

Preparing Muslim Health Professionals for Ibaadah-Friendly AI-Driven Healthcare: A Narrative Critical Review of Islamic Ethico-Legal, Technological and Nigerian Health-System Perspectives

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Abstract

Introduction: Artificial intelligence (AI) is rapidly entering healthcare through diagnostic support, predictive analytics, administrative automation, patient engagement and population-health planning. For Muslim health professionals, these innovations raise a practical question: how can digital medicine support safe clinical care while preserving worship, dignity, privacy and moral accountability? This review reframes Ibaadah-friendly AI-driven healthcare as a Nigerian health-system concern rather than a narrow religious add-on.

Methodology: A narrative critical review was conducted using the source presentation on Ibaadah-friendly AI-driven healthcare as the primary conceptual stimulus. Peer-reviewed and official literature on AI ethics, Islamic bioethics, Ibaadah-friendly hospitals, Nigerian digital health policy, data protection, health financing and AI evaluation standards was purposively reviewed.

Results: Four themes emerged. First, AI adoption in Muslim health settings requires more than technical competence; it requires ethical judgement and human accountability. Second, Islamic ethico-legal principles can be translated into practical AI requirements, including protection of life, privacy, fairness, harm prevention, human oversight and public benefit. Third, Nigerian implementation must address informal-sector realities, high out-of-pocket payment, state-level variation, digital literacy, language diversity, data governance and provider incentives. Fourth, current faith-and-AI discussions often underdevelop actuarial design, lifecycle regulation, clinical validation, plural religious settings and measurable implementation indicators. The review proposes the MIZAN-AI Ibaadah-Friendly Health Architecture as a practical model for integrating Islamic ethics, AI governance and Nigeria's digital health agenda.

Conclusion: Ibaadah-friendly AI should be governed as a rights-respecting, evidence-informed and plural health-system intervention. It should enable worship where clinically appropriate, protect non-Muslim patients and staff from exclusion, and hold clinicians, institutions, regulators and vendors accountable. Nigeria needs locally validated AI tools, strong data protection, ethical procurement, patient appeal mechanisms, interfaith-sensitive implementation and research that measures health outcomes alongside spiritual-care quality.

Keywords: Artificial intelligence, Ibaadah-friendly healthcare, Islamic bioethics, Nigeria, Spiritual care.

Introduction

Artificial intelligence is increasingly promoted as a route to faster diagnosis, better access, safer workflows and more efficient population-health planning. In practice, AI may support image interpretation, triage, risk prediction, health education, remote monitoring, claims review, supply-chain management and clinical documentation. These functions are attractive in health systems with shortages of specialists, uneven rural access, weak referral systems, high out-of-pocket expenditure and

fragmented health records. They also carry familiar risks: privacy breach, algorithmic bias, opaque decision-making, unsafe automation, weak clinical validation and displacement of human accountability [1-8].

The source presentation, *Preparing Muslim Health Professionals for Ibaadah-Friendly AI-Driven Healthcare*, starts from this promise and tension. It argues that Muslim health professionals should combine technological competence with Islamic ethico-legal awareness, so that clinical settings can

protect life, serve dignity and support worship where this is clinically safe. Its central insight is important: AI is not morally neutral once it enters a ward, clinic, claims platform or public-health dashboard.

This paper treats the presentation as a valuable conceptual starting point and develops it into a Nigerian health-system review. The argument is not that hospitals should become sectarian spaces, nor that religious identity should determine access to care. Ibaadah-friendly healthcare means that institutions recognise the practical needs of Muslim patients and staff to fulfil religious duties where clinically appropriate. These may include prayer support, safe ablution or tayammum arrangements, halal nutrition, modesty-sensitive care, Ramadan medication advice and end-of-life spiritual support. In public and mixed Nigerian settings, such provisions should sit within a broader rights-based model that also respects Christian, traditional, secular and other patient needs.

