APPLICABILITY OF ARTIFICIAL INTELLIGENCE IN THE NIGERIAN HEALTHCARE SECTOR: AN IMPERATIVE FOR A LEGAL FRAMEWORK

BY
DR. NGOZI EUNICE EMEKA*

Abstract

The use of AI technology is now prevalent across the world and the emergence of artificial intelligence (AI) in healthcare has been trailblazing, reshaping the way we diagnose, treat and monitor patients. This technology is drastically improving healthcare research and outcomes by producing more accurate diagnoses and enabling more personalized treatments. At present, Nigeria has no legislative framework for dealing with issues arising from the use of AI in the Nigerian healthcare sector, some of these issues includes; increased security risk, cyber-attacks, medical professionals training complications etc. The primary aim of this paper is to accentuate the need for a legal framework for dealing with issues arising from the use of AI systems in the Nigerian healthcare sector. Consequently, the study adopted the doctrinal research methodology, which involves examining journal articles, textbooks, periodical articles and the likes. The study found that despite there being lots of positive comments associated with artificial intelligence in the Nigerian healthcare sector there are also a lot of negative remarks on the application of AI in the Nigeria healthcare sector, one of which is the lack of a legal framework regulating the use of AI in the healthcare sector, the study also found that medical professionals are likely to grapple with legal issues that may arise as hospitals begin, slowly but inevitably, to introduce AI in the Nigerian healthcare sector. The study amongst others, recommended the enactment of a legislation targeted at supporting the use of Artificial Intelligence to expand access to healthcare and eliminating or minimizing the risks presently associated with AI.

Introduction

Artificial Intelligence (AI), has been playing a vital role in the world in the past few decades. But the most important field where AI is growing rapidly is the medical field, especially in treatment management and diagnostic.[1]AI has countless applications in healthcare that is, from finding links between genetic codes to driving robots used in surgery process, in fact, it is reinventing, and it has been a boon to the healthcare industry. AI has the potential to revolutionize various aspects of the Nigerian Health Sector, such as diagnostics, treatment planning, drug development, patient monitoring, and administrative processes. AI in healthcare has opened up new possibilities for improving patient outcomes, enhancing efficiency, and reducing costs. It has the ability to analyze vast amounts of medical data, identify patterns, and generate insights that can aid in accurate

---

* Ngozi Eunice Emeka, PhD, LL.M, B.L, LLB; Department of International Law and Jurisprudence, Faculty of Law, Nnamdi Azikiwe University, Awka, Nigeria, Email: ne.nwafor@unizik.edu.ng, 07035114683.

[1]J Puaschunder& D Feierabend. Artificial Intelligence in the Healthcare Sector. SSRN Electronic Journal (2018).

diagnosis, personalized treatments, and proactive healthcare management. Moreover, AI can automate repetitive tasks, streamline administrative processes, and improve the overall delivery of care.

These AI applications in healthcare are still evolving, and while they offer numerous benefits, there are also ethical, legal, and regulatory considerations to be addressed. Data privacy, patient consent, biases in algorithms, and regulatory compliance are crucial factors that need to be carefully managed to ensure the reliability and safety of AI-based healthcare systems. Issues of liability and accountability may also arise when AI systems are used in decision-making processes that typically involved human professionals.

In Nigeria, there is currently no specific law or regulation that directly regulates the use of AI in the Nigerian Heath Sector. The National Health Act which provides a legal framework for the regulation, development and management of the Nigeria's Health System merely under section 26 provides for the protection and lawful use of patient's medical and health records while the Nigerian Data Protection Act 2023 serves as a cornerstone for addressing data privacy and protection concerns. Despite the following, these laws are limited and do not entirely address the vast majority of legal concerns associated with the use of AI in the Nigerian Health Sector.

Since AI has the potential to revolutionize the Nigerian healthcare industry, the study therefore, emphasize the need for robust regulations on the applicability of AI in the Nigerian healthcare sector to contribute to the advancement of healthcare and benefit patients, healthcare professionals, and the industry as a whole.

