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Enterprise Risk Management Frameworks for NGO-Led Public Health Programming in Nigeria

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Abstract

Background: Public health NGOs in Nigeria operate within a complex environment marked by limited fiscal space for health, high household spending, uneven service readiness, workforce instability, fragile data systems, donor dependence, and recurrent humanitarian shocks. Yet most available ERM frameworks are either generic, corporate, public-sector oriented, or insufficiently adapted to the programmatic realities of nonprofit and humanitarian public health delivery in Nigeria.

Objective: This paper develops a Nigeria-specific conceptual framework for integrated governance and enterprise risk management for NGO-led public health programming and proposes an implementation and validation protocol capable of linking risk governance to service continuity and programme health outcomes.

Methods: The manuscript uses critical synthesis of pre-2022 literature and official policy documents, combined with secondary analysis of Nigeria-specific health financing and humanitarian indicators. The proposed empirical validation phase adopts a convergent mixed-methods design involving document review, expert Delphi, structured survey measurement, and qualitative key informant interviews. Integration is proposed through joint display analysis and pillar integration methods.

Results: The synthesis identifies seven core domains for an integrated Nigeria-specific ERM model: governance and risk appetite; contextual and programmatic risk mapping; financing and donor-risk management; service delivery and workforce resilience; data integrity and digital governance; safeguarding and community accountability; and monitoring, assurance, and adaptive learning. Secondary evidence shows that Nigeria's health financing structure remains highly exposed to private and out-of-pocket burden, while humanitarian pressures intensify continuity, access, and operational risk in affected regions.

Conclusion: A context-sensitive integrated governance and ERM framework is both theoretically justified and operationally necessary for NGO-led public health programming in Nigeria. The next empirical step should be field validation using expert consensus, psychometric testing, and stakeholder-based implementation assessment across multiple programme areas and geographies.

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Introduction

Nigeria's policy and planning architecture already recognizes the need for stronger governance, health system coordination, and strategic management. The National Health Policy 2016 and the Second National Strategic Health Development Plan 2018-2022 both position governance, service delivery, financing, human resources, and information systems as fundamental building

blocks for achieving better health outcomes ^[1, 2]. National surveys reinforce the magnitude of the operational challenge. The 2018 Nigeria Demographic and Health Survey documents persistent gaps across maternal and child health, immunization, nutrition, and service utilization, while the Nigeria HIV/AIDS Indicator and Impact Survey underscores the continuing need for organized, data-driven, multi-actor public health programming ^[3, 4].

NGOs and nongovernmental public health implementers occupy a vital space within this landscape. In Nigeria, they commonly support HIV service delivery, maternal and newborn health, immunization, WASH, primary health care, nutrition, disease surveillance, community engagement, and humanitarian health response. However, NGO programming is exposed simultaneously to donor compliance demands, supply constraints, data quality failures, insecurity, staff turnover, reputational threats, safeguarding obligations, and rapid epidemiological change. In 2021 alone, UNICEF reported 5.1 million children in need of humanitarian assistance in the Northeast, 8.7 million people in need overall, 2.2 million IDPs in the Northeast, and 400,000 IDPs in the Northwest. The same report recorded 12,035 cholera cases and 312 deaths in the three northeastern states, showing the extent to which public health programming is embedded in a volatile risk environment ^[5].

This context makes a narrow, compliance-only view of risk inadequate. Contemporary ERM guidance instead argues that risk management should be integrated into governance, strategy, operations, information, culture, and performance. COSO links ERM to strategy and performance. ISO 31000 emphasizes value creation, leadership, integration, customization, and continual improvement. The Orange Book frames risk management as an essential part of governance and decision-making. The NC State nonprofit guide further adapts ERM for mission-driven organizations by focusing on practical tools, board communication, and implementation steps ^[6, 9]. Yet none of these sources, on their own, fully resolve the Nigeria-specific needs of NGO-led public health programmes operating across development and humanitarian interfaces.

The research gap, therefore, is not whether ERM is valuable. The gap is whether an integrated governance and ERM model tailored to NGO-led public health programming in Nigeria can be articulated, operationalized, implemented, and validated in a way that links mission assurance to measurable programme health outcomes. This manuscript addresses that gap by asking three questions. First, what risk governance domains are essential for NGO-led public health programming in Nigeria. Second, how should those domains be organized into an integrated framework. Third, what research design can credibly validate such a framework in practice ^[6-10, 20-25].

