



## A REVIEW OF MEDICOLEGAL ISSUES FACING RADIOLOGISTS IN NIGERIA

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### Article History

Received: 15/02/2024

Accepted: 24/02/2024

Published: 26/02/2024

Vol – 2 Issue – 2

PP: -30-34

### Abstract

Radiology is an essential part of medical practice. Since its discovery many years ago, ionizing radiation has been widely used in medicine for both disease diagnosis and therapy. Ionizing radiation has potentially dangerous consequences if not precisely regulated. The Nuclear Safety and Radiation Protection Act of 1995 established the legal basis for radiation protection and safety regulations in Nigeria. Due to their expanding involvement in patient management and the growing reliance of other physicians on radiologists for diagnostic and management guidance, there is a growing trend of medicolegal cases against radiologists. These medicolegal cases are mainly due to medical negligence and malpractice, as well as issues surrounding doctor-patient relationships, standards of care, business dealings, lack of informed consent, and poor communication. This article is aimed at examining medicolegal issues in radiology in Nigeria. To advance job satisfaction and avoid medicolegal issues as a radiologist, a good understanding of medical law and ethical standards is crucial. The need for hospitals to establish a legal medicine department or a medicolegal unit, cannot be overstressed.

**Keywords:** Radiology, Radiologist, Radiation protection, Medicolegal issues.

## INTRODUCTION

Radiology is a branch of medicine that uses imaging technology to diagnose and treat patients. (1)

Radiology started with radiography, but currently, it comprises all imaging modalities, together with those that do not use electromagnetic radiation, such as ultrasonography and magnetic resonance imaging (MRI), as well as others that do, such as computed tomography (CT), fluoroscopy, and nuclear medicine including positron emission tomography (PET). Another aspect of radiology, Interventional radiology is the performance of usually minimally invasive medical procedures with the guidance of imaging technologies such as those mentioned above. (2)

Since its discovery in 1895 by Wilhelm Conrad Rontgen, ionizing radiation has become very common in medicine and is being put into use for the diagnosis and treatment of diseases. (3)

In recent years the field of radiology has become essential in the care of patients. Owing to this, there is now an emergence of novel duties as well as liabilities concerning diagnosis and interventional procedures performed by the radiologist. (4). Increased public awareness about healthcare issues has led to an increase in litigation cases against healthcare professionals, leaving them more vulnerable to litigation procedures. (4)

In the U.S., radiologists represent about 3.6% of physicians and are ranked between 6<sup>th</sup>-8<sup>th</sup> in terms of medicolegal claims. Studies also suggest that 50% of radiologists in the US would have been sued once or more at age 60. (5)

Concerns about legal issues may affect many of the decisions that are made by the radiologist, and most often, physicians and other healthcare specialists may not appreciate the implications of these concerns. However, such legal concerns frequently influence the conclusions made by radiologists more than is necessary. In the ordinary practice of radiology, preventing medicolegal action means a better understanding of the law surrounding radiology and its complications. (4,5).



## Radiation Safety Standards and Regulation of Radiology

Despite its usefulness and wide application in the field of medicine, radiation can be hazardous if not carefully used. Ions generated from biological tissue interaction with ionizing radiation are capable of distorting normal biological processes, hence, inappropriate protection against ionizing radiation can cause infertility, genetic defects, cataracts, skin burns, cancer, and death. (3)

Naturally, humans are prone to an average background radiation of approximately 2.4 mSv per individual per annum. Radiation from radiologic diagnostics contributes to roughly one-fifth of the average annual effective dose per head in the global population. (6)

Radiation protection is of great concern to national and international organizations because of the possible harmful effects associated with ionizing radiation if not accurately controlled. (3). The International Commission on Radiation Protection (ICRP) and International Commission on Radiation Units and Measurements (ICRU) in association with the International Atomic Energy Agency (IAEA), provided a series of recommendations and documents on radiation safety standards. They recommended systems for restricting the doses received by radiation-exposed patients and workers, as well as other radiation safety practices including assessment of radiation risk. (3)

In Nigeria, the Nigerian Nuclear Regulatory Authority (NNRA), through its Department of Radiological Safety is mandated by Section 9(1) of the Nuclear Safety and Radiation Protection Act of Nigeria, to be responsible for the regulation and ensuring compliance with issues regarding radiation safety and protection. This includes protecting the radiation workers as well as the general public from the harmful effects of ionizing radiation. (6,7).

The Medical and Dental Council of Nigeria (MDCN), is a body created by law to regulate the medical profession in Nigeria. It has a professional disciplinary department that manages allegations of professional misconduct against any medical doctor from the public. (8). Its investigative panel was established under section 15 subsection 3 of the Medical and Dental Practitioners' Act, and its disciplinary tribunal which has the status of a high court, was established under section 15 subsection 1 of the Act. (8).