1. What is AI?

Experts in the field of AI technology have provided technical definitions of AI. The High-Level Expert Group on Artificial Intelligence (AI HLEG)[2] defined AI systems as

> "… software systems designed by humans that, given a complex goal, act in the physical or digital dimension by perceiving their environment through data acquisition, interpreting the collected structured or unstructured data, reasoning on the knowledge, or processing the information, derived from this data and deciding the best action(s) to take to achieve the given goal."[3]

In the National Artificial Intelligence Initiative Act, 2020 enacted by the Congress of the United States, "artificial intelligence" is defined as

> "a machine- based system that can, for a given set of human-defined objectives, make predictions, recommendations or decisions influencing real or virtual environments."[4]

---

[2] A group of 52 experts set up by the European Commission to advise and support the Commission on the implementation of the European initiative on AI.

[3] Ethics Guidelines for Trustworthy AI published by the High-Level Expert Group on Artificial Intelligence (AI) on 8 April 2019.

[4] 15 U.S.C.A. § 9401(3)

The European Union (EU) Artificial Intelligence Act[5] defines "AI system" as

> "… a machine-based system that is designed to operate with varying levels of autonomy and that may exhibit adaptiveness after deployment, and that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments."

The common thread running through the technical definitions set out above is that AI systems are machine-based. For centuries, humans have used machines to assist in carrying out varied functions. For example, in forensic science, machines have been used in areas such as ballistics, toxicology, fingerprints and DNA identification to produce useful results. Machines have also been used to measure alcohol levels in humans. For decades, computers have been used to process vast amounts of data and to make mathematical calculations within seconds, tasks that are humanly impossible to perform. However, there is a remarkable difference between AI machine systems and the traditional machines referred to above. The traditional machines of the past decades are generally operated by humans and under the direct control of humans. Humans determine the parameters of the operation of the machine, they control the data and are directly responsible for the outcome. The human operator is in a position to fully explain the processes, from input to output, by which the results are achieved. By contrast, an AI system refers to the ability of a machine to learn from raw data inputted into it and replicate human intelligence by performing tasks that humans would normally perform, but without any direct human input or control over the process by which it produces outcomes. Eftychia Bampasika put it succinctly: "Core to the concept of AI … is the notion of an agent capable of taking relatively autonomous decisions, depending on its perception and cognition of its environment."[6]

The two main categories of AI systems:

There are two main categories of AI systems. These are the expert systems and the machine learning systems (which include neural networks). An expert system has been described as one "composed of a database (the "knowledge base") containing relevant information about the subject matter of the system and the program (the "inference engine") that applies the rules of logic and probability to the knowledge base to draw conclusions."[7]

Expert systems[8] depend on a database of detailed specialized knowledge and rules provided by experts in a specific field of knowledge. The inputted database necessarily contains relevant facts, rules and cases which the machine processes by logical reasoning in response to the user's query, and produces an intelligent conclusion. Because expert systems rely on specialized knowledge provided by human experts in a given field and

---

5 Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024, which lay down directly applicable harmonised rules on artificial intelligence. See Article 3(1) thereof.

6 E Bampasika, "Artificial Intelligence as Evidence in Criminal Trial." WAIEL (2020). at p. 22.

7 W Andrew. S. D. Jurs, "Machines Like Me: A Proposal on the Admissibility of Artificial Intelligent Expert Testimony." (2024) Pepperdine Law Review Vol. 51(No. 4): 71. at p. 616.

8 Although there are varieties of expert systems, their basic characteristics remain essentially the same.

apply the rules of logic and probability in arriving at conclusions, their conclusions are relatively easy to explain. Thus, expert systems are regarded as "open-box" systems. Expert systems replicate the judgment of a human expert in a given field of knowledge, for example, fingerprints and DNA identification. Because they do this by automation of routine tasks, they can process vast amounts of data and resolve queries within seconds. This saves time and increases productivity.

In contrast, machine learning systems refer to machines that are programmed to learn patterns and relationships from the raw data inputted into them, and to autonomously produce results from their learning experiences. While humans input the raw data, the algorithmic processing of the raw data by which the system makes its conclusions and recommendations does not follow rules and logical reasoning set by the programmers. In between the inputting of the raw data and the output of conclusions and recommendations, there is a "black box" of algorithmic processing and calculations autonomously carried out by the system that is largely unexplainable even by the programmers. Thus, no one, including the programmers, may be able to explain how a particular result, although accurate, was arrived at. For this reason, machine learning systems are regarded as "closed box" systems.