The aim of the study is to develop a context-sensitive integrated governance and ERM framework for NGO-led public health programming in Nigeria. The specific objectives are to synthesize the relevant pre-2022 literature, identify Nigeria-specific programmatic risk domains, translate these domains into measurable constructs, propose an implementation pathway, and design a robust validation protocol. The working hypothesis is that NGO public health organizations that institutionalize integrated governance and

ERM capabilities will be better positioned to sustain programme continuity, strengthen accountability, improve learning, and protect health outcomes under conditions of uncertainty ^[6-9, 11-17].

Literature Review and Conceptual Foundation

ERM frameworks and their relevance to Nigerian NGO public health programming

The ERM literature reviewed here converges around a small number of principles. Effective risk management is strategic rather than merely reactive. It must be embedded in governance. It requires structured identification, assessment, treatment, monitoring, and learning. It must also be adapted to organizational context. COSO emphasizes governance, culture, strategy, performance, review, and information. ISO 31000 emphasizes principles, framework, and process, with leadership and continual improvement as anchors. The Orange Book emphasizes public-interest accountability, first-line ownership, assurance, and decision quality. The NC State nonprofit guide translates ERM into mission-linked nonprofit practice ^[6, 9].

The nonprofit literature adds two important refinements. First, mission-driven organizations often experience risk as a balance between purpose, scarce resources, reputational legitimacy, and vulnerable stakeholders. Second, boards matter, but board presence alone is not enough. Garcia-Rodriguez and colleagues show that nonprofit vulnerability should be examined through a multidimensional lens that goes beyond simplistic governance proxies ^[10]. For Nigerian health NGOs, that insight is important because boards often coexist with donor-imposed controls, government partnerships, community obligations, and field-level operational realities.

The public health implementation literature from Nigeria sharpens the picture. Ogoina and colleagues found that among 20 hospitals across Nigeria, readiness scores during COVID-19 ranged from 28.2 percent to 88.7 percent, with only 15 percent adequately ready, and with especially weak scores in surge capacity, human resources, staff welfare, and availability of critical items ^[11]. Okech and colleagues showed that workforce attrition in rural PHC settings is a serious threat, with 81 percent of nurses in their study indicating potential voluntary exit and with many nursing cadres favoring movement to urban opportunities ^[12]. Tijani and colleagues showed that data integrity is not an abstract issue. Their Nigerian outbreak management case reported automated validation, near-complete data capture, and better confidentiality and accuracy after system redesign ^[13]. Together, these studies demonstrate that governance and ERM in Nigerian public health must explicitly cover readiness, workforce stability, and data integrity.

The service delivery literature also shows that organizational design choices influence performance. In Adamawa State, performance-based financing improved many service-delivery indicators, particularly antenatal visits and skilled deliveries, although gains were not uniform across all outcomes ^[14]. Community pharmacy integration for HIV treatment in Abuja and in a larger multi-state differentiated refill model showed strong retention and refill performance, demonstrating that decentralization and partnership can work when governance, accountability, and workflow are well

designed^[15, 16]. At the same time, Oduenyi and colleagues show that gender-discriminatory norms inside health systems can damage quality of care, autonomy, respectful engagement, and maternal-newborn outcomes^[17]. Therefore, an ERM model for public health NGOs in Nigeria must

extend beyond finance and compliance to include service model design, gender-responsive quality, community trust, and decentralized delivery governance.

