STRENGTHENING PUBLIC HEALTH EMERGENCY PREPAREDNESS THROUGH HEALTH INFORMATION, EDUCATION AND COMMUNICATION PRINCIPLES IN NIGERIA

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Abstract
The health of the population in Nigeria remains at risk due to recurrent public health emergencies, which reveal persistent gaps in preparedness systems, particularly in the areas of risk communication and community engagement. This study examined how the principles of Health Information, Education, and Communication (IEC) can enhance public health emergency preparedness in Nigeria. The paper draws on established theories of behaviour and communication, as well as existing empirical evidence and the current structure of preparedness in the country, to synthesize how IEC can contribute to increasing risk awareness, reducing misinformation, building public trust, and promoting protective behaviours before, during, and after emergencies. The analysis identified the existence of institutional frameworks alongside significant policy, capacity, and coordination gaps, as well as limitations in current action plans for integrating IEC into emergency preparedness and response frameworks. Overall, the study demonstrates that systematic, theory-driven, and community-centred IEC is essential for strengthening resilient preparedness systems and improving population health outcomes in Nigeria.
Keywords: Public Health Emergency, Health Information, Education and Communication Principles, Nigeria

Introduction

Emergencies in public health, such as the outbreak of infectious diseases, natural disasters and complex humanitarian disasters, are a constant and constantly changing threat to population health especially in low- and middle-income countries. Nigeria has had recurrent epidemics of epidemic prone diseases like Ebola virus disease, Lassa fever and the most recent COVID-19. The events have highlighted the urgent need to have preparedness mechanisms that do not only include clinical and laboratory capacity but also have risk communication mechanisms, community engagement and behavioural change activities. Risk communication and community engagement are fundamental preparedness and response capacities of the International Health Regulations (2005) as identified by the World Health Organization (World Health Organization [WHO], 2018).

Health Information, Education and Communication (IEC) is one of the pillars of the practice of public health, which is focused on enhancing knowledge, attitudes and influencing behaviours using evidence-based communication plans. When dealing with emergencies, IEC principles provide the timely flow of correct information, overcome misinformation and establish trust between the communities and authorities. The results of empirical studies have proven that open, culturally awareness and participatory communication leads to better compliance with preventive strategies and a more effective response to outbreak (Abrams and Greenhawt, 2020; Vaughan and Tinker, 2009). In Nigeria, community-centred communication was helpful during the 2014 Ebola outbreak, contributing to quick containment (Shuaib et al., 2014).

Even though there has been an improvement in institutional fortification as evidenced by the creation of the Nigeria Centre for Disease Control (NCDC), there is still a gap in the incorporation of institutionalized IEC frameworks into preparedness planning at state, federal and local level. The literature has indicated such issues as the spread of misinformation, the lack of trust in the community, inconsistency in messages and poor coordination between governmental health services and media channels (Olapegba et al., 2020; Usman et al., 2020). Enhancing

preparedness with systematic use of the IEC principles, which are based on the behavioural science, community involvement and health literacy, can be viewed as a strategic path to increasing the resilience and decreasing morbidity and mortality in the event of an emergency. Therefore, this paper discusses how the IEC principles can be used to enhance the emergency preparedness in Nigerian.

Conceptual and Theoretical Foundations of Health Information, Education and Communication (IEC)

i. Conceptual Foundations of Health Information, Education and Communication (IEC)

Health Information, Education and Communication (IEC) constitutes a structured and evidence-based approach within public health designed to inform, influence and sustain health-related behaviours at individual, community and population levels. Conceptually, IEC extends beyond simple information dissemination; it encompasses strategic message development, audience segmentation, culturally appropriate delivery channels and continuous feedback mechanisms aimed at behavioural and social change (Nutbeam, 2000). Within the context of strengthening public health emergency preparedness in Nigeria, IEC operates as a critical enabling system that promotes risk awareness, builds trust and enhances community compliance with public health directives.

At its core, IEC is grounded in the recognition that health behaviour is shaped by cognitive, social and environmental determinants. Public health emergencies—such as infectious disease outbreaks, natural disasters and humanitarian crises—often generate uncertainty, fear and misinformation. In such circumstances, timely, transparent and culturally sensitive communication becomes indispensable for mitigating panic and promoting protective actions. The World Health Organization (WHO) emphasises risk communication and community engagement as core capacities under the International Health Regulations (2005), underscoring that preparedness must incorporate systematic communication strategies before, during and after emergencies (World Health Organization [WHO], 2018).

