

Review Article

Overview of Persistent Inter-Professional Rivalry Within the Laboratory Medicine Practice Domain of Tertiary Healthcare Institutions in Nigeria: A Narrative Review

Collins Amadi^{1, 2, 3, 4, *} , **Roy Chidi Amadi^{4, 5, 6}** , **Sasha Chidera Amadi^{4, 5, 6}** , **Elena Chile Amadi^{4, 5, 6}** , **Comfort John^{4, 7}** 

¹Department of Chemical Pathology, Rivers State University, Port Harcourt, Nigeria

²Department of Chemical Pathology, PAMO University of Medical Sciences, Port Harcourt, Nigeria

³Department of Chemical Pathology, University of Uyo, Uyo, Nigeria

⁴Department of Laboratory Services, MEDCOL Nigeria Limited, Port Harcourt, Nigeria

⁵Basic Health Studies, Captain Elechi Amadi Polytechnic, Port Harcourt, Nigeria

⁶Basic Health Studies, Excellent Montessori College, Port Harcourt, Nigeria

⁷Department of Business Management, Ignatius Ajuru University of Education, Port Harcourt, Nigeria

Abstract

The persistent inter-professional rivalry within the laboratory medicine practice domain of Nigerian tertiary healthcare institutions constitutes a systemic crisis that undermines diagnostic accuracy, jeopardizes patient safety, and disrupts healthcare delivery. This longstanding conflict between the Medical Laboratory Scientists (MLS) and the laboratory-based physicians (Clinical Pathologists) centers mainly on operational independence, leadership in clinical laboratories, and statutory boundaries. This review examines the historical, legal, educational, and socio-political causes of this rivalry in Nigerian tertiary healthcare settings. Historically, laboratory medicine practice functions shifted from physician-led to specialized, autonomous scientific roles, leading to overlapping claims over laboratory and clinical consultation domains. Conflicting laws—such as the Medical and Dental Council of Nigeria (MDCN) Practitioners Act and the Medical Laboratory Science Council of Nigeria (MLSCN) Act—have created parallel regulatory frameworks, resulting in ongoing legal disputes at the National Industrial Court. These dynamics foster operational silos, strikes, and diagnostic errors, often causing preventable misdiagnoses. To transform this rivalry into collaborative clinical efforts, the article recommends a comprehensive approach that includes legislative reforms, separation of administrative and clinical roles, formal interprofessional education in training, and joint governance boards in tertiary healthcare settings. Ultimately, resolving this conflict is vital to achieving international standards and protecting Nigerian patient care from interprofessional conflicts.

Keywords

Nigeria, Interprofessional Relations, Laboratories, Hospital, Tertiary Healthcare, Health Workforce

*Correspondence: Collins Amadi (collins338@yahoo.com)

Received: 9 August 2026; **Accepted:** 18 August 2026; **Published:** 22 September 2026



Copyright: © The Author(s), 2026. Published by Science Publishing Group. This is an **Open Access** article, distributed under the terms of the Creative Commons Attribution 4.0 License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

1. Introduction

The efficiency of modern healthcare systems depends fundamentally on diagnostic laboratory medicine, which influences about 70% of definitive clinical decisions [1-3]. In tertiary health institutions, such as teaching hospitals (THs) and federal medical centers (FMCs) in Nigeria, the clinical laboratory is the critical unit for disease screening, definitive diagnosis, prognostication, and therapeutic monitoring [2, 3]. However, the operational environment of laboratory medicine practice in Nigeria is severely fractured by a chronic, highly polarized inter-professional rivalry [4-9]. This conflict pits the Medical Laboratory Scientists (MLS)—allied health professionals trained specifically in laboratory methodologies, analytics, and diagnostics—against the Laboratory-based Physicians (LPs)—medical doctors specialized in laboratory medicine who complete postgraduate residency training to interpret pathological changes and consult on patient care [10-14]. While this professional rivalry appears structurally mitigated or non-existent in many developed health systems globally, it manifests within the Nigerian public healthcare sector as an active, zero-sum struggle for supremacy [15-20]. Between 2011 and 2016 alone, the Nigerian health sector experienced at least five major nationwide industrial actions directly triggered or compounded by this specialized diagnostic rivalry, causing severe disruptions to public healthcare delivery [21-23]. The rivalry routinely presents as localized administrative standoffs within THs and FMCs, where both professional bodies claim the exclusive statutory right to head laboratory departments, authorize official diagnostic reports, control fiscal resources, and dictate equipment procurement pipelines [6]. The consequences of this rivalry extend far beyond bureaucratic friction [23-27]. The ongoing hostilities degrade the professional work environment, compromise strict laboratory quality-assurance protocols, and increase the risk of analytical errors [24-27]. Consequently, patients frequently face delayed processing times, fractured diagnostic chains, or catastrophic misdiagnoses that can result in preventable mortality [24-27]. This review article systematically dissects the evolution and drivers of the persistent MLS-LPs rivalry within Nigerian THs and FMCs. By examining the historical trajectories, conflicting legal statutes, and educational differences that sustain this impasse, this paper outlines evidence-based structural, legal, and collaborative frameworks designed to transform an adversarial relationship into a cooperative clinical alliance.

2. Methodology

2.1. Search Strategy and Information Sources

A comprehensive search was executed across major electronic databases to identify relevant literature published between 2000 and 2026. The searched databases included PubMed, African Journals OnLine (AJOL), Embase, Google

Scholar, and the Cochrane Database of Systematic Reviews. To capture local institutional reports and grey literature, manual searches were performed on the official websites of the Medical Laboratory Science Council of Nigeria (MLSCN), Medical and Dental Council of Nigeria (MDCN), the Nigerian Medical Association (NMA), and the Federal Ministry of Health (FMOH). The search syntax combined Medical Subject Headings (MeSH) terms and free-text keywords using Boolean operators (AND, OR). The primary search terms included: "laboratory medicine", "medical laboratory science", "inter-professional rivalry", "professional conflict", "pathologists", "medical laboratory scientists", "tertiary healthcare", "teaching hospitals", and "Nigeria". Reference lists of all retrieved articles and relevant review papers were manually screened to identify additional eligible studies.

2.2. Eligibility Criteria

To capture the full landscape of this multi-faceted institutional issue, strict eligibility criteria were applied to accommodate heterogeneous data sources.

2.2.1. Inclusion Criteria

- 1) Peer-reviewed primary research articles (qualitative, quantitative, and mixed-methods).
- 2) Review papers, conceptual frameworks, and expert commentaries addressing healthcare conflicts.
- 3) Official government white papers, court judgments, and health policy documents regarding professional jurisdictions in Nigeria.
- 4) Studies published in the English language.
- 5) Literature focusing specifically on Nigerian tertiary healthcare institutions (THs/FMCs).