One of the statutory functions of the Medical and Dental Council of Nigeria, as contained in section 1 subsection 2(c), of the Medical and Dental Practitioners Act, is, preparing and reviewing a Code of Conduct that the Council considers desirable for the practice of the profession in Nigeria, known as the 'Code of Medical Ethics' (9).

## Medicolegal Perspectives

There is a growing trend of medicolegal cases against radiologists due to their increased participation in the management of the patient and the increasing dependence of referring physicians on the radiologist, for making a diagnosis

and guiding management. These legal cases commonly arise due to patient mismanagement and poor communication. (4)

It has been documented that about 4% of radiological diagnoses are erroneous. (4). A study done in the US showed that error in diagnosis was the most common cause of lawsuits against radiologists. The second commonest was as a result of procedural complications and miscommunication between doctors and patients. (4). Breast imaging findings accounted for the most common source of incorrect diagnosis, with regards to body parts. Concerning interventional radiology, vascular injuries represented the most common source of lawsuits. (4,10)

In the Netherlands, England, the U.S.A., and Germany missed breast cancer diagnoses, according to studies, are the commonest cause of malpractice lawsuits against radiologists. (4,10)

According to guidelines published by the American College of Radiology, it is the duty of the radiologist who while interpreting radiologic findings or performing a procedure sees a noteworthy finding to communicate such to the referring physician. (11). Also, it is duty-bound to the radiologist to suggest a more elaborate examination to the referring physician if warranted. (12)

In African nations, including Nigeria, doctors' actions on their patients were considered unquestionable in the past. This narrative is however changing, doctors are now being sued for medical negligence and errors. (13). It therefore behooves the medical doctors to seek information regarding their medical and ethical rights and responsibilities. (14)

In Nigeria, medically related cases that get to court for adjudication are scanty owing to factors such as ignorance, cultural inhibitions, and the cost of litigation as well as bureaucracies. (15)

The legal framework concerning radiation safety standards in Nigeria is enshrined in the Nuclear Safety and Radiation Protection Act of 1995. (16). Section 25 of the Act, deals with, the Control of radiation exposure, and states that "The Authority shall, in the performance of its functions and for the protection of radiation workers and the general public, ensure that: (a) no practice is adopted, unless its introduction produces a positive net benefit; and (b) the dose equivalent to individual, shall in no way exceed the established limits prescribed by the Authority" (16)

Section 26, explains the modality to follow in cases of, Emergency and accidental radiation exposure. Liability for damages is captured under section 43, while section 45 deals with penalties for the contravention of provisions of the Act, which include, withdrawal of license, imposition of fine, and imprisonment. (16)

## Negligence and Malpractice

Even though there is an increasing awareness among Nigerians concerning medical malpractice and negligence, many victims are unaware of how to demand justice or seek

retribution, medical professionals too lack consciousness of the legal consequences of their conduct. (8,9).

Malpractice and medical negligence are examples of tortious obligations that could also lead to criminal penalties. Indeed, the provision of healthcare will occasionally lead to situations in which patients experience discomfort or irreversible harm while being treated by medical professionals, radiologists are not left out. (8,9)

Though sometimes used interchangeably, medical negligence can be defined as any mistake or error that causes a patient to suffer unintentional injury, while medical malpractice refers to instances where a healthcare professional purposefully fails to follow the proper standard of care. That is not to suggest that there was a deliberate attempt to cause harm, only that the medical professional knew that the harm or injury could have been avoided if different protocols had been followed. (8,9)

Generally, the reasons radiologists may face legal action include the following: errors in observation, errors in interpretation, failure to suggest the next appropriate procedure, inappropriate communication, abuse of fundamental human rights, and criminal offenses. (17)

The commonest reasons for medical malpractice lawsuits are due to improper patient management and miscommunication between patients and doctors. (4)

To be able to establish a case of negligence against a radiologist, it is mandatory that the three main fundamentals of medical negligence, which are; that a duty of care is owed, there was a breach of the duty of care, and that an injury or permanent disability has been suffered as a direct consequence of the breach, must be proved beyond a reasonable doubt. (8,9).

