



## Doctor-Patient Relationship in Contemporary Ophthalmic Practice: Emerging and Evolving Ethical Concerns in Nigeria.

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### ABSTRACT

Like other healthcare professionals, the ethical and professional obligations of ophthalmologists are enunciated in numerous documents, oaths, codes, declarations, guidelines, charters, regulations, and statutes relevant to medical practice; one of which is the 2014 International Council of Ophthalmology (ICO) document on ethical guidelines for ophthalmologists. Over the last few years, however, emerging and evolving developments within ophthalmic practice appear to be adding a nebulous zone to the recognition and resolution of inherent and associated ethical concerns, especially those with implications for the doctor-patient relationship (DPR); the core of healthcare and medical practice. There is an increasing realization that many ophthalmologists may even be oblivious of the ethical considerations and deliberations which permeate the myriad of decisions they make during their practice and daily activities. There is thus a pressing need to encourage thought, reflection and dialogue among ophthalmologists, and indeed other healthcare professionals, on these issues, particularly within Nigeria and, by extension, Africa. Based on our interactions and experiences as practicing ophthalmologists in Nigeria, as well as a review of pertinent existing literature (including grey literature), this paper explores some identified ethical concerns for the contemporary ophthalmologist working in these settings; thereby adding our perspective and another dimension to the discourse around healthcare ethics. Key concerns include but are not limited to challenges related to allocation of scarce health resources, informed consent, discharge-against-medical advice (DAMA), communication, documentation, clinical photography, tele-health consultations, off-label use of certain materials, unnecessary ophthalmic procedures and diagnostic tests, COVID-19, and the use of patients in research. With heightened awareness and sensitivity on these issues, contemporary Nigerian ophthalmologists are expected to be in a better position to navigate through potential ethical challenges during their practice, thereby enhancing their ability to promote good doctor-patient relationships and render high-quality professional eye care to their patients and society. Ethics education and training should remain top priority among the educational needs of health workers. The ethical issues raised further trigger the need for empirical research.

### KEYWORDS

Ophthalmologist, Relationship, Ethical Concern, Contemporary, Practice

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### Introduction

Over the last few decades, ophthalmology has witnessed tremendous advances globally and contemporary practice has become more exciting, complex and laden with numerous challenges; some of which are best regarded as being ethical in nature (1). Being one of the most complex and high-tech specialties, even the slightest error from the ophthalmologists' end can lead to severe consequences including visual impairment of the patient and life-time blindness (2). As ethical principles are integral parts of medical practice (3), it is not surprising that ethical

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considerations and deliberations permeate the myriad of decisions taken by ophthalmologists; even without realizing it on many occasions. On the surface, one may assume that the eye doctors need not bother with many of the headline-grabbing ethical problems which other specialists such as obstetricians/gynecologists, psychiatrists, oncologists and pediatricians are primarily involved in (4). As ophthalmologists routinely handle cases such as refractive errors, acute red eyes, itchy eyes, pterygia, chalazion, squints, glaucoma and cataract, there are erroneous and misleading impressions about the 'moral simplicity' in ophthalmic practice.

Ethical concerns in ophthalmology had always existed, but emerging and evolving developments in the last few years appear to be adding a nebulous zone to their recognition and resolution. While knowledge and technical skills may be of paramount importance in the care of the patient, there is also a pressing need for practicing ophthalmologists, especially in Nigeria, to have the ability to identify and act on associated ethical issues, especially with respect to their implications for the doctor-patient relationship. This paper is a sequel to an earlier related paper presentation in 2013 at the 38th Annual meeting of the Ophthalmological Society of Nigeria in Asaba, Nigeria. (5) Our perspective is borne from our interactions and experiences as practicing ophthalmologists in Nigeria, as well as a review of pertinent existing published literature and unpublished findings from an exploratory qualitative survey. The paper is an attempt to heighten awareness on some of these issues among ophthalmologists and other health workers, and encourage thought, reflection, and dialogue over them.

### **Are there relevant ethical standards or guidelines in ophthalmology?**

The basic tenets of ethical/professional care in medical practice had been enunciated in documents, oaths, codes, declarations, charters, regulations, guidelines, standards, statutes, institutional rules, and laws all through the years, and they remain applicable and relevant in our era. Important milestones include the Hippocratic Oath, the WMA Declaration of Geneva(Physicians' Oath), Helsinki Declaration(DoH), Belmont Report, WMA International Code of Medical Ethics(ICME), Islamic Code of Medical Ethics, Code of Medical Ethics in Nigeria(COMEIN), National Code of Health Research Ethics in Nigeria(NCHRE), Physician Charter for Medical Professionalism, the Code of Ethics of the American Academy of Ophthalmology(AAO), and the ethical guidelines of the International Council of Ophthalmology (ICO) .