Health literacy is a central conceptual component of IEC. Nutbeam (2000) identifies three levels of health literacy: functional, interactive and critical. In emergency preparedness, functional literacy enables populations to understand warnings and advisories; interactive literacy facilitates dialogue with health authorities; and critical literacy empowers communities to evaluate misinformation and participate meaningfully in response efforts. Empirical evidence from pandemic contexts indicates that higher health literacy is associated with greater adherence to preventive measures and improved risk perception (Paakkari&Okan, 2020).

Furthermore, contemporary IEC frameworks increasingly adopt participatory and community-centred approaches. Rather than relying solely on top-down communication, effective preparedness integrates community engagement, feedback loops and trust-building mechanisms. Studies during epidemic responses demonstrate that transparent communication and community involvement significantly enhance compliance with public health interventions (Vaughan & Tinker, 2009). In Nigeria, structured communication strategies during the 2014 Ebola outbreak were instrumental in containing transmission, highlighting the practical relevance of IEC in emergency preparedness (Shuaib et al., 2014).Thus, conceptually, IEC in public health emergency preparedness is multidimensional: it strengthens knowledge, shapes risk perception, addresses misinformation, promotes collective responsibility and reinforces institutional credibility.

ii. Theoretical Foundations Underpinning IEC in Emergency Preparedness

The success of the IEC strategies in emergency preparedness is supported by the existing behavioural and communication theories elaborating the manner in which individuals perceive risk, weight information and take up protective behaviours. There are a number of theoretical models which are particularly relevant to the Nigerian public health.

Health Belief Model (HBM): Health Belief Model assumes that perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action and self-efficacy influence health-related behaviours (Rosenstock, 1974; Champion and Skinner, 2008). When people are prepared during an emergency, the more likely they are to follow preventive steps like vaccination, quarantine or washing their hands, the more they feel like they are at risk and the more serious they believe the consequences of being infected are. Disease severity, route of transmission and preventive effectiveness should be effectively communicated in the IEC campaigns to boost compliance. Perceived susceptibility and benefits have proven to be very significant predictors of adherence to preventive behaviours in times of the COVID-19 pandemic (Kwok et al., 2020).

Protection Motivation Theory (PMT): Protection Motivation Theory builds up on risk perception models by focusing on the processes of threat appraisal and coping appraisal (Rogers, 1983). People weigh the intensity of a threat and their ability to take preventive actions. Misinformation and lack of trust are causing problems with compliance in Nigeria and in order to do this, IEC needs to improve the comprehension of the threat and trust in recommended intervention approaches. Studies that have been carried out in outbreaks show that effective

communication on the effectiveness of the response improves protective behaviour intentions (Bish&Michie, 2010).

Social Cognitive Theory (SCT): The Social Cognitive Theory emphasizes the interplay between thoughts and behaviour of an individual and the surrounding (Bandura, 2004). Key constructs are observational learning, modelling and reinforcement. Respected community members, religious leaders and healthcare providers can be used as role models in cases of compliance with preventive measures in order to exercise authority in matters of emergency. Development of self-efficacy-belief in oneself to initiate the protective behaviours is particularly important in fostering continued compliance. According to Bandura (2004), strategies of communication that lead to more mastery and collective efficacy generate more profound behavioural consequences.

Risk Communication Theory: Risk communication theory is concerned specifically with how the information about the hazards is communicated and interpreted. The transparency, timeliness, credibility and empathy attributes are the defining features of effective risk communication (Vaughan and Tinker, 2009). During emergency situations in the field of health, trust is lost due to inconsistent messages, causing less compliance. There is evidence that the level of trust in authorities is a determinant of behavioural response when dealing with epidemics (Siegrist and Zingg, 2014). Thus, the IEC efforts in Nigeria need to focus more on trust-building, which can be achieved by referencing coordinated messages and community involvement.

Integration into Public Health Emergency Preparedness in Nigeria

Theoretical integration on a Public Health departmental point of view means that IEC interventions are organized, quantifiable and contextually valid. A hybrid approach of HBM, PMT and SCT offers a more holistic approach considering psychological perspective of cognitive risk perception, emotional reaction, environmental factors and capability to behave. The risk communication theory also enhances preparedness by informing message framing and transparency in the institutions.

