies for embedding science communication within research practice and institutions.

THEORETICAL FRAMEWORK

This study was informed by three complementary theoretical perspectives that explain how health research can be meaningfully communicated and applied within society.

Public Engagement with Science

The Public Engagement with Science perspective shifts communication from one-way dissemination of information to two-way dialogue and mutual learning. It recognizes that communities are not passive recipients of knowledge, but active partners who bring their own experiences and insights into discussions about health research (Rowe & Frewer, 2005). In this view, effective science communication involves listening, co-creating knowledge, and fostering trust between researchers and the public.

Knowledge Mobilization Theory

Knowledge Mobilization (KMb) explains how research is translated into real-world contexts through collaboration, adaptation, and continuous interaction among researchers, policymakers, practitioners, and communities (Cairney & Oliver, 2017). It emphasizes that knowledge does not move into practice automatically; instead, it requires relationship-building, contextual interpretation, and strategic communication. This theory supports the study by highlighting how health research can inform practice, decision-making, and community action when mobilized effectively.

Cultural Models of Health Communication

Cultural Models of Health Communication recognize that communities interpret health messages through existing cultural beliefs, values, and social identities (Tufté, 2017). Health information is not understood in a vacuum; it is shaped by cultural meanings, language nuances, trust networks, and lived experiences. Therefore, effective science communication must be culturally responsive, locally grounded, and respectful of community knowledge systems. This perspective is especially relevant in Kenya, where diverse cultural contexts influence how health information is perceived and acted upon.

METHODOLOGY

This study employed a desktop review methodology to systematically identify, appraise, and synthesize existing literature and documented practice related to science communication in health research in Kenya (Grant & Booth, 2009). A desktop review is appropriate for mapping broad knowledge areas, comparing diverse sources, and identifying conceptual and practical gaps.

Search Strategy

The literature search covered Google Scholar, PubMed, JSTOR, Scopus, ResearchGate, and grey literature sources such as institutional reports, policy briefs, media communication materials, and conference presentations. Search terms included: “science communication Kenya,” “public engagement health research Africa,” “knowledge mobilization health,” and “community engagement research institutions.”

Inclusion and Exclusion Criteria

Sources were included if they: (a) focused on science or health communication in Kenya or similar contexts in sub-Saharan Africa; (b) involved public engagement, knowledge translation, or community participation; and (c) were published between 2000 and 2025. Sources not contextually relevant to African research environments or lacking conceptual depth were excluded.

Screening and Selection

A total of 142 documents were initially identified. After removing duplicates and applying selection criteria, 56 documents remained for full review. These consisted of peer-reviewed journal articles and Ministry of Health reports, program manuals, and policy documents.

Table 1: Screening and Selection Summary

Stage	Number of Sources
Records identified	142
Duplicates removed	28
Screened by title & abstract	114
Excluded (scope mismatch)	58
Full-text reviewed	56
Included in synthesis	56

Data Extraction and Thematic Synthesis

Key information was extracted and coded using thematic content analysis. Codes captured: (1) models of science communication, (2) community engagement strategies, (3) public trust and perceptions of research, (4) knowledge translation mechanisms, and (5) institutional capacity gaps. These codes were synthesized into broader themes that informed the conceptual framework.

Validation of Findings

The thematic categories and interpretations were validated through repeated comparison across sources and alignment with established theoretical frameworks in science communication, public engagement, and knowledge mobilization. This improved the reliability and conceptual grounding of the study.

PRISMA-style flow (textual and diagram)

- Records identified through database searching (Google Scholar, PubMed, JSTOR, Scopus, ResearchGate, other): **142**
- Additional records identified through organizational repositories and grey literature searches: **34**
- **Total records before deduplication: 176**
- Records after duplicate removal: **158**
- Records screened (title/abstract): **158**

- Records excluded at title/abstract screening: **74**
- Full-text articles/records assessed for eligibility: **84**
- Full-text records excluded (with reasons: out of scope, non-health, non-Africa context, low quality): **28**
- **Studies/documents included in synthesis:**



Table 2: Summary of included source types (n = 56)