2.2.2. Exclusion Criteria

- 1) Studies focusing exclusively on secondary or primary healthcare tiers without systemic relevance to tertiary centers.
- 2) Articles addressing professional rivalry outside the laboratory medicine domain (e.g., nurse-doctor conflicts), unless they offered direct comparative frameworks.
- 3) Editorials or opinion pieces lacking verifiable institutional contexts or citations.

2.3. Study Selection and Data Extraction

Two independent reviewers screened the titles and abstracts of all retrieved citations against the predefined inclusion criteria. Discrepancies were resolved at this stage by consensus. Full-text articles of potentially eligible studies were then retrieved and subjected to a second, rigorous evaluation. A standardized data extraction form was developed to capture

the heterogeneity of the included literature. For empirical studies, extracted data included the author, year of publication, study design, institutional setting, sample characteristics, and primary sources of conflict. For non-empirical sources (policy documents, judicial rulings, and commentaries), data extraction focused on legal arguments, regulatory frameworks, and systemic recommendations.

2.4. Data Synthesis and Analysis

Given the high heterogeneity of the retrieved literature—ranging from cross-sectional surveys to qualitative interviews and legal texts—a meta-analysis was not feasible. Instead, a narrative synthesis approach was adopted. The extracted data were analyzed using thematic synthesis. The extracted text, findings, and arguments were coded inductively to identify recurring patterns, friction points, and systemic drivers of conflict. These codes were then clustered into overarching thematic domains, such as leadership/headship disputes, legislative overlap, salary disparities, and the impact of rivalry on patient care. The synthesized findings are presented textually and supported by summary tables to provide a clear overview of the current state of inter-professional rivalry in the Nigerian laboratory medicine discipline and clinical practice.

3. Evolution of Inter-professional Rivalry

The structural roots of the contemporary rivalry are deeply tied to the historical development of clinical laboratory services in British colonial and post-independence Nigeria [28–30]. In the early-to-mid 20th century, laboratory infrastructure in colonial medical facilities operated under a rigid, physician-centric hierarchical model. Laboratories were designed as basic, technical extensions of clinical medicine, run by medical officers or general pathologists who directed the diagnostic workflow [8, 9]. Personnel performing manual, repetitive bench work were classified as "laboratory technicians" or "technologists". These technical cadres functioned under direct medical supervision, possessing narrow vocational certificates rather than autonomous professional standing [6–9]. As medical science advanced through the mid-post-independence era, the technical component of diagnostic medicine evolved into an intricate discipline driven by complex molecular diagnostics, immunochemistry, automation, and strict statistical quality control [6, 7]. This technological leap demanded highly specialized training pathways separate from general medical curricula [6–9]. The technical cadre successfully transformed its professional identity, shifting from vocational apprenticeships to standardized university degrees [26, 27]. The landmark enactment of the Institute of Medical Laboratory Technology Decree (No. 56 of 1968) provided the initial legislative framework that formalized this transition, establishing medical laboratory technology as an explicit, regulated specialty [6–9, 31].

Subsequent amendments and new laws elevated this status further, culminating in a transition from "technologists" to "MLS" holding five-year Bachelor of Medical Laboratory Science (BMLS) degrees [28, 31–36]. With this academic advancement came an explicit push for professional self-actualization and complete operational autonomy from direct medical oversight. At about the same time, the medical field consolidated its postgraduate training models through the National Postgraduate Medical College of Nigeria (NPMCN) and the West African College of Physicians (WACP) [32–36]. These bodies trained LPs across specialized sub-disciplines including Chemical Pathology, Hematology and Blood Transfusion, Medical Microbiology, and Histopathology [33, 36]. As LPs continued to view themselves as the traditional, legally accountable custodians of all clinical laboratory departments, the newly autonomous MLS cadre rejected this hierarchy, viewing physician oversight as an obsolete colonial legacy designed to suppress their professional independence [35]. Thus, the rapid professionalization of the scientific cadre collided with the established authority of the medical elite, turning the clinical laboratory into a contested space [26, 27, 36].

4. Professional Disconnect: Roles, Training, and Identities

4.1. MLS (Medical Laboratory Scientists)

The professional identity of the MLS in Nigeria is anchored on high-level competency in the analytical and technological phases of laboratory diagnostics [31]. The five-year BMLS curriculum covers advanced biochemistry, clinical hematology, transfusion science, medical microbiology, histopathology, and molecular biology [31]. This is followed by a mandatory one-year clinical internship and passing a national licensing examination. Core responsibilities of an MLS in a typical Nigerian tertiary healthcare center include: analytical execution, quality management systems (QMS), technical troubleshooting, and laboratory biosafety [9, 28, 37]. The laboratory analytical execution involves designing, calibrating, validating, and running complex automated and manual diagnostic assays. QMS role entails designing and executing internal quality control (IQC) protocols and reviewing external quality assessment (EQA) schemes. The technical troubleshooting processes entail managing instrument downtime, optimizing reagent consumption, and pioneering molecular diagnostics. Laboratory biosafety duties of an MLS usually involve enforcing containment protocols, waste management, and chemical hygiene. MLSs view their role as an independent science and profession, independent of medicine, specialized in generating reliable, accurate data.

4.2. LPs (Laboratory-Based Physicians)

LPs are medically qualified doctors and holders of the

MBBS (Bachelor of Medicine/Surgery Degree), who have completed an extensive residency training program lasting between four and six years under the NPMCN or WACP [32-34]. Their training covers advanced pathology, clinical correlation, disease pathophysiology, and institutional leadership. Core responsibilities of LPs in a Nigerian tertiary healthcare center include: diagnostic interpretation, clinical consultation, patient-facing interventions, and translational leadership [38, 39]. LPs' diagnostic interpretation duties involve interpreting complex laboratory data (e.g., bone marrow aspirates, protein electrophoretic scans, complex histopathology slides) and correlating these findings with clinical presentations. LPs' clinical consultation focuses on advising ward physicians on appropriate test selection, diagnostic algorithms, and therapeutic monitoring of patients. Patient-facing interventions include performing specialized clinical procedures such as fine-needle aspiration cytology, bone marrow biopsies, and therapeutic apheresis, among other complex procedures.

LPs in tertiary hospitals serve as the vital bridge between

basic laboratory science and bedside patient care. Their translational leadership involves validating novel biomarkers, integrating complex diagnostics into daily practice, guiding clinical trials, and training multidisciplinary teams to advance precision medicine [38, 39].