To be able to enhance the public health emergency preparedness of Nigeria with the help of Health Information, Education and Communication (IEC), a purposeful and planned strategy is needed. At the centre of this effort is institutionalisation of special risk communication units in Emergency Operations Centre at both national and subnational levels. Within preparedness governance structures, the embeddedness of specialised communication teams will help them not to treat risk communication an ancillary function, but as a major operation pillar that is consistent with surveillance, laboratory services and logistics. This kind of institutionalisation facilitates consistency in the message, speedy information transmission and longer contact with the population in the emergency process.

Another factor that would be important is the provision of culturally sensitive and linguistically appropriate communication materials that represent the socio-cultural diversity in Nigeria. Multilingual messages - modified to suit local situations and belief systems - increase the level of understanding, confidence and behavioural acceptance of the messages within diverse populations. The involvement of the community gatekeepers such as traditional rulers, faith based leaders and other reputable local actors also enhances the credibility of the messages and promotes community ownership of the interventions on the public health. Moreover, preparedness systems should include the ongoing surveillance of misinformation, especially those that operate within the digital arena as well as adaptive and evidence-based messaging plans that have the ability to respond rapid to the arise of rumours and the general concerns of the population. It is also necessary to have sustained capacity building in behavioural science-informed communication among the public health professionals to ensure they have the theoretical and practical skills that they can use to plan persuasive and contextually-appropriate interventions. By basing IEC strategies on the proven behavioural and communications theories, the eventual result will be improved effectiveness of the strategies, development of trust in society, and the creation of effective emergency preparedness systems in Nigeria which are responsive and resilient to the community.

Public Health Emergency Preparedness in Nigeria: Current Structures and Gaps

Public health emergency preparedness in Nigeria is anchored within multi-sectoral systems designed to prevent, detect, respond to and recover from health emergencies. Nigeria Centre for Disease Control and Prevention (NCDC) is the foundation of national preparedness and response by acting as the principal public health institute, with the mandate of coordinating activities of disease outbreak mitigation and emergency response to public health issues throughout the federation of Nigeria. The NCDC was established by statutory law in 2018 and occupied existing epidemiological and laboratory networks with major core functions of surveillance, detecting outbreaks, deploying a rapid response team, establishing laboratory networks, providing risk communication and engagement (Nigeria Centre for Disease Control, 2025). It also applies priorities in the framework of the International Health

Regulations (IHR, 2005) in coordination of the national capabilities of surveillance, response operations and health security planning with state ministries of health and international partners (World Health Organization, 2018).

One of the most recent institutional innovations has been the development of NCDC Incident Coordination Centre (ICC) and subnational Public Health Emergency Operations Centres (PHEOCs) which offer preparedness and response operations organized command and control platforms. ICC promotes routine risk analysis, early warning capabilities, gathering and coordination of multidisciplinary response pillars, and PHEOCs at the state level enhance governance coherence, stakeholder collaboration and outbreak management not only of the infectious disease (NCDC research, 2025; Adigun et al., 2022). This type of structures aims at institutionalising preparedness as a system of operations and not a reactionary mechanism, to facilitate more sustainable incorporation of surveillance, logistics, laboratory capacity and communication operations (NCDC research, 2025; Adigun et al., 2022).

Although these strengths are present, several gaps and systematic constraints exist regarding the ability of Nigeria to be fully prepared. To begin with, resource constraints such as the lack of funding of health security in the country, logistical issues, and lack of supplies lead to the chronically vulnerable situation, especially in rural and underserved areas. The lack of a consistent funding terminates equipment acquisition, personnel retention and emergency inventories, which deter the potential of fast response and system strength as a whole (Jonah, 2024). Second, the human resource limitations are also the important ones, as the WHO Core Capacity scores show moderate scores in emergency preparedness planning and human resource deployment according to the IHR framework, yet major gaps are in providing the essential service delivery, infection prevention and control, and mobilising the resources in the context of emergencies (WHO, Strategic Partnership for Health Security, 2020). In fact, emergency resource mobilisation and health service provision scores are low- examples of gaps in surge capacity in the case of a large-scale outbreak or multiple emergencies.