2. Various uses of AI technology in Healthcare and how they can serve in the Nigerian Healthcare Sector

Artificial intelligence is revolutionizing the field of healthcare, offering enormous potential to improve patient care, improve clinical decision-making, simplify administrative tasks and transform healthcare delivery. Here are some key areas where AI is used in healthcare:

i. Health Administration: AI can simplify administrative tasks in healthcare, such as scheduling appointments, collecting co-payments from patients, or admitting patients. This can reduce the administrative burden on healthcare providers, improve operational efficiency and improve the overall patient experience.[9]

ii. Medical Diagnosis: AI algorithms can analyze massive amounts of medical data, such as medical images, lab results, and patient records, to help healthcare professionals diagnose diseases with greater accuracy and speed. For example, artificial intelligence can help radiologists detect early signs of breast cancer in mammograms or identify abnormalities in X-rays and CT scans. An example of the use of artificial intelligence[10] in medical diagnostics is the field of radiology, where artificial intelligence algorithms can analyze medical images to help radiologists detect and diagnose various conditions. For example, AI is used in the diagnosis of breast cancer on mammograms. Breast cancer is one of the most common cancers in women, and mammography is a widely used tool for its detection. However, mammograms can be complex to interpret and false-positive and false-negative results can occur, leading to unnecessary follow-up tests or missed

---

9 P Hamet, & J Tremblay , Artificial intelligence in medicine. Metabolism ,(2017) 69 , S36-S40.

10 MMH Shandhi, & JP Dunn , AI in medicine: Where are we now and where are we going ? Cell Reports Medicine ,(2022) 3 (12), 100861.

diagnoses. Artificial intelligence algorithms can improve the accuracy and efficiency of mammogram interpretation by helping radiologists identify potential abnormalities. The use of artificial intelligence in mammography interpretation has shown promising results in research studies and clinical trials. AI algorithms for medical diagnosis, including breast cancer detection, are not intended to replace human radiologists. They are designed to increase the expertise of healthcare professionals and provide them with additional tools to help them make decisions.

iii. Robotic Surgery: Robotic surgery, assisted by AI systems, allows for more precise and less invasive procedures. Surgeons can use robotic tools controlled by AI algorithms to perform complex surgical procedures with greater accuracy, reduced trauma, and improved patient outcomes.

iv. Telemedicine: Telemedicine, facilitated by AI technology, enables remote consultation and treatment, particularly beneficial in rural or remote areas. AI- powered Chabot can triage patients, provide preliminary assessments, and guide them to appropriate medical resources. Additionally, telemedicine platforms can utilize AI algorithms to analyze patient symptoms or medical history and provide recommendations or personalized treatment plans.[11]

v. Drug Creation: Every system that adapts Artificial Intelligence has an added advantage of accomplishing its task within a short period. In healthcare, analysts have been taking longer to generalize findings, but with health systems that have Machine Learning algorithms are used to decrease drug discovery times. For example, developing pharmaceuticals using clinical test methods will take clinicians and analysts many years and huge cost.[12] Therefore employing the use of AI to restore parts of the discovery process of a drug will be cheaper, quicker, and safer. However, it might not be possible to employ AI technology in all the drug discovery processes. Rather it assists with stages such as the process of discovering new compounds that can be possible drugs. Also, AI can be used to identify the application of compounds stored in the laboratory that were previously tested. For example, after the outbreak of Ebola in West Africa, Artificial Intelligence technology was used to scan accessible medicines that might be redesigned to fight the disease.[13]

vi. Treatment Design: Advanced treatment in healthcare has resulted from the adoption of AI technology, which has upgraded the treatment tactics and aiding the analysis process that provides a satisfying treatment strategy as well as monitoring treatments. Also, Artificial Intelligence has the capabilities of analyzing and accurately recognizing signs and symptoms of medical images such as X-rays, CT scan, MRI, and ultrasounds. This makes there to be faster diagnostics, thereby reducing the period at which a patient waits

---

11AN Ramesh ,C Kambhampati , JR Monson & PJ Drew, Artificial intelligence in medicine. Annals of the Royal College of Surgeons of England ,(2004) 86 (5), 334.

12S Ibric, Z Djuric, J Parojcic& J Petrovic, Artificial intelligence in pharmaceutical product formulation: Neural computing. Chemical Industry and Chemical Engineering Quarterly, (2009) 15(4), 227- 236.