4.3. The Overlap and Cognitive Dissonance

The core of the rivalry lies in the overlap between the pre-analytical, analytical, and post-analytical phases of testing, as illustrated in Table 1 below. Cognitive dissonance occurs because both groups develop a deep sense of professional pride during training that directly conflicts with each other's perceived jurisdiction [31, 32]. MLSs are trained to view themselves as managers of the entire laboratory ecosystem, while LPs are trained to view themselves as the directors of the laboratory [31, 32]. When these two identities are forced into a single department without clear, mutually accepted boundaries, friction becomes inevitable [22, 23, 26].

Table 1. Matrix of Overlapping and Distinct Domains in Nigerian Laboratory Medicine.

Functional Phase [40, 41]	MLS Domain [31]	Overlapping/Disputed Zone [13-21]	LP Domain [32]
Pre-Analytical	Design of specimen collection protocols; technical staff assignment.	Determining test appropriateness; setting institutional diagnostic algorithms.	Clinical consultation on test selection; direct patient bedside evaluation.
Analytical	Instrument calibration; running assays; troubleshooting assays; IQC/EQA execution.	Validation of new testing methodologies; review of unusual or discordant results.	Clinical oversight of test utility; troubleshooting clinical mismatch.
Post-Analytical	Technical release of raw data; authorization of technical accuracy; archiving.	Signing/authorizing final diagnostic reports; clinical interpretation of complex outputs.	Pathophysiological correlation; direct consultation with ward clinicians; bone marrow/histopathology reporting.

MLS: Medical Laboratory Scientists; LP: Laboratory-Based Physician; IQA/EQA: Internal quality assurance/external quality assurance

5. Global Best Practices in Laboratory Medicine Governance

To address these challenges, the Nigerian health sector can look to international models of laboratory medicine practice, where such rivalries have been successfully mitigated through clear role demarcation and collaborative frameworks [40].

5.1. The United Kingdom Model

In the United Kingdom, the healthcare system utilizes a collaborative approach defined by the Health and Care Professions Council (HCPC) and the Royal College of Pathologists

(RCPath) [41-45]. The role of the Biomedical Scientist (equivalent to the Medical Laboratory Scientist) is well-defined and highly respected. The biomedical Scientists hold statutory responsibility for the technical performance of assays, internal quality control, and the management of laboratory equipment [43]. The LPs (specialist medical doctors) focus on complex morphological interpretations (e.g., reporting histopathology slides), clinical consultations, and advising clinical teams on complex patient cases [44]. Consultant LPs and senior Biomedical Scientists often work together on joint steering committees to manage the laboratory [43-45]. This shared governance helps minimize the administrative disputes frequently seen in Nigeria [9, 45].

5.2. The United States (US) Model

In the United States, the Clinical Laboratory Improvement Amendments (CLIA) provide federal regulatory standards for all clinical laboratory testing to ensure accuracy, reliability, and timeliness [46–48]. CLIA clearly defines the personnel qualifications and responsibilities for laboratory directors, technical supervisors, clinical consultants, and testing personnel [46].

In the US model, laboratory directors can be either board-certified pathologists or doctoral-level scientists (e.g., PhDs in clinical chemistry, microbiology, or immunology) [47]. This credential-based approach—rather than a purely professional or medical-degree-based framework—fosters a meritocratic environment where competence determines leadership [47]. The Laboratory-based Physicians or the Clinical Pathologists handle medical diagnoses, while laboratory scientists focus heavily on technical validation and operations [48].

5.3. The South African Model

South Africa has established an integrated approach through the National Health Laboratory Service (NHLS) [49–52]. The NHLS operates a centralized network of diagnostic laboratories across the country. It employs both MLS and LPs within a single organizational structure. The system relies on a structured career pathway for scientists, allowing them to advance based

on academic and technical competencies. Standardized protocols, interdisciplinary training programs, and centralized management effectively reduce professional friction. This model demonstrates that a unified national laboratory service can help mitigate professional disputes and optimize operational efficiency [49–52].

6. Drivers of the Inter-professional Conflict

The ongoing rivalry between MLS practitioners and LPs in Nigeria is maintained by an intricate network of structural, administrative, and legal factors embedded within the Nigerian public health framework. These drivers turn every clinical laboratory into a point of constant operational friction [8, 26, 27, 53].

6.1. Ambiguities in Statutory Legislation

The primary driver of this systemic friction is the existence of contradictory and parallel statutory legislation enacted by the National Assembly. This legislative clash has created a dual-regulatory paradox that pits two distinct government councils against each other within the same physical department, as detailed in Table 2 below [31, 32].

Table 2. Statutory Contrast and Overlap in Laboratory Regulation.

Legislative Act	Regulating Council	Primary Statutory Mandate	Professional Interpretation of Jurisdiction
Medical Laboratory Science Council of Nigeria Act (Act 11 of 2003 / Cap M25 LFN 2004) [31]	Medical Laboratory Science Council of Nigeria (MLSCN) [31]	Regulates the science, practice, licensing, equipment accreditation, and management of medical laboratories and scientists.	MLS practitioners assert absolute, exclusive operational autonomy over the "bench," laboratory administration, and the generation, validation, and authorization of laboratory outcomes.
Medical and Dental Practitioners Act (Cap M8 LFN 2004) [32]	Medical and Dental Council of Nigeria (MDCN) [32]	Regulates the practice of medicine, surgery, dentistry, and the clinical operation of diagnostic laboratory specialties by physicians.	Pathologists assert statutory authority over the entirety of "clinical laboratory practice," including the ultimate sign-off, supervision, and clinical diagnosis of laboratory data.

LFN: Law of the Federal Republic of Nigeria; MLSCN: Medical Laboratory Council of Nigeria; MDCN: Medical and Dental Council of Nigeria; MLS: Medical Laboratory Scientist

This legal dichotomy allows each profession to claim a distinct statutory mandate. Pathologists rely on the MDCN framework to argue that a clinical laboratory is a medical facility that must be directed by a medically licensed practitioner to ensure patient safety [32]. Conversely, the MLS cadre relies on Section 29 of the MLSCN Act to assert that Medical Laboratory Science is a fully autonomous profession equal to medicine, granting them the exclusive right to manage and control laboratory departments without external interference [31].