Comparative framework table

Table 1: Comparative review of core ERM frameworks and their adaptation potential

Framework	Core emphasis	Why it matters for NGO-led public health programming in Nigeria	Main adaptation needs
COSO ERM 2017 ^[6]	Governance, culture, strategy, performance, review, reporting	Strong for aligning programme risk with mission and portfolio-level decisions	Simplify for field teams and tie to donor and safeguarding requirements
ISO 31000:2018 ^[7]	Principles, framework, process, leadership, continual improvement	Flexible enough for NGOs of different sizes and sectors	Translate into sector-specific risk registers and decision thresholds
HM Treasury Orange Book 2020 ^[8]	Governance, risk ownership, assurance, decision quality, risk culture	Useful for clarifying lines of accountability and assurance logic	Adapt public-sector language for nonprofit governance and programme delivery
NC State Nonprofit ERM Guide 2021 ^[9]	Practical rollout, tools, board communication, nonprofit use cases	Most directly useful for NGO implementation steps	Needs stronger contextualization to Nigeria's humanitarian and public health risks

The comparative review suggests that the best approach is not to choose one framework alone, but to integrate them. The conceptual model proposed in this manuscript therefore uses ISO 31000 as the process umbrella, COSO as the strategic alignment frame, the Orange Book as the accountability and assurance logic, and the NC State nonprofit guide as the implementation bridge^[6-9].

Conceptual model

The conceptual assumption is straightforward. When

governance structures, field operations, information systems, donor management, and stakeholder accountability are managed through one integrated ERM architecture, organizations are more likely to maintain continuity, detect threats early, allocate resources intelligently, learn faster, and protect programme outcomes. This approach is also consistent with mixed-methods thinking in implementation and evaluation research, where complex systems require both measurable constructs and contextual interpretation^[20-22].

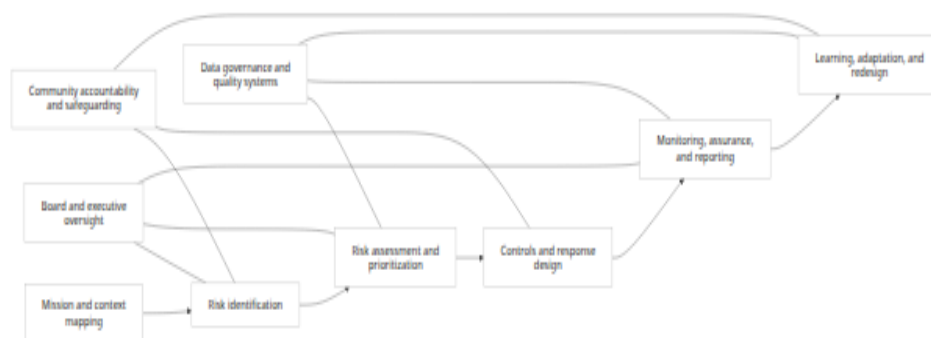


Fig 1

Materials and Methods

Study Design

If progressed into a full empirical paper, the recommended design is a convergent mixed-methods framework-development and validation study. The quantitative strand would test the measurement properties and structural relationships among ERM domains. The qualitative strand would explain how governance and risk routines are actually enacted in Nigerian public health organizations. Integration would occur through design, instrument building, and joint display analysis, following established mixed-methods principles and joint-display techniques^[20-22].

Setting, Population, and Sampling

The study setting should be NGO-led public health organizations operating in Nigeria across at least four programme areas, namely HIV, maternal and child health,

immunization and PHC, and humanitarian health or nutrition. To increase transferability, sampling should include organizations working in both relatively stable and high-risk states. The quantitative component can target senior managers, programme managers, M&E and data officers, finance and compliance leads, field coordinators, and safeguarding focal persons. The qualitative component should include executive directors, board or advisory members, donor-facing staff, government counterparts, and community-facing implementers. The expert Delphi should ideally include 15 to 25 participants with demonstrated expertise in Nigerian public health programming, risk management, donor compliance, or nonprofit governance^[20-24].

Instrument Development and Validation Logic

Instrument development should proceed in three stages. First,

a structured domain pool should be extracted from the literature and policy review. Second, domain statements and items should be refined through Delphi rounds until acceptable consensus is reached. Third, the resulting scale should undergo pilot testing, exploratory factor analysis, confirmatory factor analysis, internal consistency checks, and convergent and discriminant validity testing. Delphi remains

appropriate where expert judgment is required for issues that are not readily settled by experiment alone, while Lawshe's content-validity logic provides a defensible route for retaining essential items^[23, 24]. Hair and colleagues provide a practical basis for multivariate validation procedures^[25]. Operationalization table