Most importantly, there is still a disconnect and lack of coordination and integration even within sectors and levels of government. Although the NCDC is playing a leadership role nationally, the state preparedness has significant discrepancies with states having some functioning PHEOCs or even proper connections with the local health infrastructures. The lack of communication between health authorities and security agencies, border control and community stakeholders also adds to the complexity of unified emergency responses (Usman et al., 2020; Usman et al., 2020). Further, long-term inadequate investment in laboratory networks and government health infrastructure diminishes the ability to detect diseases early, and the lack of integration between animal and environmental health sectors compromises One Health solutions needed to respond to zoonotic diseases (Jonah, 2024).

Lastly, despite the risk communication systems adopted by NCDC and partners such as the use of call centres, social media usage and community networks, the systems are yet to be enhanced in order to dispel misinformation and instill confidence and provide a dynamic community feedback in the event of an emergency. Previous capacity analysis showed that risk communication plans were present, but not operationalised, and the imperative to maintain communication with the population outside of emergency events was low, and it was necessary to improve internal coordination mechanisms (Durojaiye et al., 2021). Such gaps were also revealed in greater detail by the COVID-19 pandemic, which underscored the importance of more intensive communication approaches and coordination with wider preparedness means (Wafula&Madukoma, 2025).

Integrating IEC Principles into Emergency Preparedness and Response Systems

A robust public health emergency preparedness system cannot be fully effective without the systematic integration of Health Information, Education and Communication (IEC) principles. Effective integration ensures that communities are not merely passive recipients of directives but active partners in preparedness, capable of understanding risks, adopting protective behaviours and sustaining engagement throughout all phases of an emergency. In Nigeria, where diverse cultural beliefs, varying health literacy levels and information disparities exist, the operationalisation of IEC within preparedness systems is particularly critical (Shuaib et al., 2014; Usman et al., 2020).

i. Risk Communication and Community Engagement as Core IEC Functions

Risk communication and community engagement (RCCE) are the basic constituents of IEC integration. Risk communication is a real-time flow of information, guidance and opinions between the experts, authorities and communities in the situation of emergency (World Health Organization [WHO], 2018). It aims to make publics aware of dangers, minimize uncertainty, generate trust and stimulate the desirable behavioural reactions. Community engagement goes beyond the provision of information and involves useful involvement of individuals

and social networks in the preparedness planning and implementation (Abrams and Greenhawt, 2020). WHO has recognised RCE as a central capacity in the International Health Regulations (2005) and highlighted that quality communication systems are deemed crucial to effective preparedness and response to all hazards (WHO, 2018).

An example of successful integration of RCCE is the effort of Nigeria in dealing with the 2014 Ebola outbreak, with timely dissemination of correct information and participation of the community being attributed to the success in containing the outbreak (Shuaib et al., 2014). The leaders of the community, traditional rulers, and local influencers were involved in the transmission of similar messages regarding transmission, symptoms and preventive measures to them. This was a grassroots method of communication that contributed to the reduction of mistrust and misinformation and, thus, increased the adherence to control strategies, including community surveillance and safe burial procedures (Shuaib et al., 2014). The COVID-19 pandemic also demonstrated the significance of planned risk communication but also showed those areas where IEC integration was still inadequate, especially against fake news disseminated via social media and message coordination between federal and local governments (Olapegba et al., 2020; Usman et al., 2020).

ii. Designing Culturally Tailored and Audience-Specific IEC

To be effective in emergency preparedness, IEC should be culturally competent and meet the information requirements of different audiences. The generic health advisories do not usually appeal to the people whose belief systems, languages and social norms are not the same as the message creators. Linguistically suitable, locally contextualised and sensitive to cultural undertones messages have higher chances of being credible and acted upon (Vaughan and Tinker, 2009). In the same way, when responding to the 2018 Lassa fever outbreak in Nigeria, multilingual campaigns aired on community radio, mobile phones and local town criers enhanced knowledge and triggered early health-seeking behaviour in the impacted states (Makinde et al., 2021).