6.2. Professional Identity and Rivalry

The conflict is deeply driven by disputes over professional identity, operational boundaries, and structural job roles [22, 23, 26, 27]. At the center of this dispute is a fundamental question: *Who owns the laboratory space and the diagnostic data generated within it?* The MLS cadre views the laboratory bench—including the preparation of samples, calibration of analytical instrumentation, execution of assays, and primary

validation of data—as their exclusive professional domain. They frequently express a "fear of professional extinction," worrying that if pathologists or medical doctors directly control bench activities or supervise scientists, the distinct identity of the MLS profession will be eroded. On the other side, LPs view the laboratory as an integrated medical entity where analytical data must be translated into actionable clinical insights [13-18]. Pathologists contend that because they undergo extensive clinical residency training, they are uniquely qualified to correlate raw laboratory values with patient pathophysiology, perform invasive diagnostic procedures (such as bone marrow aspirations or deep tissue biopsies), and offer direct clinical consultations to attending physicians [13-16]. The rivalry intensifies regarding the authorization and signing of diagnostic reports. MLS practitioners maintain that their license empowers them to sign and release reports directly. The LPs counter that a diagnostic report is a medicolegal document that must carry a physician's endorsement to be clinically valid, arguing that an unvetted laboratory value lacks the necessary medical synthesis required for complex patient management [13-31].

6.3. Institutional Leadership and Administrative Control

In Nigerian THs/CMCs, institutional hierarchy and administrative appointments are heavily contested. For decades, hospital management boards—traditionally led by Chief Medical Directors who are medical doctors—automatically appointed LPs as "Heads of Department" (HODs) or "Directors of Pathology Services" across all laboratory units [22, 23]. Under this arrangement, all practicing medical laboratory scientists were structurally placed under the administrative control and performance appraisal of the designated Pathologist. The MLS cadre, mobilized through the Association of Medical Laboratory Scientists of Nigeria (AMLSN), has systematically challenged this structure. They argue that an administrative HOD role involves managing personnel, budgets, and internal laboratory processes, tasks they believe should be handled by the most senior MLS within an independent "Medical Laboratory Services Department". This dispute has led to an administrative impasse in many tertiary centers. When a Pathologist is appointed HOD, scientists may employ passive resistance, refuse to submit performance evaluation forms, or decline to implement operational directives. In response, hospital management has occasionally withheld promotions or reassigned laboratory spaces, triggering union protests and sudden, localized work stoppages [16-19].

6.4. Economic Factors and Remuneration Disparities

The structural division is further widened by a significant gap in economic remuneration and career progression within the civil service [22, 23, 26, 27]. LPs, as medical doctors, are

compensated under the Medical Salary Structure, which features higher entry points, specialized clinical allowances, and accelerated earning potential. Medical Laboratory Scientists are remunerated under the Consolidated Health Salary Structure, which applies to non-physician allied health professionals [23, 27]. This creates a pronounced income gap between professionals working in the same physical laboratory space, often with similar or overlapping years of academic and clinical experience. The MLS cadre views this disparity as an artificial institutional hierarchy that systematically undervalues scientific diagnostics. Consequently, the struggle for administrative control of laboratories is also an economic fight; controlling the department influences procurement authority, institutional resource allocation, and internal revenue-generating pipelines, directly affecting professional status and institutional leverage [22, 26].

7. Impact of Rivalry on Tertiary Healthcare Delivery

The never-ending and persistent friction between these two critical diagnostic groups has wide-ranging, negative impacts on the quality and safety of healthcare delivery within the Nigerian teaching hospitals [22, 27, 54-57].

7.1. Quality Assurance Degradation and Analytical Risk

A major consequence of this rivalry is the breakdown of comprehensive Quality Assurance (QA) and Quality Control (QC) systems within clinical laboratories [27, 57]. Maintaining international diagnostic standards, such as ISO 15189:2022, requires seamless coordination across all phases of testing: pre-analytical (sample collection and integrity), analytical (reagent precision and bench testing), and post-analytical (clinical correlation and reporting). When communication between MLS and LPs breaks down, these phases function as disconnected silos. MLS may execute analytical runs without the benefit of clinical context from the LPs, while pathologists may attempt to interpret data without insight into analytical adjustments or baseline instrument calibrations on the bench. This separation increases the risk of undetected errors, leading to the release of inaccurate or unverified diagnostic data [26, 27, 57].

7.2. Clinical Misdiagnosis and Patient Harm

When laboratory quality is compromised by professional conflict, the patient bears the direct clinical cost [26, 27, 54-58]. There are documented instances across Nigerian public hospitals where conflicting interpretations of diagnostic data and delayed test releases have caused severe medical harm. A prominent historical example that illustrates the risk of laboratory oversights is the landmark case of Baby Oyinkansola

Eniola at the Lagos University Teaching Hospital (LUTH) [58]. Due to systemic operational failures and broken supervisory oversight within the hospital's laboratory structure, a newborn infant was transfused with HIV-positive blood. The resulting federal panel of inquiry exposed severe deficiencies in accountability, leading to the dismissal of senior hospital administrators and demonstrating how a lack of unified professional coordination can result in catastrophic clinical failures. Furthermore, when errors occur in critical assays—such as oncology biopsies, hemoglobin genotyping, viral load quantifications, or bacterial resistance profiling—patients may receive inappropriate, toxic, or ineffective therapies, directly contributing to preventable morbidity and mortality [22, 23, 54-57].

7.3. Economic Loss and the Rise of Medical Tourism

The operational instability caused by recurrent strikes and professional standoffs has deeply eroded public confidence in

teaching hospital laboratories [22, 23]. Attending clinical physicians within these same institutions frequently advise patients to patronize private diagnostic centers to avoid delays or verify questionable internal results. This shift deprives public teaching hospitals of vital internally generated revenue that could otherwise be reinvested into upgrading diagnostic infrastructure, purchasing modern analyzers, and funding research. On a larger scale, wealthy Nigerians completely lose faith in the domestic diagnostic framework, accelerating the drain of billions of Naira annually into international medical tourism in regions like India, Europe, and the Middle East [54, 55].

8. Mitigation Strategies: Shifting from Rivalry to Synergy

Resolving the long-standing impasse between MLS and LPs requires moving away from attempts at professional dominance toward structured, legal, educational, and operational integration [56-63].