Nigeria is a particularly important setting for this discussion. The country is religiously and culturally diverse, with Muslim-majority states, Christian-majority states, mixed communities and large urban plural centres. Health financing remains fragile, the informal sector is large, and many households still pay directly for care despite recent health-insurance reforms [9-12]. At the same time, Nigeria is expanding its digital-health ambition and has enacted a national data-protection law [13,14]. If AI is added to these reforms without careful governance, it may deepen inequity. If it is ethically designed, locally validated and properly regulated, it can strengthen access, safety, financial protection and spiritual-care responsiveness.

Methodology

This was a narrative critical review. A narrative approach was appropriate because the subject lies at the intersection of Islamic ethics, AI governance, health professional education, spiritual care, Nigerian health-system reform and health economics. The aim was not to pool effect sizes, but to build a conceptual and policy-relevant synthesis for IMAN Medical Journal.

The source presentation on Ibaadah-friendly AI-driven healthcare was used as the primary conceptual stimulus. Because full bibliographic details for the presentation were not supplied, it is acknowledged as

source material rather than retained as a numbered reference. The wider literature was purposively selected from peer-reviewed journals, WHO publications, Nigerian legal and policy documents, Islamic bioethics scholarship and empirical work on Islamic-friendly or Ibaadah-friendly hospitals. Search concepts included artificial intelligence in healthcare, AI ethics, regulatory considerations for AI in health, Islamic medical ethics, Maqasid al-Shariah and biomedicine, Ibaadah-friendly hospital, Shariah-compliant healthcare, Nigeria digital health, Nigeria Data Protection Act, National Health Insurance Authority Act, health financing, informal sector and algorithmic bias.

The synthesis proceeded in four stages. First, claims in the source presentation were grouped under AI benefits, ethical boundaries, Ibaadah-friendly care and professional preparation. Second, these themes were compared with Islamic ethico-legal principles and mainstream AI ethics. Third, the themes were mapped to Nigerian health-system functions: access, service delivery, spiritual care, financing, provider payment, data governance, regulation and workforce development. Fourth, the gaps identified were used to construct an original model, the MIZAN-AI Ibaadah-Friendly Health Architecture.

Results

Conceptual contribution of the source presentation

The presentation makes three useful contributions. First, it understands AI as more than a technical tool. It links AI adoption to Islamic moral concerns, especially preservation of life, professional accountability, ethical boundaries and spiritual fulfilment. Second, it recognises that Muslim health professionals require training that combines AI literacy with Islamic ethics, rather than leaving technological adoption to vendors or administrators alone. Third, it identifies practical Ibaadah-friendly actions, including prayer-sensitive scheduling, fasting-sensitive care and Shariah-compliant recommendations where these are safe and relevant.

These points are consistent with the wider Ibaadah-friendly healthcare literature. Ibaadah-friendly hospitals have been described as holistic clinical settings that help patients and staff fulfil religious duties while receiving or providing treatment [15]. Preliminary evidence from a Malaysian Ibaadah-friendly hospital setting suggests that staff training

may support knowledge, attitudes and practice, although the evidence base remains small and context-specific [16]. Studies from Islamic-friendly hospitals in Malaysia also suggest that halal and Muslim-friendly service attributes may influence patient satisfaction and loyalty [17].

The presentation is strongest where it treats professional work as morally accountable service. This is clinically important because AI can create distance between clinician and patient. A Muslim health professional cannot simply accept a machine output because it is fast, impressive or commercially endorsed. The clinician remains morally and legally responsible for interpreting AI outputs within clinical facts, patient values, Islamic principles where relevant, and the laws of the country.

Islamic ethico-legal foundations for Ibaadah-friendly AI

Islamic healthcare ethics is not limited to isolated legal rulings. It includes moral character, intention, trust, professional excellence, juristic reasoning, prevention of harm and pursuit of public benefit [18-20]. The Maqasid al-Shariah tradition is especially useful because it links healthcare decisions to the protection of life, intellect, religion, lineage, wealth and dignity. However, contemporary Islamic bioethics scholars also warn that Maqasid language can become vague unless it is tied to careful evidence, appropriate authority and concrete clinical reasoning [19,20].