The segmentation of the audience, i.e. categorizing people according to their age, sex, socio-economic status, education level and other suitable criteria, helps the communicators to frame the messages efficiently and select the appropriate channel. Studies show that the digital and social media might be more popular among the younger population but the older adults might depend on radio and face-to-face communication (Obasola and Agunbiade, 2016). On the same note, incorporation of women groups, faith based groups and youth association in co-creation of messages can enhance credibility as well as extend reach. The inclusion of the essential knowledge of behavioural science, including how messages are framed in order to focus on the collective responsibility and normative behaviours, make them even more effective (Bavel et al., 2020).

iii. Multi-Channel Information Dissemination and Feedback Mechanisms

The successful implementation of IEC requires the implementation of a multi-channel methodology of information delivery to provide redundancy and coverage of the diverse socio-demographical groups. The more traditional methods like community meetings, radio broadcasts and interpersonal counselling are still useful especially in the rural and low literacy environments. At the same time, digital tools, such as SMS notifications, social networks and mobile apps, provide the possibility of quick spread and interactive involvement, particularly in urban and peri-urban areas (Merchant and Lurie, 2020). In times of the COVID-19 pandemic, those countries that implemented the digital trackers, real-time dashboards, and two-way communication channels were more aware and adherent (Zhao et al., 2020).

The feedback mechanisms created as a part of multi-channel communication will enable authorities to determine the level of understanding of the community, eliminate misunderstandings and correct messages in real-time. The trust is promoted by two-way channels of communication, including use of hotline services, interactions through social media and community hotspot that develops a sense of ownership among the people (Vaughan and Tinker, 2009). The feedback loops can also be used to track the changes in the attitude and behaviours of the people to enable the preparedness systems to be ready to change with the changing conditions.

iv. Institutionalising IEC within Preparedness Governance Structures

The entrenchment of IEC principles in preparedness governance structures can help to make sure that communication is not a secondary aspect but a major operational capability. The latter will need the provision of specialized risk communication units in national and subnational emergency operations centres, regular training of health workers in crisis communication, and institutional guidelines regarding the clearance and distribution of messages (WHO, 2018). The inculcation of IEC as part of standard operating procedures, preparedness plans and simulation exercises fosters preparedness and minimizes confusion in the real case of an emergency.

An illustrative case is the integration of the communication pillars in the Public Health Emergency Operations Centres (PHEOCs) in Nigeria that requires the initiation of risk communication planning to be done alongside epidemiological and logistics approaches. Yet, the assessment of PHEOC performance shows that communication departments usually do not have sufficient staff, training, and operational independence, which makes them less efficient in the periods of maximum emergencies (Durojaiye et al., 2021). To counter these loopholes, it is important to invest in human resources and develop communication skills and inter-agency coordination to ensure success in integrating IEC.

v. Monitoring, Evaluation and Documentation of IEC Outcomes

Successful incorporation of IEC in preparedness systems must have stringent monitoring and evaluation (M&E) systems. M&E allows the authorities to determine the level of message reach, whether people take the recommended behaviours or not, community perception, and the overall effectiveness of communication interventions. Some of the performance indicators could be the rates of community awareness, shifts in health seeking behaviour, rate of information spread, and minimisation in the rates of misinformation. Institutionalisation of accountability and continuous improvement can be achieved with IEC indicators incorporated into national preparedness scorecards including the Joint External Evaluation (JEE) metrics as part of the International Health Regulations (WHO, 2018).

The example of West Africa shows that nations where M&E mechanisms on IEC were well-developed were better placed to implement changes in strategies in the middle of the outbreak to achieve a better control result (Sankoh et al., 2018). To enhance the preparedness ecosystem in Nigeria further, developing standardised tools, post-emergency review and dissemination of lessons learned between states and neighbouring countries can contribute to better preparedness.

Policy, Capacity Building and Multisectoral Partnerships

Effective public health emergency preparedness in Nigeria requires policy frameworks that prioritise Health Information, Education and Communication (IEC) principles, sustained capacity building of human and institutional resources, and collaborative partnerships across sectors. This multi-pronged approach enables a systematic and sustained integration of communication principles into preparedness planning, operational decision-making and community engagement efforts.

i. Policy Frameworks for IEC in Emergency Preparedness

Sound policy frameworks present the structural foundation in the incorporation of IEC in the field of emergency preparedness of public health. The National Health Policy (2016) and the Nigeria Centre for Disease Control (NCDC) Strategic Plan have goals that are associated with health promotion and risk communication in Nigeria but their operationalization does not usually provide clear guidelines that IEC should follow during an emergency. Communication principles, such as the use of pre-positioned messaging protocols, media engagement objectives and community participation requirements are explicitly prioritised policy environments to enhance coordination among the diverse tiers of government and enable local players to play a significant role in preparedness systems (Usman et al., 2020).