13 P Agrawal, Artificial Intelligence in Drug Discovery and Development. *Journal of Pharmacovigilance*,(2018) 06(02).

for diagnosis from months to hours. Also, AI has facilitated the invention of medical assistant systems such as Modernizing Medicine which gathers information about a patient, record diagnosis, aid in the testing process, and arrange billing information using the cloud computing.[14] Also, the technique of using a public database that holds information from many patient and doctor cases, assists physicians to arrive at better-personalized treatments or discover similar cases using AI technology to extract data. In future, clinicians will be required to adopt more extensive AI techniques to cater for better care design and to satisfy patients with long their long haul treatment program.

vii. Managing Medical Data and Records: Data management is the vital role of Artificial Intelligence in healthcare where it is responsible for collecting or gathering, storing, normalizing, and tracing the source of the data. Compiling and investigating data are the essential steps in healthcare, therefore data management the widely used technique in Artificial Intelligence. Furthermore, healthcare data is generated in large volumes every day; this has made more data analytic tools to be implemented. These tools have helped healthcare organizations to collaborate with patients and make informed decisions on large data and storing it to reduce wastage.[15]

3. Challenges Related to AI Practices within the Legal and Ethical Responsibilities
Despite the great potential of Artificial intelligence which is now being applied to many different fields, the legal and ethical implications of AI applications cannot be overlooked. The application of AI in clinical practice has enormous promise to improve healthcare, but it also poses ethical issues that we must now address Ethical considerations focus on moral principles, fairness, and societal impact, while legal issues revolve around compliance with laws and regulations. To fully achieve the potential of AI in healthcare, major ethical issues must be addressed:[16]

i. **Privacy and Data Security:** AI algorithms require access to vast amounts of patient data for training and analysis. This raises concerns regarding patient privacy and the security of sensitive health information. Balancing the need for data-driven healthcare advancements with individual privacy rights is a significant ethical challenge.

ii. **Algorithmic Bias and Discrimination:** Biased result is another concern raised in the used of AI in Saudi hospitals. AI algorithms can inadvertently perpetuate biases present in the training data, potentially leading to discriminatory outcomes in healthcare delivery. Addressing algorithmic bias is crucial to ensure fair and equitable treatment for all patients, regardless of their demographics or background. Since AI technology learns from data, twisted data may be a major concern for the patient.[17] The implicit racial, gender or other

---

14 N R Tadapaneni, Cloud Computing: Opportunities and Challenges. SSRN Electronic Journal. (2018) 10.2139/ssrn.3563342.

15 O Ali., A Shrestha, J Soar, & S F Wamba, Cloud computing-enabled healthcare opportunities, issues, and applications: A systematic review. *International Journal of Information Management*, (2018) 43, 146-158.

16 M. B Trangpodar& V. K Sharma ,'The impact of artificial intelligence on healthcare industry: A comprehensive legal study' *International Journal of Law, Policy and Social Review (IJLPSR) 2023, 104-110.*

17 R Challen, J Denny, M Pitt, L Gompels, T Edwards,& K Tsaneva-Atanasova, Artificial intelligence, bias and clinical safety. BMJ Quality and Safety, (2019) 28(3), 231–237.

biases of the humans who code the algorithms or the data that is fed into the algorithms may affect the results. In fact, the data may not represent the whole populations in their multiple differences and diversities; for example, the ethnic minorities are under-represented in the medical studies representing the actual medical data.[18] Consequently, this situation may lead to biased results, which may affect some population.[19] Biased results can also be caused due to the lack of Interoperability and connectivity.

iii. Lack of Transparency and Explainability: Deep learning algorithms often function as black boxes, making it difficult to understand the rationale behind their decisions. This lack of transparency raises ethical concerns regarding the accountability of AI systems and the ability to explain their outcomes to patients and healthcare professionals.

iv. Professional Autonomy and Responsibility: As AI systems become more sophisticated and capable of making clinical decisions, there may be a shift in the balance of decision-making authority between healthcare professionals and AI algorithms. Determining the appropriate roles and responsibilities of healthcare professionals in the context of AI decision support systems is an ethical dilemma that requires careful consideration.

v. Trust and Reliability: Trust is essential in the doctor- patient relationship. The reliance on AI systems to support clinical decisions raises concerns about the reliability and accuracy of these systems. Ethical dilemmas arise when considering the level of trust that can be placed in AI algorithms and how to strike the right balance between human expertise and AI assistance.

vi. Equity and Access: AI technologies in healthcare have the potential to exacerbate existing inequalities in healthcare access. Issues such as the availability of AI-powered healthcare services, affordability, and disparities in access to technology can lead to unequal healthcare outcomes. Ensuring equitable distribution and access to AI-enabled healthcare is an ethical challenge that needs to be addressed.