The fact that negligence is difficult to prove does not deprive a patient of other legal opportunities as may be deemed appropriate, as the inability of a victim to successfully prove a case of negligence against a medical practitioner does not completely absolve a practitioner from charges related to other offenses under other aspects of the law. (8,9)

### Standard of care and business dealings

Two other core ways in which the law affects the practice of radiology relate to the business dealings of radiologists concerning private practices, billing practices, self-referral, and conflicts of interest, as well as the radiologist's responsibilities to perform a certain standard of care. (5,11,14). Legal issues can relate to the various business aspects of the profession, the radiologist's affiliation with the outside world, and their relationship with other medical professionals. (5,11,14)

Medicolegal experts know that in any health-related profession, there are legal implications when it comes to the standard of care. This is no different for radiology, with radiologists having to adhere to ethical standards, a strict set of laws, and guidelines, when it comes to ensuring a timely service to patients, especially in emergencies, referring

patients, refusing care, and ensuring that patients are given information about the results of radiologic findings. (5,11,14)

The standard of care for medical practice is that of a "reasonable man", which means that of a normal medical practitioner under the same conditions. In terms of medical malpractice, however, the emphasis is on the standard of professional responsibility expected from a comparable medical practitioner. (8,9).

There have been claims made in some places that an early-career physician should not be held to the same standards as a medical consultant. After all, professional drivers are required to meet higher standards than expected of a vehicle learner, for instance. (8,9).

Therefore, the quality of care expected of the consultant should be more advanced than that of a junior medical practitioner and this fact must be considered in determining liability. Even so, there may be an exclusion if a less experienced physician is hired to function as a specialist. In such cases, the hospital will also be held responsible for failing to hire a qualified specialist to provide specialized care. (8,9)

### Informed Consent

Obtaining permission before performing a medical intervention, particularly a surgical or radiological procedure on an individual, or before divulging personal data is known as 'informed consent'. To put it simply, it means that before beginning any kind of medical or surgical intervention, a physician must obtain the patient's consent and fully explain to them all the potential advantages, risks, complications, and workable alternatives. (8). Medical interventions without valid consent constitute trespass to the patient and a criminal law assault. (8). Failure to obtain a patient's informed consent before commencing a procedure or treatment is a violation of their fundamental human right and a form of medical negligence and could give rise to a cause of action for battery and even assault. (18)

It is widely acknowledged in contemporary medicine that mentally competent adult patients have the freedom to choose whether or not to receive a particular medical service or treatment. This right is reflected in the informed consent doctrine, which holds that a patient has the right to be informed about the advantages and disadvantages of any medical service or treatment, along with any available alternatives, and to use that information to make an informed decision about whether or not to accept it. (19)

Under the law, a successful informed consent action against a medical practitioner requires several elements: A duty to the patient; Legally inadequate informed consent; and, Patient injury resulting from that inadequate consent (the "causation" requirement). (19)

Note that the elements of informed consent are similar to those for medical negligence, and as such, matters of allegations of failure to obtain adequate consent are part of a larger malpractice action. (19)

For mentally competent patients, getting consent is a fairly simple process. It entails asking the patient if they would like to proceed after providing an understandable explanation of the medical service, including any alternatives and potential hazards. (19)

Consent can be acquired orally or in writing, though it is better to have a written consent form signed by the patient. Radiologists need to understand that the patient has the right, either orally or in writing, to withdraw their consent at any moment and for any cause. (19)

Despite informed consent, procedures and examination of the opposite sex, especially a female patient by male doctors, should ideally always be chaperoned. In emergency conditions, however, a medical practitioner may go ahead to give all the necessary care to save life. (14)

Apart from being the patient's first interaction with the radiology team and its services, the informed consent procedure is more than just required by law, it presents a perfect chance to establish a solid doctor-patient relationship. (19)

It is important to take the time to honestly, truthfully, and patiently answer the patient's queries in a setting as free from coercion as possible. Consequently, consent should ideally be obtained from hospital inpatients in their room, or if outpatients are involved, in a room other than the procedure room, if at all possible. Consent obtained under frightening or intimidating circumstances, as well as consent obtained for additional procedures during an ongoing intervention, may be illegal. (14,19)

### Conclusion and Recommendation

Like every medical discipline, the practice of radiology is governed by ethical standards and legal limitations, as well as regulations from national and international organizations, therefore every radiologist will at some point be exposed to situations that could give rise to medicolegal actions.

It is a fact that healthcare practice will sometimes result in situations where patients suffer some distress or even permanent injury in the course of medical intervention by medical practitioners. Such distress or injury is usually a result of medical errors due to the action or inaction of the medical expert.

Radiologists encounter a lot of medicolegal issues as part of their careers, whether business-related or regarding the standard of care of their patients.

To improve job satisfaction and avoid legal problems as a radiologist, a good understanding of medical law is crucial.

The need for hospitals to establish a legal medicine department or a medicolegal unit, cannot be overstressed. Such a department or unit would be responsible for participating in multiple committees, preparing guidelines, protocols, and recommendations, and being consulted on legal and ethical issues concerning patient management.

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