Table 2: Draft operationalization of the integrated ERM model

Domain	Operational definition	Candidate indicators	Expected data source
Governance and risk appetite	Degree to which leadership structures define, own, and review mission-critical risk	Board review frequency, approved risk appetite, risk committee presence, escalation thresholds	Policy review, management survey, interviews
Context and programme risk mapping	Capacity to identify strategic, operational, financial, clinical, safeguarding, and humanitarian risks	Risk register completeness, field risk scans, scenario planning frequency	Programme documents, survey, interviews
Financing and donor-risk management	Ability to manage funding volatility, earmarks, cash flow, and compliance exposure	Funding concentration, burn-rate controls, donor exception tracking	Finance records, survey
Service delivery and workforce resilience	Capacity to sustain safe service delivery under disruption	Staffing continuity plans, surge protocols, attrition monitoring, referral fallback	HR records, survey, interviews
Data governance and integrity	Ability to ensure accurate, timely, secure, decision-useful data	Validation rules, completeness rates, duplicate restrictions, dashboard use	M&E systems, digital workflow review
Safeguarding and community accountability	Protection of clients, staff, and communities with functional reporting and response channels	Complaint mechanisms, safeguarding training, case-management pathways	Safeguarding logs, interviews
Monitoring, assurance, and learning	Routine review of controls, outcomes, incidents, and adaptation	Audit follow-up, lesson-learning loops, after-action reviews	Internal reports, survey, interviews

Proposed Analytical Strategy

Quantitative analysis should begin with descriptive statistics, followed by exploratory factor analysis to test item clustering, then confirmatory factor analysis or SEM to assess the fit of the proposed seven-domain model. Reliability should be assessed with internal consistency measures and composite reliability. Validity should include content validity, convergent validity, discriminant validity, and, where possible, criterion linkage to programmatic proxies such as continuity, reporting quality, or service interruption frequency^[24, 25]. Qualitative data should be analyzed thematically, with coding organized around governance, operational risk, data integrity, donor management, safeguarding, and adaptation. Final interpretation should merge both strands through joint displays and meta-inference^[20-22].

Ethical and Reporting Note

No primary field data, participant consent materials, or ethics approval number were provided in the user request. Therefore, this manuscript can honestly report only the conceptual, methodological, and secondary-data portions at present. Before journal submission as an empirical article, the author should complete ethics review, protocol registration where relevant, and the planned validation study. The current version is best described as a conceptual and methodological manuscript with embedded Nigeria-specific secondary evidence.

Nigeria-Specific Secondary Evidence and Analytical Findings

The strongest secondary-data signal for ERM need in Nigeria is the financing profile. Official indicator series show that household and private financing remain structurally dominant. In 2021, out-of-pocket spending was about 77.21 percent of current health expenditure, while domestic general

government health expenditure was only about 3.30 percent and external financing about 19.35 percent. Current health expenditure per capita was approximately US\$81.52 in 2021. This configuration implies several risks for NGO-led programming. First, public health NGOs operate in a system where state financing buffers are weak. Second, donor funding may substitute for rather than complement domestic system strength. Third, household financial burden can reduce utilization, disrupt continuity, and distort programme assumptions about access and demand^[1-3, 5].

Nigeria out-of-pocket health spending share The humanitarian picture deepens the governance problem. UNICEF's 2021 annual humanitarian report documented 5.1 million children in need of humanitarian assistance in the Northeast, 8.7 million people in need overall, 2.2 million IDPs in the Northeast, and 400,000 IDPs in the Northwest. It further recorded 12,035 cholera cases and 312 associated deaths across the northeastern states during the reporting period. At the same time, UNICEF-supported services reached millions, including 5,761,240 people accessing integrated PHC services in the Northeast and 3,896,079 children vaccinated against measles^[5]. These figures show that programme scale and programme fragility coexist. For ERM purposes, that means risk registers should not focus only on organizational survival. They must also track consequence pathways for continuity of care, outbreak response, supply chains, client protection, and field access. Selected humanitarian and health service indicators The empirical literature supports the same conclusion from a service-delivery perspective. Ogoina *et al.* found that only 3 of 20 hospitals in their national survey had adequate COVID-19 readiness and that the weakest dimensions were surge capacity, human resources, staff welfare, and critical items^[11]. Okech *et al.* found severe attrition pressures in rural PHC, especially among nurses and midwives, with many motivated by better prospects in urban areas^[12]. Tijani *et al.* show that