For AI-driven healthcare, Islamic ethics can be translated into design and governance requirements. Hifz al-nafs supports early warning systems, clinical decision support and safe referral. Hifz al-aql supports mental health protection, informed consent and digital literacy. Amanah requires trustworthy data stewardship. Adl requires fairness audits and non-discriminatory benefit design. La darar wa la dirar requires patient-safety monitoring, cybersecurity and the right to challenge harmful outputs. Shura requires stakeholder participation, including patients, clinicians, women, disability advocates, Islamic scholars, Christian representatives and regulators in plural Nigerian settings.

A critical point is that AI has no moral agency in Islamic terms. Algorithms do not intend, repent, bear taklif or answer ethically in the way humans do. Responsibility must therefore remain with people and institutions: developers, procurers, clinicians, hospital boards, health financing agencies, regulators and professional bodies. This position is compatible with global AI ethics literature, which repeatedly emphasises transparency, responsibility, privacy, fairness, safety and non-maleficence [2,3,5-8].

Nigeria-specific implementation functions

In Nigeria, Ibaadah-friendly AI must be linked to service delivery rather than presented as a conference slogan. At primary-care level, AI could support community health workers with triage, maternal danger signs, immunisation reminders, health education, mental health screening, diabetes and hypertension follow-up, and referral navigation. These tools should be available in Hausa, Yoruba, Igbo, Pidgin and other locally relevant languages, and should work on low-end devices where internet access is weak.

At secondary and tertiary levels, AI may support radiology, pathology, laboratory decision support, medicine safety, theatre scheduling, intensive-care risk prediction, referral prioritisation and quality improvement. Ibaadah-friendliness in these settings includes prayer facilitation, spiritual care, modesty-sensitive workflows, halal food systems, Ramadan medication planning and end-of-life support. These supports must not delay emergency care or override evidence-based treatment.

At health-financing level, AI can assist enrolment, claims management, fraud detection, capitation monitoring, benefit-package design and subsidy targeting. This is where actuarial design becomes ethically central. If AI uses previous healthcare spending as a proxy for need, it may underrate poor and rural people because they historically used less care due to cost and distance. Obermeyer and colleagues showed how cost-based proxies can reproduce inequity in population-health algorithms [21]. Nigeria should therefore use need-sensitive

Table 1: Mapping Ibaadah-friendly healthcare, AI mechanisms and Islamic ethico-legal values

Domain	Islamic ethico-legal value	AI-driven healthcare translation	Safeguards and measurable indicators
Clinical decision support	Hifz al-nafs; la darar	AI-assisted triage, diagnostic support, deterioration alerts and referral prompts that protect life while keeping clinicians responsible.	Local validation; clinician override; false-negative audits; incident reporting; documented human review.
Prayer and worship facilitation	Hifz al-din; rahmah; tayseer	Bedside prayer guidance, prayer-time-aware scheduling, reminders for mobile staff, and support for ablution or tayammum where clinically safe.	No coercion; clinical safety first; privacy-respecting prompts; equivalent support for other faith needs in public hospitals.
Ramadan and fasting-sensitive care	Maslahah; hifz al-nafs; rukhsah	Risk stratification for diabetes, pregnancy, renal disease, mental illness and medication timing during Ramadan.	Use accepted clinical guidance; pre-Ramadan review; shared decision-making; clear advice when fasting is unsafe.
Modesty, gender dignity and communication	Karama; haya; amanah	Booking and staff-allocation systems that support reasonable gender preference, chaperones and respectful communication when feasible.	Emergency care must not be delayed; anti-discrimination rules; patient preference recorded but not absolutised.
Halal nutrition and medicines	Hifz al-din; tabayyun; darurah	Medication and diet decision support that flags halal concerns and clinically acceptable alternatives where available.	Pharmacist verification; necessity exceptions; avoid misinformation; document patient choice.
Data stewardship	Amanah; satr; hurmah	Electronic records, remote monitoring and AI models governed by minimum necessary data, privacy by design and role-based access.	NDPA compliance; data protection officers; audit trails; breach response; explicit governance for religious and health data.
Population health and financing	Adl; hifz al-mal; maslahah	AI-assisted enrolment, subsidy targeting, fraud detection, claims review and risk adjustment for insurance schemes.	Avoid adverse selection; appeal mechanisms; equity impact assessment; do not use cost alone as proxy for need.
Health professional formation	Ihsan; niyyah; adab	Curricula combining AI literacy, Islamic bioethics, cultural humility, communication skills and patient-safety practice.	Competency assessment; simulation; continuing professional development; interprofessional learning.
Plural public accountability	Shura; adl; muwatanah	Governance structures that include Muslim and non-Muslim stakeholders in high-impact AI decisions.	Public consultation; transparent procurement; patient rights; interfaith-sensitive implementation.