The International Health Regulations (IHR) (2005) also obliges signatory states such as Nigeria to develop risk communication and community engagement capacity as the primary preparedness measures (World Health Organization [WHO], 2018). Nevertheless, assessment of IHR core capacity in Nigeria suggests that there are continuing communication policy gaps in the formulation of risk communication policies, emergency health workforce planning and cross-sectoral planning (WHO, 2020). To overcome these shortcomings, by making IEC a more explicit part of national and subnational emergency preparedness plans, and by making sure the policy is regularly reviewed, communication can be institutionalised as a fundamental activity and not an add-on.

It is also important that policy coherence should occur between ministries (e.g., Health, Information, Education and Local Government Affairs). The communication policy should be in line with national response strategies of humanitarian policies, country disaster management policies and media regulation policies to prevent mixed messages and guarantee monolithic messages of public health in times of emergencies.

ii. Capacity Building for IEC Implementation

Capacity building involves training, operational support, resource allocation and workforce development as a way of putting into practice the IEC strategies. At state and national levels, focused training in risk communication, behavioural science, community involvement and media relations will improve the capacity of the public health practitioners to design and deliver context-specific messages. The studies conducted in the context of outbreaks indicate that training helped professionals be more confident about communicating complex information, dealing with misinformation, and addressing various audiences (Sankoh et al., 2018).

In Nigeria, PHEOCs and local health departments usually have poor human resources in terms of specialised communications skills, and this aspect decreases the willingness to apply IEC strategies in case of an emergency (Durojaiye et al., 2021). The capacity of the health workforce can be enhanced through the establishment of pre-emergency training programmes, which would form part of the undergraduate and postgraduate programs of study in the field of public health and through the establishment of continuous professional development systems. Tabletop exercises and drills which simulate IEC systems, and logistics, surveillance and clinical response make preparedness learn of operational constraints in advance of actual emergencies.

Moreover, the workforce empowerment needs to propagate to the media professionals, community health workers, traditional leaders and civil society organisations as they are all highly important intermediaries between the public health authorities and communities. These actors are better trained and this increases message coherence, cultural relevance and reach, thus increasing the overall effect of preparedness communication undertakings.

iii. Multisectoral Partnerships and Coordination

The strong preparedness systems are those that capitalize on the collaboration outside the health sector. Multisectoral collaboration Multisectoral collaboration including education, communication, transportation, finance, security and technology sectors enhances the IEC integration resource base and institutional capabilities. An example of cross-sectoral collaboration, i.e. the One Health approach emphasising the interdependence of human, animal and environmental health, is exemplary to improving surveillance and communication systems (especially in response to zoonotic threats) (Okello et al., 2014).

Risk communication efforts and capacity building during outbreaks like Ebola and COVID-19 have been coordinated with the international organisations of WHO, the United States Centers for Disease Control and Prevention (CDC), United Nations agencies and non-governmental organisations in Nigeria (Shuaib et al., 2014; Adebisi et al., 2021). Such partnerships offer technical skills, resource and international best practices. Nonetheless, sustainable preparedness demands domestic leadership and coordination platforms that balance international inputs and national priorities and needs of communities.

Along with collaborating with technology companies and telecommunication networks, partnerships also broaden the reach of the IEC by enabling IoT-based solutions by digital profiles, two-way feedback and the use of SMS alerts, and data analytics to communicate risks better in real-time and respond to community feedback (Merchant & Lurie, 2020). Working with traditional media houses and social influencers will enhance the message dispersion and credibility in communities with low digital penetration.

iv. Community and Civil Society Engagement

Civil society organisations (CSOs) and community-based organisations (CBOs) are vital in IEC implementation particularly among under-served and marginalised communities. They tend to be organisations with strong contextual understanding, trust relations and grassroot networks capable of engaging in customised communications and spreading preparedness communications fast (Harris et al., 2019). The community involvement would have to be beyond the tokenic participation to active participation in the development of the message, the planning forums and feedback loops. Cultures become more culturally relevant when community actors are empowered as co-creators of IEC strategies and preparedness interventions are owned by them.