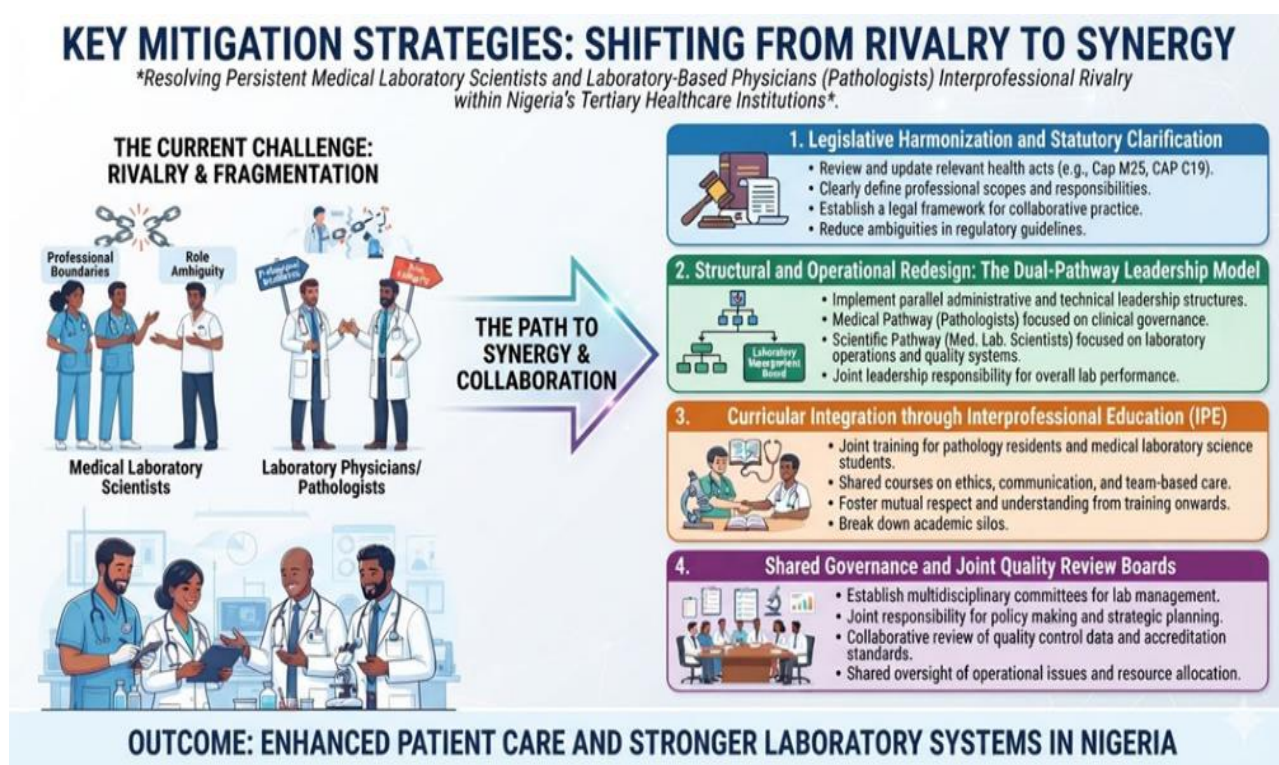


Figure 1. Illustrating key mitigation strategies for resolving the persistent MLS-LP interprofessional rivalry within the laboratory medicine practice domain of Nigeria's tertiary healthcare institutions.

8.1. Legislative Harmonization and Statutory Clarification

The National Assembly must take deliberate legislative steps to amend the conflicting clauses within the MDCN Act

(Cap M8) and the MLSCN Act (Act 11 of 2003) [31, 32, 41, 59, 60]. The laws must explicitly define boundaries in precise, modern language to avoid overlapping jurisdictions [31, 32]. The statutes should clarify that the MLSCN retains exclusive regulatory authority over the licensing of laboratory scientists,

technical bench methodologies, and the accreditation of physical laboratory environments [31]. Concurrently, the legislation must affirm that the MDCN regulates clinical medical practice, including the clinical interpretation of generated data and direct patient consultations by medical specialists [32]. Explicitly separating "scientific bench regulation" from "medical clinical regulation" can resolve the primary driver of legal conflict [31, 32, 41, 59, 60].

8.2. Structural and Operational Redesign: The Dual-Pathway Leadership Model

THs should abandon the outdated, single-leader framework that triggers constant supremacy battles [9, 22]. Instead, institutions should adopt a Dual-Pathway Leadership Model that clearly separates administrative management from clinical diagnostic consultation [22, 53, 57, 61]. Under this model, the Director of Medical Laboratory Services (most senior qualified MLS) exercises full administrative and technical control over the scientists, bench workflows, shift allocations, and physical instrumentation logistics. In parallel, the Head of Clinical Pathology (a consultant physician) directs the clinical consultative domain, overseeing diagnostic algorithms, post-analytical medical correlations, complex biopsies, and direct case consultations with attending clinical teams. Neither professional path subordinates the other; they function as parallel, intersecting lines focused on distinct aspects of the diagnostic pipeline [22, 53, 57, 61].

8.3. Curricular Integration Through Interprofessional Education

To prevent professional animosity from taking root early, the Federal Ministry of Education, the National Universities Commission, and professional regulatory bodies must integrate formal Interprofessional Education pathways directly into undergraduate medical and laboratory science curricula. Currently, in the Nigerian educational system, Medical Students and Medical Laboratory Science students train in strict professional isolation, which can foster early misconceptions regarding respective job roles. By establishing shared lecture series, joint clinical case simulations, and collaborative laboratory ethics workshops, undergraduate trainees can learn to respect the unique competencies of each discipline before entering the workforce [40, 53, 57]. This early collaborative exposure is critical to replacing a culture of professional suspicion with a framework of mutual clinical reliance.

8.4. Shared Governance and Joint Quality Review Boards

At the institutional level, THs and FMCs must establish mandatory, joint laboratory governance review boards composed of equal numbers of LPs and MLS [9, 26, 57]. These

boards should meet regularly to oversee internal quality controls, manage structural laboratory spaces, coordinate equipment acquisitions, and resolve internal operational disagreements. By shifting the decision-making process from individual professional fiat to a collaborative committee model, institutions can build operational transparency [9, 26, 57]. This shared framework ensures that both professions are actively engaged in maintaining international diagnostic benchmarks, safeguarding patient care, and reducing the friction that fuels industrial action [53, 56, 62, 63].

9. Conclusion

The longstanding rivalry between MLS and LPs continues to pose a significant structural weakness within Nigeria's tertiary healthcare system. For many years, this discord has exhausted institutional resources through legal disputes, hampered patient care during strikes, and jeopardized patient safety. The investigation reveals that this stalemate is not a result of fundamental scientific discrepancies but stems from outdated and overlapping legal frameworks, vague institutional roles, and a historical absence of collaborative training approaches. To resolve this impasse, it is crucial to move beyond the zero-sum competition for professional superiority. As the field of laboratory medicine evolves into one that increasingly relies on complex molecular genomics, automated processes, and artificial intelligence, the demand for integrated and high-precision diagnostics has never been more critical. Nigeria must not permit its essential diagnostic foundations to remain fragmented by internal strife. Nigeria cannot afford to let its key diagnostic pillars remain fragmented by internal disputes. The way forward necessitates a unified approach: the National Assembly should define and align professional boundaries, hospital boards must adopt a dual-pathway leadership structure, and educational institutions need to emphasize interprofessional training. By enacting these structural, legal, and educational reforms, the dynamics can evolve from adversarial tensions to a collaborative clinical alliance. Ultimately, fostering this professional cooperation is crucial for ensuring accurate diagnostics, upholding international laboratory standards, and safeguarding the well-being of patients throughout Nigeria.