variables, not claims cost alone, in health-financing AI. At quaternary-prevention level, AI should protect patients from overdiagnosis, unnecessary screening, excessive digital surveillance and commercially

driven interventions. In Islamic terms, avoiding harm includes avoiding waste, anxiety,

stigma and medicalisation without benefit. An Ibaadah-friendly digital system should help patients receive necessary care, not multiply tests or applications simply because technology makes them available.

Strengths and gaps in the source write-up

The source write-up is constructive because it neither rejects AI as alien innovation nor accepts it uncritically as inevitable progress. It rightly places AI within Islamic accountability and professional preparation. It also highlights AI's potential for diagnostics, predictive analytics, resource allocation, rural access and Hajj-related risk management.

Its limitations are also important. First, several citations in the earlier draft were not aligned with the claims they were supporting. The most important correction is that the author-supplied source presentation should not be retained as a numbered published reference until its full bibliographic details are confirmed. Second, the presentation speaks generally about ethical boundaries but does not specify AI lifecycle governance: dataset selection, model development, local validation, procurement, clinical deployment, monitoring, incident reporting, model updating and withdrawal.

Third, the earlier draft underdeveloped actuarial design and provider incentives. AI may influence who is enrolled, who is subsidised, which claims are paid and which providers are sanctioned. These are not minor administrative issues; they determine access and financial protection. Fourth, the draft needed stronger attention to plural implementation. In Nigeria, an Ibaadah-friendly model must be strong enough to serve Muslim patients and careful enough to protect non-Muslims from exclusion, discomfort or religious pressure.

Finally, the model must be more inclusive. Women, people with disabilities, older adults, low-literacy patients, internally displaced persons, rural communities and informal-sector workers can easily be excluded by digital systems. An Islamic ethic of justice cannot be satisfied by an application that only educated smartphone users can use.

The proposed MIZAN-AI Ibaadah-Friendly Health Architecture

This review proposes the MIZAN-AI Ibaadah-Friendly Health Architecture as a practical model for integrating Islamic psychoeducation, AI governance

and Nigerian health-system design. Mizan means balance. The model treats AI as useful only when it balances innovation with worship facilitation, patient safety, public accountability, financial protection and plural citizenship.

M stands for Maqasid-centred purpose: every AI tool should show how it protects life, intellect, dignity, wealth, family or lawful religious practice. I stands for Ibaadah facilitation without coercion: health systems should make worship possible where clinically safe while respecting non-Muslim patients and staff. Z stands for zero-harm lifecycle governance: AI tools require risk assessment, local validation, cyber-security, monitoring and withdrawal pathways. A stands for actuarial fairness and access: financing algorithms should reduce, not automate, adverse selection, claim denial and exclusion of the poor. N stands for Nigerian plural implementation: design must fit Muslim-majority, mixed, urban, rural, humanitarian and informal-sector realities. AI stands for accountable and interoperable intelligence: digital tools should connect to Nigeria's health architecture and have named human accountability.

MIZAN-AI therefore avoids two extremes. It does not reduce Islamic healthcare to prayer rooms and halal meals alone. It also does not reduce AI ethics to abstract transparency statements. It places worship, clinical safety, health economics, data governance and plural public responsibility in one implementation architecture.