The ethical obligations of ophthalmologists toward patients are like those of other health care professionals. These obligations generally require practitioners to recognize, respect, and protect the rights of their patients. This approach encourages patients to participate actively in their care and allows them to develop a fiduciary relationship with their ophthalmologists based on trust. The consideration of ethics in ophthalmology is really about reflection on how to behave as a medical professional as well as the morality of decisions, actions or interventions in ophthalmic practice or research; all aimed primarily at acting in the best interests of the patient or research participant. It clarifies the choices and the alternative justifications and buttresses the individual professional judgment that is required in all cases.

The core bioethics principles of respect for autonomy, beneficence, non-maleficence and justice have remained strong over the years, and a significant proportion of daily practices among ophthalmologists are shaped by the application or misapplication of these four principles or ethical pillars.(6) These four principles provide a baseline for dialogue across different cultures, religious beliefs and political positions, as these principles are considered to be prima facie: a duty which is compulsory on all occasions unless it is in conflict with equal or stronger duties.(7)In caring for patients with eye problems for instance those with irreversibly impaired

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vision, ophthalmologists must typically balance the ethical principles of beneficence, respect for autonomy, protection of the vulnerable, and truth-telling.

According to the International Council of Ophthalmology (ICO), (1, 8) the ophthalmologist ought to act in the best interests of his/her patient; put a patient's health and care above all other considerations; provide prompt help to persons whose life or health is endangered by disease or accident within their scope of competence; treat patients without discriminating on the basis of age, gender, ethnicity, sexuality, nationality, insurance status, disability, religion, lifestyle, or culture; ensure the privacy of the patient, and maintain confidentiality in all aspects of the patient's treatment within the confines of the law, obtain informed consent from the patient for all interventions, and provide the patient with truthful and accurate information about the state of the patient's health. Indeed, the International Council of Ophthalmology (ICO) published the document in 2014 which comprises a set of moral principles and standards to guide the behavior of ophthalmologists within their professional domain. (1, 8) The standards outlined in the document include patient care standards, professional practice standards, professional community standards, standards for working with other health care professionals, research standards, social standards, commercial standards, teaching and mentoring standards, and standards governing the relationship to the medical industry. Taken together, they represent comprehensive guidelines to which ophthalmologists might refer when confronted with ethical or professional dilemmas, and to act as benchmarks by which to judge behavior in professional matters.

### **What are the ethical concerns for the doctor-patient relationship in contemporary ophthalmic practice?**

The first step in resolving an ethical concern is to identify and recognize it as such. Ethical issues are embedded in every clinical encounter between ophthalmologists and their patients and are present in the relationship the ophthalmologist has with other professional colleagues/health workers and society. In the course of the doctor-patient relationship and other relationships, ethical questions may arise; in which there is a doubt about the right action, when ethical responsibilities conflict or when their meaning is uncertain or confusing. (9) This state is what many will describe as an ethical dilemma or conundrum. According to the AAO, an issue of ethics in ophthalmology is resolved by the determination that the best interests of patients are served. (10) Some would contend, however, that the best interest principle might as well be interpreted as the best medical interests, thus promoting paternalism. However, this ought to be considered against the backdrop of other models of the doctor-patient relationship (informative, interpretive, deliberative, and instrumental) which may also be in operation, depending on the settings and circumstances. (11) Depending on the clinician's preferences, there are also a couple of structured frameworks for navigating through these ethical dilemmas; including but not limited to the 'Four-Box' method (9), CASES approach (12) and the method suggested by Wall. (13)

### **Allocation of scarce health resources**

Like other low- and middle- income countries (LMICs), Nigeria faces many essential healthcare challenges, ranging from how to prioritize limited resources to patchy service provision (both in terms of the interventions available and geographical coverage) and this permeates all through all aspects of medical practice, including ophthalmic practice. Invariably, allocation and utilization of scarce health resources and infrastructures remain a major ethical concern with far-reaching implications for clinical decision making and quality of eye care. As society progresses towards promoting greater patient autonomy, the patients also are becoming increasingly

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health-literate and potentially litigious, especially with easier access to the internet and other information-education-communication technologies. Gone are the days when a prospective patient requiring surgery would leave the decisions on whether to operate or not entirely to the 'all-knowing' ophthalmologists. Even in resource-constrained settings such as Nigeria, patients and families now wish to play more active roles in their care, regardless of their educational or socioeconomic status.