Abbreviations

AMLSN	Association of Medical Laboratory Scientists of Nigeria
BMLS	Bachelor of Medical Laboratory Science
CLIA	Clinical Laboratory Improvement Amendments
EQA	External Quality Assurance
FMCs	Federal Medical Centers
FMoH	Federal Ministry of Health
HCPC	Health and Care Professional Council

HOD	Head of Department
IQA	Internal Quality Assurance
LPs	Laboratory-Based Physicians
MDCN	Medical and Dental Council of Nigeria
MLSCN	Medical Laboratory Council of Nigeria
MLS	Medical Laboratory Scientists
NMA	Nigerian Medical Association
NHLS	National Health Laboratory Service
NPMCN	National Postgraduate Medical College of Nigeria
QMS	Quality Management System
RCPATH	Royal College of Pathologist
THs	Teaching Hospitals
WACP	West African College of Physicians

Acknowledgments

The authors gratefully acknowledge colleagues at the Pathology Unit of the Rivers State University Teaching Hospital (RSUTH), Southern Nigeria, for their insightful contributions.

Author Contributions

Collins Amadi: Conceptualization, Data curation, Formal Analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, & writing – review & editing

Roy Chidi Amadi: Conceptualization, Data curation, Formal Analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Writing – original draft, & writing – review & editing

Sasha Chidera Amadi: Conceptualization, Data curation, Formal Analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Supervision, Validation, Visualization, Writing – original draft, & writing – review & editing

Elena Chile Amadi: Conceptualization, Data curation, Formal Analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Validation, Visualization, Writing – original draft, & writing – review & editing

Comfort John: Conceptualization, Data curation, Formal Analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, & writing – review & editing

Conflicts of Interest

The authors declare no conflicts of interest.

References

- [1] Adekoya A, Okezue MA, Menon K. Medical Laboratories in Healthcare Delivery: A systematic review of their roles and impact. *Laboratories*. 2025; 2(1): 8. <https://doi.org/10.3390/laboratories2010008>
- [2] Ferraro S, Braga F, Panteghini M. Laboratory medicine in the new healthcare environment. *Clin Chem Lab Med (CCLM)*. 2016; 54(4): 523-33. <https://doi.org/10.1515/cclm-2015-0803>
- [3] Olver P, Bohn MK, Adeli K. Central role of laboratory medicine in public health and patient care. *Clin Chem Lab Med (CCLM)*. 2023; 61(4): 666-73. <https://doi.org/10.1515/cclm-2022-1075>
- [4] Weber BW, Mirza K. Leveraging Interprofessional Education to Improve Physician/Laboratory Cooperation and Patient Outcomes. *Med Sci Educ*. 2022; 32(1): 239-241. 1. <https://doi.org/10.1007/s40670-021-01496-4>
- [5] Oleribe OO, Ezieme IP, Oladipo O, Akinola EP, Udofia D, Taylor-Robinson SD. Industrial action by healthcare workers in Nigeria in 2013-2015: an inquiry into causes, consequences and control-a cross-sectional descriptive study. *Hum Resour Health*. 2016; 14(1): 46. <https://doi.org/10.1186/s12960-016-0142-7>
- [6] Mayaki S, Stewart M. Teamwork, Professional Identities, Conflict, and Industrial Action in Nigerian Healthcare. *J Multidiscip Healthc*. 2020; 13: 1223-1234. <https://doi.org/10.2147/JMDH.S267116>
- [7] Adeloye D, David RA, Olaogun AA, Auta A, Adesokan A, Gadanya M, et al. Health workforce and governance: the crisis in Nigeria. *Hum Resour Health*. 2017; 15(1): 32. <https://doi.org/10.1186/s12960-017-0205-4>
- [8] Badejo O, Sagay H, Abimbola S, Van Belle S. Confronting power in low places: historical analysis of medical dominance and role-boundary negotiation between health professions in Nigeria. *BMJ Glob Health*. 2020; 5(9): e003349. <https://doi.org/10.1136/bmjgh-2020-003349>
- [9] Opeyemi AA, Obeagu EI, Hassan AO. Enhancing quality healthcare in Nigeria through medical laboratory services: A review. *Medicine (Baltimore)*. 2024; 103(2): e36869. <https://doi.org/10.1097/MD.00000000000036869>
- [10] Salazar JH. Interprofessional education themes in a clinical laboratory sciences curriculum. *Am Soc Clin Lab Sci*. 2017; 30(2): 99-104. <https://doi.org/10.29074/ascls.30.2.99>
- [11] Emmanuel I, Abaniwo S, Nzekwe P, Richard SK, Abobarin O, Longwap A, et al. Laboratory Turnaround Time of Surgical Biopsies at a Histopathology Service in Nigeria. *Niger Med J*. 2020; 61(4): 180-183. https://doi.org/10.4103/nmj.NMJ_173_20
- [12] Solomon DH, Afisulahi AM. Barriers and enablers of interprofessional collaboration (IPC) among health workers in a Nigerian teaching hospital. *West Afr J Med*. 2023; 40(11 Suppl 1): S30.