v. Financing IEC within Preparedness Budgets

Lastly, the policy implementation, capacity building, and partnership sustenance depend on sustainable financing. Budgetary allocations that specifically include funds allocated to the IEC functions will make sure that messages aimed at risk communication, training, development of messages, community engagement and monitoring systems are not under-funded in the instance of emergencies. It has been indicated that preparedness investments in IEC have paid off in terms of lowering morbidity and decreasing treatment costs and socioeconomic disturbance in case of an outbreak (Fenoll et al., 2019). Thus, the incorporation of IEC line items into national and subnational health budgets enhances political determination and financial responsibility.

Conclusion

This paper examined how Health Information, Education, and Communication (IEC) principles can be leveraged to strengthen public health emergency preparedness in Nigeria. Through a synthesis of conceptual and theoretical foundations, an assessment of existing preparedness structures, and an exploration of integration strategies, the study underscores the central role of communication, community engagement, and behavioural change in effective emergency preparedness. The analysis reveals that, although Nigeria has made notable progress in institutional preparedness—particularly through the establishment of the Nigeria Centre for Disease Control, Emergency Operations Centres, and surveillance systems—significant gaps remain in the systematic integration of IEC into preparedness planning and governance frameworks. The findings suggest that strengthening preparedness through IEC requires deliberate policy prioritization, sustained capacity building, and robust multisectoral collaboration. Embedding risk communication and community engagement as core preparedness functions, tailoring messages to diverse sociocultural contexts, institutionalizing IEC within emergency governance structures, and ensuring adequate financing are essential for enhancing system resilience.

Ultimately, a preparedness system grounded in IEC principles fosters informed, empowered, and engaged communities, thereby improving adherence to public health measures and reducing morbidity and mortality during emergencies. For Nigeria, advancing public health emergency preparedness through structured, theory-driven, and community-responsive IEC is not only a strategic imperative but also a prerequisite for sustainable health security.

References

Abrams, E. M., &Greenhawt, M. (2020). Risk communication during COVID-19. *The Journal of Allergy and Clinical Immunology: In Practice, 8*(6), 1791–1794. https://doi.org/10.1016/j.jaip.2020.04.012

Adigun, A., et al. (2022). Building local capacity for emergency coordination: Establishment of subnational Public Health Emergency Operations Centres in Nigeria. *BMJ Global Health, 6*(10), e007203. https://doi.org/10.1136/bmjgh-2021-007203

Adebisi, Y. A., Jimoh, N. D., Ogunkola, I. O., Uwizeyimana, T., & Lucero-Prisno, D. E. (2021). The politics of COVID-19 response in Nigeria: A public health crisis and an opportunity for governance reform. *The American Journal of Tropical Medicine and Hygiene, 105*(4), 747–752. https://doi.org/10.4269/ajtmh.20-1506

Bandura, A. (2004). Health promotion by social cognitive means. *Health Education & Behavior, 31*(2), 143–164. https://doi.org/10.1177/1090198104263660

Bavel, J. J. V., Baicker, K., Boggio, P. S., Capraro, V., Cichocka, A., Cikara, M., … Willer, R. (2020). Using social and behavioural science to support COVID-19 pandemic response. *Nature Human Behaviour, 4*(5), 460–471. https://doi.org/10.1038/s41562-020-0884-z

Bish, A., &Michie, S. (2010). Demographic and attitudinal determinants of protective behaviours during a pandemic: A review. *British Journal of Health Psychology, 15*(4), 797–824. https://doi.org/10.1348/135910710X485826

Champion, V. L., & Skinner, C. S. (2008). The health belief model. In K. Glanz, B. K. Rimer, & K. Viswanath (Eds.), *Health behavior and health education: Theory, research, and practice* (4th ed., pp. 45–65). Jossey-Bass.

Durojaiye, M. A., Oladipo, J. A., &Akinyemi, O. O. (2021). Capacity assessment of Nigeria for health emergencies preparedness and response. *African Journal of Emergency Preparedness and Public Health, 5*(2), 2–14.