### **Discharge against Medical Advice (DAMA)**

In some occasional and unpleasant cases, conflicts between patients and their care providers or apparent failure to respect patient autonomy may contribute to the phenomenon of discharge against medical advice (DAMA). This may occur among elective and emergent cases in ophthalmology. Despite the enormous clinical, economic, ethical and medico-legal implications of DAMA, it has largely remained an under-reported matter in this part of the world.<sup>(14)</sup> High treatment cost, with resultant accumulation of high hospital bills, and refusal to consent to the ophthalmologist treatment plan (such as removal of an eye in a case of panophthalmitis) sometimes sets the stage for DAMA request by the patient or an interested third party. The refusal of the patients or their relatives to disclose vital information that will guide the ophthalmologist on treatment modalities and expected outcomes may also have ethical consequences. Poor response to treatment, as judged by the patient or their relations, also leads to DAMA. This is often due to ineffective communication between the attending physician and the patient with regards to the natural history of disease, its prognosis, potential complications, and outcomes of available treatment options. Fear of the unknown may prevent some patients from accepting potentially sight-restoring treatment, as in the case of the patient with dense, visually impairing cataracts or the patient with a benign pituitary tumor who is slowly losing all light perception, both of whom may be unduly afraid of surgery. Enhanced doctor-patient communication and shared decision-making, improved hospital infrastructural environment, formulation of explicit DAMA guidelines and strengthening of the existing national health insurance scheme have been proposed as measures to combat DAMA.<sup>(14)</sup>

### **Documentation Challenges**

The importance of proper and accurate documentation as well as record-keeping cannot be over-emphasized. In line with this is the injunction to communicate, document (electronically/manually), communicate all documentation, document all communication, and preserve all the documentation. Adequate medical documentation assures patient confidentiality and ensures that standards of care are met. Failure to treat illnesses to the best of a physician's ability based on the documented patient's medical record compromises medical ethics and professional conduct. Closely related to this is the issuance of certificates/medical reports such as sick leave certificate, medical certificates of fitness for work or school, overseas referrals, discharge reports and documents of kindred character which are fake, false, misleading, inaccurate, or inappropriate. This is considered an unethical practice in all settings, and ophthalmologists are expected never to certify what has not been verified or capable of being verified by them. This becomes even more imperative against the backdrop of an increasingly health-literate/conscious but litigious population.

### **Informed Consent Challenges**

Appropriate informed consent, comprising disclosure, comprehension, competence, and voluntary choice, is expected to be obtained prior to the performance of any medical, surgical, laser or optometric procedure, including physical examination, screening, investigations,

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treatment, and research. The basic information required for informed consent for surgery should ideally be presented by the surgeon or a trained team member, and not merely any hospital worker. The ophthalmologist is expected to disclose his or her level of experience both as surgeon generally and with the technique/procedure specifically. The Ophthalmologist is also expected to disclose the participation/involvement of trainees, residents or other staff in the procedure or intervention, and their respective degrees of involvement. Surgeon-Trainees/other staff /patients communication in awake patients' presence may have serious implications for the doctor-patient relationship, especially if the trainee's role is undisclosed. There are challenges for the ophthalmologist in balancing teaching and maintaining patient comfort and protecting patient autonomy during such awake procedures i.e. cataract surgery. Such challenges include informed consent, conflict of interests, and surgical innovation challenges. There could also be a challenge in decision-making about the continuation of awake procedures, if the patient revokes consent. Should one consider stricter selection/monitoring of patients for awake procedures according to more objective standards, to avoid conflicts of interest and potential harm to patient? Should one exclude patients from the teaching conversation? Should one be limiting trainee involvement in such awake procedures? Should one consider deceiving patients on the extent of trainee involvement? There is need for further research to identify how best to incorporate teaching conversations while optimizing the patient experience.