- [13] National Industrial Court of Nigeria. Incorporated Trustees of Association of Medical Laboratory Scientists of Nigeria v. Lagos State Government & Ors (Suit No. NICN/LA/150/2022). Judgment delivered on February 14, 2022. NICN Judgments Law Report; 2022. Available from: <https://nicnadr.gov.ng/judgement/details.php?id=6891>
- [14] Erunke J. Medical lab scientists warn National Assembly over controversial health reform bills. Vanguard Newspaper [Internet]. 2026 Mar 29 [cited 2026 Jul 7]. Available from: <https://www.vanguardngr.com/2026/03/medical-lab-scientists-warn-nassemblies-over-controversial-health-bills/>
- [15] Tolu-Kolawole D. Medical Laboratory Scientists reject new Health Reform Bills HB: 2701. Punch Newspaper [Internet]. 2026 Mar 28 [cited 2026 Jul 7]. Available from: <https://punchng.com/medical-lab-scientists-reject-new-health-reform-bills/>
- [16] Uchegbu AC. Concern over silence on pathologists/lab scientists battle in public hospitals. The Eagle Online [Internet]. 2017 Apr 1 [cited 2026 Jul 7]. Available from: <https://theeagleonline.com.ng/concern-over-silence-on-pathologistslab-scientists-battle-in-hospitals-by-achilleus-chud-uchegbu/>
- [17] Elechi-Amadi K. MLS vs SLT controversy: the facts and folly of cross-professional intrusions in medical diagnostics. Med World Nigeria [Internet]. 2023 Jul 3 [cited 2026 Jul 7]. Available from: <https://medicalworldnigeria.com/post/MLS-vs-SLT-CONTROVERSY-THE-FACTS-AND-FOLLY-by-Dr-kemzi-Elechi-Amadi-BMLS-MSc-PhD-HMD-AM-LSCN?pid=65235>
- [18] National Industrial Court of Nigeria. Nigerian Union of Pharmacists, Medical Technologists and Professionals Allied to Medicine & Anor v. Obafemi Awolowo University Teaching Hospital Complex Management Board & 6 Ors. (Suit No. NICN/ABJ/284/2014). Judgement delivered on January 27, 2016. NICN Law Reports; 2016.
- [19] Ejiogu E. AMLSN leadership tussle: Health Minister has no power to issue directive through MLSCN. The Sun Newspaper [Internet]. 2026 Jan 4 [cited 2026 Jul 7]. Available from: <https://thesun.ng/amslsn-leadership-tussle>
- [20] Okpalakunne N. Healthcare workers want Senate to amend proposed MDCN Act re-enactment bill. Nigerian Business Day [Internet]. 2021 Feb 5 [cited 2026 Jul 7]. Available from: <https://stg18326.businessday.ng/health/article/health-workers-body-advocates-amendment-of-proposed-mdcn-act-2020/>
- [21] Damen MN. AMLSN rejects Medical and Dental Practitioners re-enactment bill over professional encroachment. Nigerian Tribune [Internet]. 2021 Feb 9 [cited 2026 Jul 7]. Available from: <https://tribuneonline.ng/amslsn-rejects-medical-and-dental-practitioners-re-enactment-bill/>
- [22] Oluyemi JA, Adejoke JA. Rivalry among health professionals in Nigeria: a tale of two giants. Int J Develop Manag Rev. 2020; 15(1): 343-52.
- [23] Salisu AI, Hauwa IK, Abubakar MA, Ramla F, Mukhtar IG, Nafisa NY. Inter-professional rivalry in Nigerian health sector: a search for a potential beginning. Kanem J Med Sci. 2020; 14(1): 18-23.
- [24] Omisore AG, Adesoji RO, Abioye-Kuteyi EA. Interprofessional Rivalry in Nigeria's Health Sector: A Comparison of Doctors and Other Health Workers' Views at a Secondary Care Center. Int Q Community Health Educ. 2017; 38(1): 9-16. <https://doi.org/10.1177/0272684X17748892>
- [25] Orth M, Averina M, Chatzipanagiotou S, Faure G, Haushofer A, Kusec V, et al. Opinion: redefining the role of the physician in laboratory medicine in the context of emerging technologies, personalised medicine and patient autonomy ('4P medicine'). J Clin Pathol. 2019; 72(3): 191-197. <https://doi.org/10.1136/jclinpath-2017-204734>
- [26] Mohammed ENA, Onavbavba G, Wilson DO, Adigwe OP. Understanding the Nature and Sources of Conflict Among Healthcare Professionals in Nigeria: A Qualitative Study. J Multidiscip Healthc. 2022; 15: 1979-1995. <https://doi.org/10.2147/JMDH.S374201>
- [27] Mohammed ENA. Knowledge, causes, and experience of inter-professional conflict and rivalry among healthcare professionals in Nigeria. BMC Health Serv Res. 2022; 22(1): 320. <https://doi.org/10.1186/s12913-022-07664-5>
- [28] Erhabor O, Okara GC, Adias TC, Erhabor T, Erhabor U. Professional autonomy in the running of medical diagnostic laboratories in Nigeria. J Med Lab Sci. 2020; 30(3): 107-35. <http://doi.org/10.5281/zenodo.4048920>
- [29] Panteghini M. The future of laboratory medicine: understanding the new pressures. Clin Biochem Rev. 2004; 25(4): 207-15.
- [30] Nwobodo HA. Medical laboratory scientists and the Public Health Laboratory Commodity Supply Chain Management in Nigeria. J Med Lab Sci. 2019; 29: 75-85.
- [31] Nigeria. Medical Laboratory Science Council of Nigeria Act (Act 11 of 2003), Cap. M25, Laws of the Federation of Nigeria 2004. Abuja: Federal Government of Nigeria; 2004.
- [32] Nigeria. Medical and Dental Practitioners Act, Cap M8, Laws of the Federation of Nigeria (LFN) 2004. Abuja: Federal Government of Nigeria; 2004.
- [33] National Postgraduate Medical College of Nigeria. Curriculum and training guidelines in pathology residency. Lagos: NPMCN Press; 2022.
- [34] West African College of Physicians. Faculty of Laboratory Medicine training manual. Accra: WACP Secretariat; 2023.
- [35] Halilu SD, Maiyegun AA, Aiyekomogbon JO, Shirama YB, Mutalub YB, Oyediji FJ. Interprofessional collaboration amongst healthcare workers of a tertiary hospital in North-Eastern Nigeria. Nig Postgrad Med J. 2024; 31(2): 163-9.
- [36] Ibiobu E, Efetobor GM, Ochekwu EB, Amakoromo TE. Legal and Regulatory Frameworks Governing Science Laboratory Practice: A Global and Nigerian Perspective. Int J Res Technopren Innov. 2026; 3(1): 83-98.