Discussion

From Muslim-friendly symbols to accountable care

Ibaadah-friendly healthcare should begin with real patient needs. A prayer space is valuable, but it is not enough. Patients also need safe diagnosis, competent treatment, transparent billing, confidentiality, respectful staff, referral access and protection from unnecessary harm. AI may help deliver some of these functions, but only if it is embedded in accountable clinical systems.

The risk of symbolic compliance is significant. A hospital may advertise itself as Muslim-friendly while failing to protect patient data, ignoring women's access barriers, delaying emergency care, or using unvalidated AI tools. Islamic ethics should challenge this by asking whether institutional

Table 2: Nigeria-specific implementation pathways and risks for Ibaadah-friendly AI-driven healthcare

Setting or function	Implementation pathway	Key risks	Governance response
Muslim-majority states	Integrate Ibaadah-friendly standards into state hospitals, primary-care centres, health-worker CPD and state health insurance schemes.	Religious overreach; weak digital infrastructure; gender access barriers; variable clinical governance.	State-level IFH-AI guidelines; interprofessional training; women-inclusive governance; clinical-safety standards.
Mixed communities	Offer worship-sensitive care as a patient-centred service rather than a sectarian identity marker.	Suspicion, religious competition, staff discomfort or unequal treatment.	Interfaith patient-rights charter; equal accommodation policy; transparent communication.
Urban plural settings	Deploy AI for appointment systems, telemedicine, referrals, health education and specialist decision support across diverse populations.	Digital exclusion, language barriers, commercial overuse, privacy breaches.	Multilingual design; consent; NDPA-compliant data systems; independent audit.
Informal-sector financing	Use cooperatives, mosques, professional associations and trade groups to support enrolment, premium reminders and subsidy targeting.	Adverse selection, mistrust, exclusion of high-risk households and opaque claims denial.	Need-based risk adjustment; pooled enrolment; appeals; public reporting of denied claims.
Primary healthcare	AI-assisted triage, maternal danger-sign prompts, chronic disease follow-up, immunisation reminders and basic spiritual-care prompts.	False reassurance; lack of referral capacity; poor internet; inadequate supervision.	Human-in-the-loop protocols; offline tools; referral directories; supportive supervision.
Secondary and tertiary hospitals	AI for imaging, laboratory workflows, medicine safety, bed management, theatre scheduling and Ramadan medication planning.	Unsafe imported models; overreliance; liability gaps; workflow disruption.	Local validation; multidisciplinary AI committee; professional accountability; incident reporting.
Mental health and addiction care	Faith-sensitive psychoeducation, digital self-management, crisis triage and culturally adapted mental health communication.	Stigma, privacy breach, spiritual bypassing and replacement of clinical treatment with sermons.	Confidential platforms; evidence-based care; referral pathways; clinician and chaplain role clarity.
Hajj, Umrah and mass gatherings	AI-assisted risk stratification, heat-risk alerts, medication reminders and surveillance for pilgrims and local gatherings.	Data sharing without consent; panic alerts; exclusion of vulnerable pilgrims without counselling.	Clear consent; clinical review; pre-travel counselling; public-health oversight.
Procurement and regulation	Require ethical, clinical, cyber-security and Shariah-sensitive review before deployment in faith-based or public facilities.	Vendor capture, black-box systems, weak evaluation and poor accountability.	Transparent procurement; evaluation standards; regulatory sandbox; post-market monitoring.
Quaternary prevention	Use AI to flag unnecessary tests, duplicate prescriptions and low-value interventions.	Under-treatment if cost control dominates; moralising patient choices.	Clinical governance; patient appeal; quality metrics; ethics committee oversight.

actions preserve life, reduce harm, treat people fairly and fulfil trust. In this sense, Ibaadah-friendliness is a quality-improvement and governance agenda, not only a spiritual-care agenda. The same principle applies to AI. A tool that sends prayer reminders but misclassifies clinical risk is not ethically acceptable. A claims algorithm that detects fraud but wrongly rejects care for poor patients is not just administratively defective; it violates justice. A chatbot that gives confident religious-medical advice without clinical supervision may cause spiritual and physical harm. Muslim health professionals therefore need both technical competence and ethical discernment.