Like other specialties, there are issues with ophthalmic education and training using live patients. Current surgical training in ophthalmology is mainly based on the traditional Halsted model (15) where the novice surgeon achieves surgical competence by reading, observing, and performing surgery on 'real patients' under the supervision of an experienced surgeon. The number of procedures performed is often used as a benchmark for the trainee's level of skill, with a minimum number of surgical cases serving as the evidence of surgical competence. But there is also an obligation to provide optimal treatment, and to ensure our patients' safety and well-being. Balancing these two needs creates ethical tension in medical education, which simulation-based training may help mitigate. The regular use of virtual reality (VR) simulators has become essential in high-risk fields where errors must be avoided, and human or economic risk must be minimized i.e. aviation, nuclear power, military sectors. High-fidelity simulation has become available in ophthalmology only in the more recent past. Evidence for its usefulness in training is now beginning to emerge, for instance, in retro-bulbar injections and micro-surgical skills. Highly structured, supervised and assessed wet-lab sessions on animal models (eyes of pigs and goats) and compulsory micro-surgical skill courses offer an additional training environment. Nevertheless, ophthalmic training, especially at academic medical centers, must at some point still use real patients to hone the skills of health professionals. It may be advisable to consider the injunction 'First do no harm' (Patients are to be protected whenever possible and they are not commodities to be used as conveniences for training) while maintaining best standards of care/training. Principles of patient autonomy, social justice and resource allocation come to fore, as well. There should be a mechanism for error management and patient safety in such practice settings.

With respect to the informed consent process for glaucoma care, the patient may need to understand that the essence of any intervention, especially surgical/laser, is not to improve vision but to retard the progression of the disease. Malpractice suits related to glaucoma, like many other eye conditions, fall into four general categories: failure to make the diagnosis of glaucoma or its progression, complications of glaucoma therapy, iatrogenic (especially steroid) induction of the disease, and treatment intervention beyond the physician's level of skill. The ophthalmologist's knowledge of possible pitfalls and the ability to communicate about risks and

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reasonable expectations are the basis of a long-term, litigation-free relationship with the glaucoma patients and patients with other eye problems.(16)For the Low vision patient, the patient may need to understand that the goal of care is to optimize/maximize use of residual vision, and not necessarily to improve vision.(17) Both beneficence and respect for the patient's autonomy require that the doctor help the patient understand his or her diagnosis, as well as the interventions that offer some potential benefit. The complexity of many of the causes of low vision may require the doctor to explain the same information in different ways over time before the patient understands his or her condition. The ophthalmologist should be aware that he could be faced with a situation where patients claim that a cataract, retinal detachment, or optic atrophy is due to blunt trauma to the eye for the sake of compensation or legal redress. Patient autonomy is not an absolute right. For example, if a patient's vision has fallen to such a level that the patient is no longer legal to drive, then it must be communicated to the relevant authorities. If they refuse to do so, then the ophthalmologist must do this – there is a higher duty to the public good that overrides the duty to patient confidentiality. Generally, however, neither a patient's employers, colleagues nor family members have “a right to know” information about his or her eye condition, its causes, treatment, or likely prognosis, without the patient's consent.

### **Truth-telling and Disclosure of Medical Errors**

The need for a careful and sometimes prolonged discussion of diagnoses and proposed courses of treatment must be stressed. The difficulty, of course, is that multiple truths often exist in any given situation. Truth may be told in many ways, and the manner of telling the truth to a patient is perhaps as important as the truth itself, especially when bad news or a poor outcome must be divulged. Explaining unanticipated vitreous loss or prognosis for advanced glaucoma, for instance, may be a real test of how to tell the truth. The issue of truth-telling becomes more demanding when ethical dilemmas arise because of a medical or surgical error, adverse event, near miss, negligence, and malpractice. Modern ophthalmic surgery has reached very high safety standards. Yet, given the large number of ophthalmic procedures, medical errors are still common in eye care. (18) Making errors is not acceptable in good ophthalmic practice, but may not necessarily be unethical. It is in the handling of these errors that ethics plays a critical role. Confidence building and maintenance of adequate information chain between the patients and ophthalmologists are paramount to providing optimal eye care. Institutional policies on management of medical/surgical errors could provide a pathway for appropriate handling of such circumstances.

### **'Corridor/Curbside' Consultations**

One aspect of ophthalmic practice that is prevalent in Nigeria( where people may not be in a hurry to seek appropriate hospital consultation due to the cost or where a majority of the medications are available over-the-counter, even without a proper prescription) is curbside/corridor consultations, in which any ophthalmologist may be approached by people 'out of the blues'; be it friends, relatives, or even strangers, and asked to prescribe medications or proffer an opinion for 'that eye condition' which they have. Such a request is often made at odd places like a supermarket aisle, hospital car parking area/corridor, restaurant, elevator, and mass social gatherings; as a quick eye examination, even with the light from a mobile phone, can apparently be done practically anywhere without it being classified among the intimate medical physical examination procedures. Related to this practice is the 'e-corridor consultation' done on social media platforms such as WhatsApp, Facebook, SMS (short messaging services), or even email (with or without images).