digital redesign can materially improve completeness, validation, and confidentiality of data in Nigerian public health workflows^[13]. Sato and Belel show that governance and financing design affect service outputs, but not always uniformly across outcomes^[14]. Avong *et al.* and Asieba *et al.* show that devolved and community-based service models can achieve very strong refill and retention outcomes when

governance and workflow are coherent^[15, 16]. Oduenyi *et al.* demonstrate that gender discrimination and harmful provider norms can degrade quality, respectful care, and access, which means that a serious ERM model must explicitly include social and safeguarding risk, not only finance and operations^[17].

Nigeria health financing mix

Table 3: Selected Nigeria-specific indicators relevant to integrated ERM

Indicator	Value	Interpretation for ERM
Out-of-pocket share of current health expenditure, 2021	77.21%	High household burden and system fragility
Domestic general government share of current health expenditure, 2021	3.30%	Weak domestic fiscal cushion for programmes
External share of current health expenditure, 2021	19.35%	Donor dependence remains significant
Current health expenditure per capita, 2021	US\$81.52	Low-resource operating environment
Children in need of humanitarian assistance, Northeast, 2021	5.1 million	Large-scale vulnerability and continuity risk
People in need, Northeast, 2021	8.7 million	Wide service exposure in conflict setting
IDPs in Northeast, 2021	2.2 million	Mobility and access risk
IDPs in Northwest, 2021	400,000	Expanding insecurity beyond historic epicentres
Cholera cases in Northeast, 2021	12,035	Outbreak and WASH systems risk
Cholera deaths in Northeast, 2021	312	Consequence severity and response urgency

The analytical implication is that public health NGOs in Nigeria should treat ERM as a mission-protection system. The organization is not the ultimate object of protection. Rather, the organization is the vehicle through which health outcomes, continuity of essential services, credible data, community trust, and safeguarding responsibilities are protected under uncertainty. That framing is the central contribution of the proposed model.

Proposed Integrated ERM Framework and Implementation Pathway

The proposed model can be called the Integrated Governance and ERM Model for NGO Public Health Programming in Nigeria, abbreviated here as IG-ERM Nigeria. It contains seven interlocking components. Governance and risk appetite clarify who owns which categories of risk and what levels of exposure are acceptable. Context and programme risk mapping translate strategic, operational, clinical, data, financial, and humanitarian conditions into a live risk architecture. Financing and donor-risk management addresses concentration, earmarks, compliance strain, and cash-flow continuity. Service delivery and workforce resilience addresses surge, absenteeism, attrition, and decentralized continuity. Data governance and integrity protects decision quality. Safeguarding and community accountability protects clients, staff, and the organization's legitimacy. Monitoring, assurance, and learning closes the loop^[6-9, 11-17].

Implementation should occur in phases. The first phase is diagnostic and includes document review, risk inventory, and board-executive alignment. The second phase is design and includes a harmonized risk taxonomy, risk scoring matrix, committee structure, escalation ladder, and dashboard design. The third phase is operational embedding across programs, grants, finance, M&E, safeguarding, and field teams. The fourth phase is assurance and refinement through periodic audits, incident review, and outcome-linked learning cycles. This phased approach is consistent with both formal ERM guidance and practical nonprofit implementation advice^[6-9]. Validation should also proceed in phases. Content validity should be established through Delphi and CVR/CVI review^[23, 24]. Construct validity should be tested quantitatively^[25]. Explanatory validity should be supported qualitatively by comparing organizations with stronger and weaker ERM

routes. A mature journal article could then examine whether stronger ERM scores are associated with fewer service interruptions, better reporting quality, more timely corrective action, higher stakeholder confidence, or stronger continuity in volatile settings^[20-25].

The practical advantage of this design is that it is neither too abstract nor too narrow. It can be used by a national NGO managing HIV grants, by a humanitarian health consortium in the Northeast, or by a maternal and child health implementer working through PHC and community platforms. It also allows the author to publish this current version as a conceptual and methodological paper, then extend it later into a multi-organization validation study.

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