Implementation across Nigerian religious and social settings

In Muslim-majority states, Ibaadah-friendly AI can be integrated more visibly into public and faith-based hospitals, state health insurance schemes, Islamic medical associations and health-worker training. Visibility should not become coercion. Public hospitals must remain open to all citizens, and staff should be trained to support worship without forcing ritual observance, judging patients or delaying clinical care.

In mixed communities, implementation should emphasise patient-centred spiritual accommodation. A Muslim patient may need assistance with prayer, Ramadan advice or halal nutrition. A Christian patient may need pastoral care. A patient with no religious affiliation may want privacy and quiet. A plural model reduces suspicion because it frames Ibaadah-friendly care as part of dignity-sensitive healthcare rather than religious competition.

In urban plural settings, AI can help coordinate complex services across public hospitals, private facilities, faith-based providers, pharmacies, laboratories and insurance platforms. The ethical burden is high because data flows are larger and commercial interests are stronger. Lagos, Abuja, Kano, Kaduna, Ilorin and Port Harcourt will require strong privacy governance, multilingual patient engagement and procurement rules that prevent vendors from exploiting weak regulation.

In rural and informal-sector settings, the central question is not whether AI is sophisticated, but whether it solves real access problems. Voice-based tools, community health worker support, USSD

systems, cooperative enrolment platforms and simple decision support may be more useful than expensive hospital dashboards. Islamic cooperative structures, zakat agencies, waqf boards and professional associations can support education and enrolment, but they should be linked to regulated health-financing schemes to avoid fragmentation.

Actuarial design, adverse selection and provider incentives

The most neglected area in many faith-and-AI discussions is actuarial design. Health insurance depends on enrolment, pooling, benefit design, provider payment and claims management. AI can assist each function. It can identify high-risk groups, project utilisation, detect fraud and support targeted subsidies. It can also enable adverse selection if insurers avoid high-risk patients or design products that attract only healthy enrollees.

Islamic ethics offers a corrective. Ta'awun and takaful-oriented thinking emphasise mutual protection and risk sharing. Adl requires fair treatment of high-risk patients, not their exclusion. Hifz al-mal protects household wealth from catastrophic expenditure and also protects pooled funds from fraud. For Nigeria, this means AI in health financing should be governed by need-based risk adjustment, transparent denial reasons, appeal rights, anti-cream-skimming rules and regulatory oversight.

Provider incentives are equally important. AI-driven claims review may reduce fraud, but if poorly designed it can punish legitimate providers or delay reimbursement. AI-assisted capitation may support efficiency, but it can encourage under-service if quality monitoring is weak. Faith-based hospitals should therefore adopt AI only with clear provider-payment rules, patient-safety indicators and dispute-resolution pathways.

Regulation, data protection and clinical validation

WHO guidance emphasises that AI for health should be ethical, safe, transparent, inclusive, accountable and sustainable [2,3]. These principles are directly relevant to Nigeria. The Nigeria Data Protection Act 2023 provides a legal framework for protecting personal data and establishes the Nigeria Data Protection Commission [14]. AI systems used in Ibaadah-friendly healthcare may process both health data and religiously sensitive information. This creates a double duty of protection.

Clinical validation should be non-negotiable. AI developed on foreign datasets may not perform well in Nigerian populations, languages, disease patterns, imaging quality, laboratory systems or clinical workflows. Reporting standards such as CONSORT-AI, SPIRIT-AI and DECIDE-AI provide useful expectations for transparent evaluation of AI interventions and decision-support systems [22-24]. IMAN, teaching hospitals and regulators can adapt these standards into local review templates for AI procurement, clinical trials and implementation research.

Nigeria also needs a practical regulatory pathway. This could include an AI-health ethics review checklist, a national register of high-risk clinical AI tools, post-deployment incident reporting, cybersecurity requirements, procurement transparency and patient appeal mechanisms. Islamic ethics committees can contribute, but they should not replace statutory regulators, hospital ethics committees, professional councils or data-protection authorities.