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From the ethical viewpoint, some think that if the informal consultation does not entail any danger to the patient or others, the service provider may oblige. However, on the contrary, if it is a reportable infectious disease posing a danger to the patient or the community, the physicians should refrain themselves from doing it. In yet another opinion, physicians have been warned from accepting friend requests and allowing patients to connect via social networking sites. (19) From the legal point of view, there are a lot of gray areas, and an element of risk is always present. For example, a red eye left unattended can sometimes be potentially blinding. The legal responsibility of the doctor could be the same over the phone as it is with a personal consultation. The doctor may be held legally responsible for the phone consultation, depending on the merit of the individual case. Giving treatment advice on telephone/WhatsApp/SMS/emails must be avoided; except in cases of grave emergencies, where the emergency must be clearly recorded as such. Otherwise, it is best ethical and professional practice to always insist on the physical presence of the patient. It is mandatory to record on proxy prescriptions that the patient should be physically brought for evaluation at the earliest. Prescribing in a casual manner, without referring to the relevant medical records of the patient, is deemed to constitute medical negligence. (19)

### **Clinical Photography Challenges**

Ethical concerns, as well as legal and social issues, also lie with the increasing use of digital or electronic image recording devices for clinical photography in visually oriented specialties such as ophthalmology, especially with the proliferation of smartphones and other mobile phones with in-built cameras. Despite widespread use of mobile devices for medical photography, there is a distinct lack of published resources offering technical and practical advice to help clinicians and patients take images of a suitable quality for clinical use. Since covid-19, however, some practitioners now consider photographs an essential part of the referral pathway, and a basic understanding of medical photography principles has quickly become a requirement for many clinicians. Similarly, many patients now send images to their healthcare provider as part of a 'virtual consultation'. (20)

There are concerns over informed consent, image ownership, invasion of privacy, photographs as personal health information, disposal of unwanted images, breach of confidentiality, copyright and reproduction rights, and the medico-legal ramifications for the doctor-patient relationship. The clinician's obligations to respect the patient's rights of autonomy and confidentiality must be balanced against the benefits of clinical photography in each case. (21, 22) Patients may be indifferent to the use of clinical photography while being cared for. Frequently, they may feel uncomfortable being photographed particularly when it involves the face or other specific body parts. However, unduly enforcing rigid hospital policies and disallowing clinicians to take photographs disrupts an efficient tool for communication and compromises patient care. (21) There is no blueprint yet in Nigeria for obtaining consent for clinical photography. This is further complicated by the wide variety of clinical situations in which clinical photography can be used.

### **Tele-health and Artificial Intelligence (AI)-Assisted Diagnostics Challenges**

A new dimension in ophthalmic practice has been introduced with the advent of tele-health and artificial intelligence (AI)-assisted diagnostics. Although interchangeably used with tele-medicine, tele-health encompasses a wider range of digital healthcare activities such as research and continuing education for healthcare professionals, according to the World Health Organization. During the COVID-19 outbreak in 2020, there was an exponential growth in the demand of tele-consultation services worldwide, including Nigeria; to avoid physical contact between healthcare professionals and patients. As tele-health develops rapidly, the evolving

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ethical and medico-legal challenges arising from this alternative mode of doctor- patient interaction cannot be underestimated. The relevant challenges in tele-health practice in ophthalmology include the following areas: duty of care; communication and contingency; patient-centered care and informed consent; limitations and standard of care; keeping medical records, privacy, and confidentiality; and cross-territory practice. (23)

Although tele-health offers benefits for patients in terms of saving time and costs and avoiding physical contact, significant limitations such as the absence of physical examination, possibility of transmission failure, and potential privacy and confidentiality breaches should be made known to patients. To this end, it is good practice to get informed consent from patients before the commencement of tele-health. Whilst existing ethical and legal obligations of practicing medicine are not changed when tele-health is used, as opposed to in-person care, the evolving ethical and medico-legal issues in tele-health, such as whether to consult and prescribe treatments for first-time patients, can be challenging.(23) As a starting point, practitioners should familiarize themselves with the local and international guidelines which outline the broad ethical principles and set out the necessary standards of care in tele-health practice. It cannot be overemphasized again that the standard of care shall always be comparable to conventional in-person consultations and treatments. Practitioners should also keep abreast of the medico-legal developments in this area. Finally, practitioners who practice cross-territory tele-health should observe the licensure requirements and regulatory regimes of both the jurisdiction where they practice and where their patients are located. As for AI, its role is still evolving and has the unique potential of functioning independently from human beings. AI's role in ophthalmology should be transparent for its benefits to outweigh its potential harms. There is a need to examine under what circumstances (if at all) the principles of informed consent should be deployed in the clinical AI space. While it might appear that it is only a matter of time before physicians are rendered obsolete by this type of technology, a closer look at the role this technology can play in the delivery of eye health care is warranted to appreciate its current strengths, limitations, and ethical complexities.