Basic challenges facing the development of artificial intelligence practices within the legal responsibilities are as follows;

i.   Regulation: The fields of artificial intelligence are growing very large, which makes it imperative for the concerned authorities to strive to prepare legal legislations that control their uses and define responsibilities for the results of practices and business, to create an advanced and pioneering investment environment. Additionally, technology precedes legislation, due to its rapid development, and its entry into all fields, which

---

18 S Reddy, S Allan, S Coghlan, & P Cooper, A governance model for the application of AI in health care. *Journal of the American Medical Informatics Association*, (2020) 27(3), 491–497.

19 J M Parish, The Patient Will See You Now: The Future of Medicine is in Your Hands (Editor. Eric T.). Basic Books: New York. *Journal of Clinical Sleep Medicine*, (2015)11(06), 689–690.

requires the formulation of flexible laws capable of keeping pace with the modernity and development of AI practices. Any developing investment environment must be based on legal legislations that control practices and business to form an attractive environment for international investments. Generally, there are no special laws to regulate cases that violate AI and current legislations regulate computer programs that operate automatically, but do not regulate programs that work independently, such as robots operating in many domains. Most legislations considered the programs' actions an extension of their users, the smart programs enjoy unexpected independence, according to the dictates of the surrounding environment, and make their decisions without referring to their users, which may create concerns about the legal and moral responsibility. For instance, if a robot causes severe damage as a result of some factors,[20] the big question begging for answer will be, who is responsible for the error? is it the user, the programmer, the manufacturer, the website manager, the service provider, or the others? AI technology has not yet reached the utmost perfection, and its programs are still vulnerable to viruses or technical failures, which may sometimes make them operate in an unexpected or unauthorized manner and cause severe damage that brings to mind which begs the question of how the responsibility arising from the actions of such programs is distributed. The failure of the smart program or the robot is not always due to negligence or error in the programming and development processes, or to problems in use and guidance, as much as it is sometimes related to the nature of the program and the digital environment, or to other factors and parties that are difficult to define precisely, including viruses and technical malfunctions. The need to create a mechanism for assigning legal responsibility in a way that establishes a balance between design, production and use. It is necessary to enact a law on AI in Nigeria, provided that computer scientists play a role in drafting its texts in cooperation with representatives of the sectors concerned with artificial intelligence technology, and taking into account adherence to legal requirements during programming and development of smart applications to reduce their risk. Additionally, AI and the free flow of data are intertwined. However, the regulation of free flow of data needs to be balanced with AI. Some argue that data government regulations which restrict the free flow of data will eventually hinder the development of AI. Nonetheless, as seen in the case of GDPR, the flow data should not be restricted rather regulated, in the sense that data can flow between different jurisdiction enabling AI to flourish and at the same time protecting privacy and personal data. Measures like adequacy decision or data subject consent could be implemented to ensure the free flow of data that enables AI.

ii. Liability, Risk Allocation, Insurance, and Indemnification: Imagine an AI-based robot assisting doctors during an operation and making the wrong decision.[21] The operation therefore goes wrong and the patient can claim damages or compensation for pain and suffering, the resulting damage must be replaced, but by whom? Who is liable here? is it

---

20 Z I Khisamova., I R Begishev, & R R Gaifutdinov,. On methods to legal regulation of artificial intelligence in the world. *International Journal of Innovative Technology and Exploring Engineering*, (2019) 9(1), 5159–5162.

21 P Čerka, J Grigiene, & G Sirbikyte. Liability for damages caused by artificial intelligence. Computer Law and Security Review, (2015) 31(3), 376–389.

the Doctor, a system user who use artificial intelligence for his own purposes? The manufacturer? Or can even artificial intelligence itself be liable? These questions are very difficult to answer legally. Some key points regarding liability and medical malpractice in the context of AI in healthcare:

a. Traditional legal principles: The existing legal framework for medical malpractice generally holds healthcare professionals responsible for the care and treatment they provide to patients. When AI technology is incorporated into healthcare, healthcare professionals may still be held liable for any negligence in their use or reliance on AI systems.