Training Muslim health professionals

Muslim health professionals need a layered curriculum. The first layer is AI literacy: what AI can do, what it cannot do, what data bias means, and how risk scores should be interpreted. The second layer is clinical safety: when to trust, question, override or escalate AI outputs. The third layer is Islamic bioethics: Maqasid, amanah, adl, ihsan, la darar, shura, necessity and public benefit. The fourth layer is Nigerian health systems: NHIA, state insurance schemes, primary care, informal-sector realities, data protection and plural citizenship.

Training should use case-based learning rather than abstract lectures alone. Cases may include Ramadan insulin adjustment, AI-assisted triage in a rural clinic, prayer scheduling in a busy ward, gender preference in emergency care, chatbot advice for anxiety, automated claims denial for a diabetic patient, and AI surveillance during Hajj preparation. Ramadan-related clinical decisions and mass-gathering health risks should be taught with reference to established clinical and public-health guidance [25,26]. Simulation can teach clinicians how to integrate evidence, patient preference, Islamic guidance and legal responsibility.

Psychoeducation is also essential. Patients should understand that Islamic spiritual resources can

support coping, hope and adherence, but they do not cancel the need for evidence-based treatment. Clinicians should avoid spiritual bypassing, where religious language is used to minimise depression, anxiety, trauma, addiction, domestic violence or chronic disease. The ethical task is integration, not substitution.

Practical policy recommendations

IMAN and partner institutions should develop a Nigerian Ibaadah-Friendly AI Healthcare Guideline covering worship facilitation, AI ethics, privacy, clinical validation, procurement and plural patient rights.

Federal and state health authorities should require local validation, risk classification and post-deployment monitoring for high-risk AI tools used in clinical or financing decisions.

Hospitals adopting Ibaadah-friendly models should implement worship support as part of quality and patient-centred care, while explicitly protecting non-Muslim patients and staff from exclusion or pressure.

The Nigeria Data Protection Commission, health regulators and hospital boards should treat health, biometric and religious data as high-sensitivity data requiring strict governance.

State health insurance agencies and HMOs should subject AI claims, enrolment and risk-scoring systems to fairness audits, especially for poor, rural, disabled, female and informal-sector populations.

Medical, nursing and allied health curricula should include AI literacy, Islamic medical ethics, cultural humility, data protection and case-based Ibaadah-friendly care.

Faith-based hospitals, mosques, zakat bodies, waqf boards and cooperatives should support digital health education and enrolment, but should link financing efforts to regulated schemes to prevent fragmentation.

Research funders should support Nigerian studies on Ibaadah-friendly healthcare outcomes, AI acceptability, algorithmic fairness, Ramadan-related digital care, spiritual-care quality and implementation in mixed religious settings.

Conclusion

Ibaadah-friendly AI-driven healthcare is a promising but demanding idea. Its value lies in bringing together

spiritual care, clinical excellence, responsible innovation, fairness and health-system accountability. The source presentation makes an important contribution by placing Muslim professional preparation at the centre of AI adoption. This review strengthens that contribution by embedding it in Islamic bioethics, Nigerian health financing, data governance, plural public service and AI evaluation standards.

The central argument is that Ibaadah-friendly AI should not be reduced to prayer reminders or halal labels. It should help preserve life, dignity, privacy, intellect, wealth and lawful worship. It should also protect patients from unsafe automation, exclusion, overmedicalisation and unjust financial decisions. In Nigeria, this requires attention to Muslim-majority states, mixed communities, urban plural settings, rural primary care and the informal sector.

The proposed MIZAN-AI architecture offers a practical pathway. It asks every AI system to justify its purpose, support worship without coercion, prevent harm across its lifecycle, protect actuarial fairness, fit Nigerian plural realities and remain accountable through interoperable systems. Future work should move from conceptual advocacy to empirical evaluation, including patient outcomes, staff competence, spiritual-care quality, equity indicators, claims fairness and safety events.

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