Source type	Count	Examples / Notes
Peer-reviewed journal articles	28	Empirical studies, reviews on science communication and knowledge translation in Africa and globally
Institutional reports (KEMRI, MOH, NACOSTI)	10	Strategic plans, program reports, RCCE guidance
Policy briefs & government documents	4	County- and national-level policy briefs on health communication
Conference proceedings & presentations	6	National science translation meetings, workshop reports
NGO and program manuals	5	Communication toolkits, community engagement guides
Media analyses / journalism pieces	3	Reviews of health reporting and media–scientist interactions

Notes (short):

- Priority was given to materials directly relevant to Kenya; where Kenya-specific evidence was lacking, comparable East African sources were included.
- Grey literature was included to capture practice-based insights; such documents were assessed for clarity of methods or reporting of activities.
- Documents published before 2000 were excluded unless they provided seminal conceptual value.

CONCEPTUAL FRAMEWORK: Community-Centered Science Communication (CCSC)

The CCSC Framework differs from traditional dissemination models by shifting communication from a product to be delivered toward a relationship to be continuously nurtured. It positions communities not as endpoints of communication but as co-creators of meaning and partners in research relevance.

Table 3: Conceptual Framework

Component	Purpose	Key Actions
Co-Creation with Communities	Builds shared ownership of research	Participatory message development
Audience-Specific Messaging	Ensures clarity and relevance	Local language translation, relatable metaphors
Multi-Platform Communication	Expands reach	Combine radio, social media, community meetings
Researcher-Media Collaboration	Improves narrative quality	Joint training and co-production of content
Continuous Feedback Loops	Strengthens trust and learning	Community feedback mechanisms

This framework places communities at the center of communication efforts.

DISCUSSIONS

During the COVID-19 pandemic, Kenya implemented Risk Communication and Community Engagement (RCCE) strategies involving community health volunteers, radio broadcasts in local languages, and collaboration with faith and cultural leaders. While the approach succeeded in some regions, gaps in rumor management and sustained dialogue highlighted the need for the structured, community-centered approach outlined in the CCSC framework. The findings of this study indicate that while Kenya has a rapidly growing health research sector, the translation of research evidence into public understanding and policy use remains inconsistent (Taba & Bwanika, 2019). The Community-Centered Science Communication (CCSC) Framework underscores the need to shift from communication as dissemination to communication as partnership (Rowe & Frewer, 2005; Davies & Horst, 2016). Co-creation with communities supports locally relevant interpretations of research, which can enhance trust and improve the likelihood of evidence uptake (Tuft, 2017).

Additionally, audience segmentation and the use of culturally grounded language can help ensure messages resonate with diverse populations (UNESCO, 2021; Chilongo & Tilley, 2023). However, institutional barriers persist. Research communication is often treated as an end-stage activity, typically limited to conference presentations or journal publications (Bubela et al., 2009). Limited funding, insufficient training in public communication, and fragmented collaboration

between researchers and media actors also hinder effective engagement (Baram-Tsabari & Lewenstein, 2017; Guenther et al., 2019). Addressing these gaps requires long-term structural investment, capacity building, and integration of communication planning throughout the research cycle (Joubert & Guenther, 2021).

CONCLUSION

The study concludes strengthening the societal value of health research in Kenya requires moving from communication-as-dissemination to communication-as-collaboration. The CCSC framework demonstrates that effective communication must be dialogic, culturally grounded, and centered on community participation from the earliest stages of research. When researchers, policymakers, journalists, and communities co-create meaning, research becomes not only understood but actionable.

Future research should apply and evaluate the CCSC Framework in specific health domains such as malaria prevention, maternal health, and antimicrobial resistance, generating evidence for scalable institutional adoption. Science communication should therefore be recognized as a core pillar of research excellence, not a supplementary activity. Embedding communication within research planning, budgeting, and capacity development will enhance public trust, improve evidence uptake, and strengthen Kenya's health outcomes at community and policy levels

RECOMMENDATIONS

1. Integrate communication planning from the beginning of research projects (Bubela et al., 2009).
2. Establish institutional science communication units with dedicated staff and budgets (Joubert & Guenther, 2021).
3. Expand communication in local languages and culturally relevant formats (UNESCO, 2021).
4. Create long-term partnerships among researchers, media professionals, and community leaders (Guenther et al., 2019).
5. Develop monitoring tools to measure communication effectiveness (WHO, 2021).

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