b. Manufacturer liability: In cases involving AI systems, manufacturers of the AI technology may also have liability. If the AI system is found to be defective or malfunctions, resulting in harm to patients, the manufacturer could be held accountable for design flaws, inadequate warnings, or failure to meet regulatory requirements.[22]

c. Standard of care: Healthcare professionals have a duty to provide care that meets the standard of care recognized by the medical community. As AI becomes an integral part of healthcare, the standard of care may evolve to include the appropriate use and interpretation of AI outputs. Failure to use AI technology in accordance with the evolving standard of care could lead to liability for healthcare professionals.

d. Algorithmic transparency: The lack of transparency in AI algorithms poses challenges in determining responsibility when errors or harm occur. If the decision-making process of an AI system is opaque and healthcare professionals cannot understand or assess the reasoning behind the AI's recommendations, it may be difficult to attribute liability to a specific individual or entity.

e. Shared liability: In some cases, liability may be shared among multiple parties, including healthcare professionals, healthcare institutions, AI developers, and manufacturers. The degree of shared liability will depend on the specific circumstances, including the nature of the error, the roles of each party, and applicable laws and regulations. It is important to note that liability and medical malpractice related to AI in healthcare are still evolving areas of law, and specific legal considerations may vary across jurisdictions. Legal outcomes may also differ depending on the specific facts and circumstances of each case.

4.   Legal Frameworks Regulating the use of AI in Different Jurisdictions
The legal framework and regulations related to artificial intelligence (AI) in healthcare vary across different jurisdictions. In this response, I will compare and contrast the legal frameworks and regulations pertaining to AI in healthcare in the US, the EU, and other relevant countries, while highlighting key similarities and differences.
a. **United States (US):** In the US, the regulation of AI in healthcare primarily falls under the purview of federal agencies such as the Food and Drug Administration (FDA) etc. The FDA regulates AI-based medical devices and software, ensuring safety and effectiveness

---

22 A Samarkandi. Status of medical liability claims in Saudi Arabia. Annals of Saudi Medicine, (2006) 26(2), 87–91.

through pre- market approvals or adherence to a risk-based framework. The OCR oversees privacy and security of patients' electronic health records under the Health Insurance Portability and Accountability Act (HIPAA). The FTC monitors AI applications for deceptive or unfair trade practices.

b. **European Union (EU):** In the EU, AI in healthcare is governed by the General Data Protection Regulation (GDPR) and specific regulations under the Medical Device Regulation (MDR) and the In Vitro Diagnostic Medical Devices Regulation (IVDR). The GDPR safeguards the protection of personal data, including health-related data. The MDR and IVDR regulate AI-based medical devices and diagnostics, setting requirements for safety, performance, and conformity assessment.

Other Relevant Countries: Other countries such as Canada, Australia, and India also have specific regulations related to AI in healthcare. Canada has the Personal Information Protection and Electronic Documents Act (PIPEDA) governing the use of personal health information. Australia has the Therapeutic Goods Administration (TGA) overseeing the regulation of AI-based medical devices and therapeutic goods. In India, the Telemedicine Practice Guidelines regulate the use of AI in telemedicine consultations.

5.   Conclusion

Healthcare remains a top priority for the Nigerian Government and the significance of AI applications in healthcare cannot be overstated. AI has the potential to revolutionize how we diagnose diseases, tailor treatments to individual patients, monitor health conditions in real time, and manage the operational aspects of healthcare delivery.[23]The legal framework for Artificial Intelligence (AI) in healthcare is crucial to ensure accountability, privacy, and ethical use of AI technologies. In Nigeria, there is currently no specific legislative framework for AI in healthcare. However, several existing laws and regulations such as the constitution, the National Health Act, Nigerian Data Protection Act, Medical and Dental Practitioners Act etc can be applied to address the concerns raised by the use of AI in healthcare settings. Given the complex nature of AI systems, it is recommended to establish a separate legal framework specifically designed to regulate the use of AI in the Nigerian healthcare. This framework should address key areas such as data protection, transparency, accountability, bias, and the use of AI algorithms. It should also mandate regular audits and assessments of AI systems used in healthcare to ensure patient safety and ethical considerations. Regulators and policymakers will need to work closely with experts in the field to design effective regulations that promote innovation while addressing the risks associated with AI in the Nigeria healthcare. Furthermore, collaborations between legal experts, healthcare professionals, technology developers, and policymakers will be crucial to strike the right balance between facilitating AI adoption and safeguarding patient rights and welfare.

---

23 D KHANNA, 'Use of Artificial Intelligence in Healthcare and Medicine' International *Journal of Innovations in Engineering Research and Technology* (IJIERT) 2018 5(2) 22-26