### **Off-Label Use of Materials/substances**

Another concern lies with the off-label use of certain substances/materials in ophthalmic practice; with common examples being the use of amniotic membrane graft in minor ophthalmic surgical procedures without explanation and consent from patients, bevacizumab as intra-vitreous injections for numerous neovascular ocular diseases(>50 conditions);5 fluorouracil-mitomycin C(5-FU/MMC) in ocular surface neoplasia, pterygium surgery, glaucoma filtration surgery; hyaluronic acid as a viscoelastic agent in reforming the anterior chamber; fibrin sealant in adhering conjunctival graft to scleral bed in pterygium resection; doxycycline in acne rosacea; acetylcysteine 10%/20% as mucolytic in filamentary keratopathy and as anti-collagenase drug in severe alkali injuries; ivermectin for onchocerciasis; and edetate disodium EDTA used for band keratopathy. Once approved by the proper drug/device regulatory body (NAFDAC in Nigeria, FDA in the USA) for any use, a drug may be prescribed by individual physicians for any indication in all ages without violating the law in many countries. They may, however, be liable to malpractice actions. A non-approved use that does not adhere to an applicable standard of care places a doctor in a difficult legal position. If a respectable minority of similarly situated physicians prescribes in the same manner, a standard of care could be met in most jurisdictions.

Informed consent remains crucial in equivocal cases. Off-label use becomes an ethical, not a legal, issue when the principle of informed consent is introduced. Many practitioners prescribe drugs for off-label purposes without informing their patients that the drug has not been approved for the purpose they intend. Is it acceptable for a physician to neglect to tell patients

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of a drug's off-label status? It could be argued that the physician who withholds that information is violating the ethical duty to secure the patient's informed consent. There are important clinical and ethical considerations associated with prescribing off-label such as explaining the benefits and risks, obtaining, and documenting informed consent, documenting the reason for off-label use in the patient's record, and ensuring that the patients are aware of the intended duration and relevant monitoring.

Despite providing all the appropriate information about a proposed treatment, including any off-label use, the patient has a right to exercise informed refusal. Such refusal should be documented, and it must be established that the patient understood the risks and possible outcomes associated with the refusal. Therapeutic privilege, as one can imagine, is a hotly debated issue. Many argue that it too often allows physicians to set aside legal requirements and ethical principles to provide the treatments that they see as best, but that are not necessarily what their patients want. Whether or not to inform patients of off-label drug use has been the subject of heated debate for a long time, with convincing arguments made on both sides of the issue and no consensus reached. What must be said is that ophthalmologists should follow evidence-based standards of care constructed from comprehensive studies looking at health outcomes, patient satisfaction, and the feasibility of the proposed methods.

### **Genetics/Genomics in Practice and Research**

The role of genetics /genomics in ophthalmic consultations and research is rapidly expanding globally, and gradually coming into strong consideration in Nigeria. Clinicians are beginning to have patients presenting with genetic test results for themselves or family members. New clinical trials are re-defining treatments based on genetic understanding of eye diseases. Gene therapy and stem cell therapy for some eye conditions are becoming promising. In this era of rapid genomics advancements, some ophthalmologists in Nigeria will thus face the challenge of interpreting and explaining complex testing options, results, and interventions to patients. Concerns with genetic testing for eye diseases will include issues of pre-symptomatic testing in children/ adults, choice and expectations, informed consent; identity; blame/responsibility; family implication; unexpected paternity or family relationships; social/legal implications; data ownership, storage, and privacy; and secondary/incidental findings.