- [37] Ogechi Onyeaghala E, Abdulrahman AO, Olamijuwon PB, Oluwaseun P, Ifeanyi E. Medical laboratory science: pivotal role in health component of a new emerging Nigeria. *Int J Curr Res Chem Pharm Sci*. 2023; 10: 32-42.
- [38] Mohammed Y. The role of pathologists in patient care: a Nigerian perspective. *Caliph Med J*. 2022; 10 (1&2): 613-616.
- [39] Rafindadi AH. Elevating the practice of Pathology in Nigeria to the 21st Century standard. *Ann Trop Path*. 2014; 5(1): 5-17.
- [40] Archibong F, Asibong U, Okoye IE, Onyia TJ, Legogie A, Nformi KJ, et al. International best practice: Understanding the core difference between medical laboratory science and clinical laboratory medicine in Nigeria. *Nig J Med*. 2021; 30(2): 145-8. https://doi.org/10.4103/NJM.NJM_169_20
- [41] Archibong F, Atangwho A, Ayuk AE, Okoye IE, Atrogor M, Okokon IB. Medical law: exploring doctors' knowledge on the laws regulating clinical and medical laboratories in Nigeria. *Nig J Med*. 2019; 28(4): 386-392. <https://doi.org/10.4103/1115-2613.278630>
- [42] Pearse C, Scott S. A Review of Clinical Laboratory Education, Training and Progression: Historical Challenges, the Impact of COVID-19 and Future Considerations. *Br J Biomed Sci*. 2023; 80: 11266. <https://doi.org/10.3389/bjbs.2023.11266>
- [43] Rouse N, Rienties B. Readiness to Practice for Biomedical Scientists and Screen-Based Simulated Learning Experiences: A Scoping Review. *Information*. 2025; 16(9): 747. <https://doi.org/10.3390/info16090747Chicago/TurabianStyle>
- [44] Watson ID, Wilkie P, Hannan A, Beastall GH. Role of laboratory medicine in collaborative healthcare. *Clin Chem Lab Med*. 2018; 57(1): 134-42. <https://doi.org/10.1515/cclm-2017-0853>
- [45] Kapilashrami A. Situating Biomedical and Professional Monopoly at the Intersections of Structural, Ideational and Agentic Power Comment on "Power Dynamics Among Health Professionals in Nigeria: A Case Study of the Global Fund Policy Process". *Int J Health Policy Manag*. 2023; 12: 8019. <https://doi.org/10.34172/ijhpm.2023.8019>
- [46] Ehrmeyer SS. Satisfying regulatory and accreditation requirements for quality control. *Clin Lab Med*. 2013; 33(1): 27-40. <https://doi.org/10.1016/j.cll.2012.11.007>
- [47] Krasowski MD. Educational Case: Regulatory issues with laboratory testing. *Acad Path*. 2019; 6: 2374289519877549. <https://doi.org/10.1177/2374289519877549>
- [48] Jackson BR, Sendak MP, Solomonides A, Balu S, Sittig DF. Regulation of artificial intelligence in healthcare: Clinical Laboratory Improvement Amendments as a model. *J Am Med Inform Assoc*. 2025; 32(2): 404-407. <https://doi.org/10.1093/jamia/ocae296>
- [49] Shrivastava R, Poxon R, Rottinghaus E, Essop L, Sanon V, Chipeta Z, et al. Leveraging gains from African Center for Integrated Laboratory Training to combat HIV epidemic in sub-Saharan Africa. *BMC Health Serv Res*. 2021; 21(1): 22. <https://doi.org/10.1186/s12913-020-06005-8>
- [50] Volaric AK. Establishing sustainable collaborations in global pathology education. *Front Med (Lausanne)*. 2023; 10: 1346780. <https://doi.org/10.3389/fmed.2023.1346780>
- [51] Van Der Merwe N, Ramesar R, De Vries J. Whole Exome Sequencing in South Africa: Stakeholder Views on Return of Individual Research Results and Incidental Findings. *Front Genet*. 2022; 13: 864822. <https://doi.org/10.3389/fgene.2022.864822>
- [52] Ellapen MT, Ellapen TJ, Paul Y. The growth patterns of the medical technology profession in South Africa. *Afr J Lab Med*. 2021; 10(1): 1-5. <https://doi.org/10.4102/ajlm.v10i1.1164>
- [53] Adigwe OP, Mohammed ENA, Onavbavba G. Preventing and Mitigating Inter-Professional Conflict Among Healthcare Professionals in Nigeria. *J Healthc Leadersh*. 2023; 15: 1-9. <https://doi.org/10.2147/JHL.S392882>
- [54] Alubo O, Hunduh V. Medical dominance and resistance in Nigeria's health care system. *Int J Health Serv*. 2017; 47(4): 778-94. <https://doi.org/10.1177/0020731416675981>
- [55] Dangana A. Systemic Consequences and Effects of Interprofessional Rivalry on Health Systems and Services in Abuja: A Systematic Review. *Saudi J Med*. 2025; 10(5): 263-9. <https://doi.org/10.36348/sjm.2025.v10i05.007>
- [56] Nwobodo EO, Nwadinigwe UC, Anyehie UB, Ugwueze GC. Inter-professional conflict among healthcare teams in Nigeria: implications on quality of patient care. *Res Sq*. 2021; 10. <https://doi.org/10.37547/medical-fmospj-02-10-02>
- [57] Ogbonnaya LU, Ogbonnaya CE, Adeoye-Sunday IM. The perception of health professions on cause of interprofessional conflict in a tertiary health institution in Abakaliki, southeast Nigeria. *Nig J Med*. 2007; 16(2): 161-8. <https://doi.org/10.4314/njm.v16i2.37300>
- [58] Lambo E. Nigeria: Health officials fired after baby infected with HIV. *Mail & Guardian [Internet]*. 2006 Aug 3 [Cited 2026 Jul 7]. Available from: <https://mg.co.za/news/south-africa/2006-08-03-nigeria-health-officials-fired-after-baby-infected-with-hiv/>
- [59] Opara MC. Proving Medical Negligence in Nigeria: A Narrative Review of the Roles of Tribunals, Regulatory Bodies, and Councils. *Arch Curr Res Int*. 2025; 25(3): 310-8. <https://doi.org/10.9734/acri/2025/v25i31121>
- [60] Archibong F, Legogi A, Atangwho A, Nformi K, Nwafor NK. Knowledge and Perception of the Dichotomy between Medical Laboratory Science and Clinical Laboratory Medicine among Students of the University of Calabar, Nigeria. *Int J Sub-Saharan Afr Res*. 2024; 2(4): 114-23. <https://doi.org/10.5281/zenodo.14566039>
- [61] Koethe SM, Kroft SH. Hospital laboratory leadership and the dyad model of management. *Laboratory Medicine*. 2013; 44(2): 168-71. <https://doi.org/10.1309/LMU6EOR26CDVVLVS>
- [62] Adaran T, Jenrola O, Jegede F, Ojo O, Bakare A, Omiyale O, et al. Quality Management Systems implementation in public medical laboratories: A sustainable approach to health system strengthening in Lagos State, Nigeria. *PLoS One*. 2025; 20(6): e0319409. <https://doi.org/10.1371/journal.pone.0319409>

- [63] Stringer G, Ferguson J, Walshe K, Grigoroglou C, Allen T, Anderson M, et al. Shared clinical governance arrangements between NHS and independent acute hospitals in England: Findings from a national survey of senior leaders. *J Health Serv Res Policy*. 2026; 19: 13558196261431315.
<https://doi.org/10.1177/13558196261431315>