Fenoll, D., Li, R., &Polasky, S. (2019). Cost-effectiveness of risk communication during health emergencies: Evidence and implications. *Journal of Public Health Policy, 40*(3), 273–283. https://doi.org/10.1057/s41271-019-00159-8

Harris, E., et al. (2019). Community engagement for public health emergencies. *Global Health Promotion, 26*(4), 73–82. https://doi.org/10.1177/1757975918820800

Jonah, O. M. (2024). Nigeria's public health response to disease outbreaks: A review of strengths and weaknesses. *Journal of Public Health in Africa, 15*(1), 773–788.

Kwok, K. O., Li, K. K., Chan, H. H. H., Yi, Y. Y., Tang, A., Wei, W. I., & Wong, S. Y. S. (2020). Community responses during the early phase of COVID-19 epidemic in Hong Kong: Risk perception, information exposure and preventive measures. *Emerging Infectious Diseases, 26*(7), 1575–1579. https://doi.org/10.3201/eid2607.200500

Makinde, O., Odokonyero, R., &Okebe, J. (2021). Communication strategies for outbreak control: The role of multilingual messaging during Lassa fever outbreak in Nigeria. *Journal of Public Health in Africa, 12*(2), 192–200. https://doi.org/10.4081/jphia.2021.192

Merchant, R. M., & Lurie, N. (2020). Social media and emergency preparedness in response to novel coronavirus. *JAMA, 323*(20), 2011–2012. https://doi.org/10.1001/jama.2020.4469

Nigeria Centre for Disease Control and Prevention. (2025). *About the NCDC*. https://www.ncdc.gov.ng/ncdc.gov.ng/ncdc

Nigeria Centre for Disease Control and Prevention. (2025). *Preparedness*. https://www.ncdc.gov.ng/preparednes

Obasola, O. I., &Agunbiade, O. M. (2016). Online health information seeking behaviour among young adults in Nigeria. *Health Information & Libraries Journal, 33*(4), 290–301. https://doi.org/10.1111/hir.12148

Olapegba, P. O., Iorfa, S. K., Kolawole, S. O., Oguntayo, R., Gandi, J. C., Ottu, I. F. A., &Ayandele, O. (2020). Survey data of COVID-19-related knowledge, risk perceptions and precautionary behaviour among Nigerians. *Data in Brief, 30*, 105685. https://doi.org/10.1016/j.dib.2020.105685

Okello, A. L., Van Eerd, M., & Hastings, D. (2014). One Health: Past successes and future challenges in three African contexts. *Frontiers in Veterinary Science, 1*, Article 5. https://doi.org/10.3389/fvets.2014.00005

Rogers, R. W. (1983). Cognitive and physiological processes in fear appeals and attitude change: A revised theory of protection motivation. In J. Cacioppo& R. Petty (Eds.), *Social psychophysiology: A sourcebook* (pp. 153–176). Guilford Press.

Rosenstock, I. M. (1974). Historical origins of the health belief model. *Health Education Monographs, 2*(4), 328–335. https://doi.org/10.1177/109019817400200403

Shuaib, F., Gunnala, R., Musa, E. O., Mahoney, F. J., Oguntimehin, O., Nguku, P. M., … Vertefeuille, J. F. (2014). Ebola virus disease outbreak — Nigeria, July–September 2014. *Morbidity and Mortality Weekly Report, 63*(39), 867–872.

Siegrist, M., &Zingg, A. (2014). The role of public trust during pandemics. *European Psychologist, 19*(1), 23–32. https://doi.org/10.1027/1016-9040/a000169

Usman, S., Emmanuel, A., & Usman, O. (2020). Factors influencing compliance with COVID-19 preventive measures among Nigerians. *Journal of Public Health in Africa*, *11*(1), 1323. https://doi.org/10.4081/jphia.2020.1323

Vaughan, E., & Tinker, T. (2009). Effective health risk communication about pandemic influenza for vulnerable populations. *American Journal of Public Health, 99*(Suppl 2), S324–S332. https://doi.org/10.2105/AJPH.2009.162537

Wafula, S., &Madukoma, B. (2025). Unmasking COVID-19 vulnerability in Nigeria: Mapping risks beyond urban hotspots. *arXiv*. https://arxiv.org/abs/2509.05398

World Health Organization. (2018). *Managing epidemics: Key facts about major deadly diseases*. WHO Press.

World Health Organization. (2020). *Strategic partnership for health security and emergency preparedness: Nigeria assessment*. WHO Press.