### **Unnecessary diagnostic tests, procedures, or surgeries**

Another aspect of ophthalmic practice that has ethical implications is the deployment of unnecessary diagnostic tests, procedures, or surgeries. It is possible that these procedures are usually ordered by the care providers simply for personal financial gain, and not the welfare of the patient. In this case, it will border on exploitation of a patient, and is highly unethical and unprofessional. These include any test performed to evaluate a new or nonstandard diagnostic instrument or method; any test that provides images or data primarily for future analysis, presentation, or publication; any test obtained routinely in patients of a certain class or category without regard to the individual's personal characteristics, recent clinical history, or clinical signs (e.g. a standard combination of laboratory tests for patients with a specific disease); any duplicate test obtained without retrieval and review of the recent prior test of the same type and determination of its technical quality and the abnormalities it shows. Multiple varied justifications for this practice abound.

Unnecessary surgery is that which is medically unjustifiable when the risks and costs are more than the likely therapeutic benefits or relief to the patient based on the patient's lifestyle requirements. (24) To avoid or minimize such interventions, incorporation of ethics in curriculum

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and strict laws will definitely be helpful in clinical practice. On a related note, the high cost of ophthalmic care due to unnecessary procedures or investigations and other factors in a resource-constrained setting such as Nigeria, also has ethical implications with respect to distributive justice. This has the potential of limiting access to treatment for some patients, increasing burden of administrative tasks and contributing to physician burnout.

### **Recruiting patients for clinical research**

In line with intensification of clinical trials in the developing world, ophthalmologists also conduct many types of research, ranging from laboratory studies of animal models of human disease to clinical trials of new ophthalmic drugs and procedures. Even the practicing ophthalmologist who denies active involvement in research has occasion to evaluate emerging surgical techniques, new medications, and novel diagnostic methods as part of his or her daily activities, and sometimes recruit their patients for research. One major ethical concern with recruiting patients for clinical research is that of possibility of compromised voluntariness and therapeutic misconception on the part of the patient-research subject, and for the ophthalmologists, the obligations derived from their dual role as caregivers and researchers. (25) Patients may get confused over the role of their ophthalmologist as care provider and researcher. Ophthalmologists should make all reasonable efforts to ensure that participants understand the research is not intended to benefit them individually. Physician-researchers share their responsibility for the ethical conduct of research with the institution that carries out research. Ethical dilemmas also arise when ophthalmologists have commercial and financial relationships while being involved in related clinical trials and/or investigational procedures.

Even with respect to eye research, especially studies involving pupil dilation, there is another factor which many ophthalmologist-researchers and health research ethics committees (HRECs) members apparently underestimate; it's ethical and medico-legal implication. For research, part of the criteria for HRECs approval and oversight of human subjects' research is to ensure that the risks to subjects are minimized. (26) As part of their review of a new research protocol, it would be typical for the HREC to request that the study team describe the features of the project intended to minimize risks to subjects. All topical mydriatics, while generally considered safe and used extensively for clinical and research purposes, have the potential for significant adverse effects. Probably, the most well-recognized risk is the chance of an acute iridocorneal angle closure event. While rare, acute angle closure can lead to vision loss, if left untreated. Given an understanding of the associated risks, the widespread use of dilation drops in vision research, and the inconsistencies identified with informing and managing these risks, there is a need to develop guidelines that HRECs and other individuals involved in overseeing research can reference when trying to determine if appropriate steps have been taken to minimize risks for the specific population being studied.(26)This will help to protect the patients-research subjects from harm, as well as the researcher, from potential litigation.

### **COVID-19 Lessons**

Regarding the doctor-patient relationship, the COVID-19 pandemic of 2020/21 had as much impact on other disciplines of medicine as on ophthalmology and raised numerous concerns for future similar occurrences. In the time of pandemic, we tended to maintain social distancing and avoid crowded areas and clustering, especially clinics or hospitals, to avoid the risk of infection. Most healthcare systems stopped, suspended, or reduced elective out-patient eye-care and surgery. Ophthalmologists were found to be at particularly high risk for contracting COVID-19, possibly because they are near patient respiratory secretions during the ophthalmic examination. (27) Although a significant proportion of clinical consultations went virtual and hybrid, the

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importance of physically close human and humane engagement in the care/management of visually challenged patients could not be easily overlooked.

Considering 'Primum non nocere' – we needed to be certain that we were protecting patients from contracting the coronavirus. At the same time, we also had a duty of care to staff. There existed not only a contractual duty but a moral duty to protect medical, nursing, and other healthcare staff. Conserving highly trained healthcare staff was certainly of individual, collective, institutional, and national interest.

For the ophthalmologist called to attend to a patient during the pandemic, the concerns would have been: what is the imminence and severity of the harm expected without intervention? What is the efficacy of the intervention under consideration? What are the risks of treatment for the patient? What are the risks of treating the patient for the health care team?(28)But the pandemic raised a couple of other ethical questions which remain pertinent till date: Is it ethically acceptable– To withhold scarce resources from patients with higher or lower risk of transmission/infection? To deny hospital admission to patients with higher or lower risk of transmission/infection? To use relevant information to make decisions about which patients are booked for eye surgery? To prioritize access to experimental treatments (which are in short supply) for those who are at higher risk of infection? For visitation policies to be informed by testing of family members to determine their risk of contracting or transmitting COVID-19? For hospitals to mandate testing of the workforce to inform work assignment decisions and to enforce mandatory vaccinations? For hospitals to prohibit a health care worker with increased risk of infection from providing direct patient care? For hospitals to prioritize health care workers with decreased risk of infection to serve as first responders? To use information on health care workers' susceptibility to COVID-19 to determine the level of personal protective equipment?

### **Gifts from patients and their relatives**

Patients offering gifts to doctors and other hospital staff is another concern. Some gifts are offered as an expression of gratitude for services rendered or a reflection of the cultural tradition in that setting. In Nigeria, this may be largely acceptable socio-culturally. Accepting gifts offered for these reasons can enhance the patient-physician relationship. Other gifts may, however, signal psychological needs that require the ophthalmologist's attention. Some patients and/or their relatives may offer gifts or cash to secure or influence care or to secure preferential treatment. Such gifts can undermine ophthalmologists' (especially working in public hospitals) obligation to provide services fairly to all patients and accepting them is likely to damage the patient-physician relationship. The interaction of these factors is complex, and ophthalmologists should consider them tactfully before accepting or declining a gift. Physicians to whom a patient offers a gift should be sensitive to the gift's value relative to the patient's or physician's means.

Physicians are encouraged to decline gifts that are disproportionately or inappropriately large, or when the physician would be uncomfortable to have colleagues know the gift had been accepted. In some climes, there is a tradition of philanthropic contributions to academic medical centers/hospitals from grateful patients to support research, patient care, education, and capital projects.(29, 30) This is also laden with a couple of ethical concerns. Currently, the practice is not well-established in Nigeria.

### **Strike actions by Ophthalmologists.**

Incessant industrial actions such as strikes by medical doctors have also remained of concern in the doctor-patient relationship. Embarking on strike actions poses ethical dilemmas for the

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contemporary ophthalmologist, who holds obligations to his professional organization/union (the Nigerian Medical Association, Medical and Dental Consultants of Nigeria, Association of Resident Doctors, Ophthalmological Society of Nigeria) and the patients under his/her care. Strikes are a legitimate deadlock breaking mechanism employed when labor negotiations have reached an impasse during collective bargaining. Striking doctors usually have a moral dilemma between adherence to the Hippocratic tenets of the medical profession and fiduciary contractual obligation to patients. In such circumstances the ethical principles of respect for autonomy, justice and beneficence all come into conflict, whereby doctors struggle with their role as ordinary employees who are rightfully entitled to a just wage for just work versus their moral obligations to patients and society.

From the utilitarian perspective, doctors' strike actions (especially if short-lived) may be justifiable only if there is evidence of long-term benefits to doctors and patients, and an improvement in the health care delivery systems.<sup>(31, 32)</sup> But this is always at some cost. When the work situation is ethically and professionally catastrophic and likely to harm or endanger the interests of the patient (society), a strike may be ethically defensible. Despite all these, it is still hard to entirely justify the benefits which may accrue from the strike against the harms (risks) to some patients (prolongation of suffering, irreversible damage to sight and health, disability, delay in treatment, loss of work, waste of funds, and death). The ophthalmologist therefore must be mindful of the ethics and etiquette of the profession, in order not to be compelled to indulge in untoward and unprofessional practices.

## Conclusion

Contemporary ophthalmic practice in Nigeria, like many other countries, is beset with emerging and evolving ethical concerns. As the population becomes increasingly health-literate and potentially litigious against the backdrop of tremendous advancement in medical sciences and technologies, it has become imperative for the practitioner to have not only a strong knowledge base in ophthalmology and excellent surgical/technical skills, but also requisite competency in medical ethics. With heightened awareness and sensitivity on these issues, contemporary Nigerian ophthalmologists are expected to be in a better position to navigate through potential ethical challenges during their practice, thereby enhancing their ability to promote good doctor-patient relationships and render high-quality professional eye care to their patients and society. Ethics education and training should remain top priority among the educational needs of health workers. The ethical issues raised further trigger the need for empirical research.

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