



Victims of Medical Errors in Osun State, Nigeria: A Qualitative Study

Kamorudeen Adegboyega

Department of Sociology, Ahmadu Bello University
Zaria-Nigeria
adegboyegaayo@gmail.com

Abstract: The Nigerian health care system has recorded unimaginable incident of medical errors. This is partly attributable to difficulty in accessing responsive health facilities by many Nigerians. When accessed, patients receive compromised health care from ill-equipped health facilities, thus, exposing patients to suffer medical errors. The study utilized the political economy approach in its theoretical and analytical thrust. Using a qualitative approach, this study sought to determine profiles of the victims, types, factors responsible for medical errors suffered by victims in Osun State. The findings revealed that medical errors manifest in various ways. These include diagnostic, medication, surgical, procedural and injection errors, among others. The study revealed that low socio-economic status of patients forced them to patronize incompetent health practitioners and ill-equipped hospital facilities and subsequently exposed them to suffer medical errors. Aligning its recommendations to the Political Economy of Medical Errors in Nigeria, this study recommended that the public healthcare system in Nigeria should be rejuvenated in order to address the challenges posed by medical errors in the country. In addition, victims of medical errors or their relatives should be encouraged to report erring healthcare providers to appropriate authorities.

Key Words: Compromised Health Care, Incident, Erring, Victims and Challenges

Introduction

Despite advances in medicine, hospitals and other health facilities have become places where patients suffer medical errors. Thus, as health workers deal with

the life and health of patients, they also face the challenge of medical errors. Incidents of medical errors therefore constitute global health problem. For the purpose of this study, medical errors are

considered as unintended, negative outcomes (injuries, disability, prolonged hospitalization or death to the affected patients) directly linked to the healthcare services provided to clients. Medical errors are also considered as unplanned mishaps resulting from health practitioners' carelessness, either unawareness, ignorance or a combination of these factors, causing either injuries, losses or increase in disabilities (Adegboyega, 2016). To understand the problem of medical errors, this study situates its analysis within the context of the political economy of health care in Nigeria. This is because the individual patient's wellbeing is influenced by the prevailing social, economic, political, cultural and environmental factors where such care is provided. The application of this approach means that the occurrence of medical errors in patient care is due to the modern medical system failures. This is because the actions of individual healthcare providers play a central role in healthcare outcomes, but their immediate working environment and wider organizational processes influence their thinking and behavior. These manifest in form of poor communication, unclear lines of authority among some healthcare providers and poorly staffed healthcare facilities (Adegboyega & Hellandendu, 2014).

Abioye and Adeyinka (2002) had earlier reported that many patients have suffered medical errors in Osun State because of unsafe vaccinations, injections, blood transfusions, counterfeit drugs or unreliable medical equipment. Therefore, the need for empirical and reliable data necessitated the researcher's interest to identify the

victims in order to analyze and document the challenges associated with the incidence of medical errors. Investigation into the victims of medical errors is important because beyond their cost in human lives, medical errors exert other significant tolls on patients and society. This argument corroborates that of Vincent (2006), who advocated that the victims' perspective of medical errors is informative in the development of initiatives designed to improve patient safety, public confidence and satisfaction with healthcare. This study therefore aimed at gaining a deeper understanding of medical errors suffered by victims in Osun State, Nigeria.

Statement of the Problem

Occurrence of medical errors constitutes serious concern for health researchers and members of the public. This is because medical errors expose victims to hardships, which may manifest in forms of loss of work, permanent disability, poorer quality of life, and other calamities. Other costs are expenses incurred such as those for special food or diet. Similarly, the victims of medical errors may not be able to perform other activities such as routine religious recreation, sports and family obligations. Additionally, fear of incurring medical errors may lead patients to procrastinate in searching for medical help, which may allow their illnesses to worsen. The doctor-patient relationship may be characterized by a morbid fear on the side of the patient.

In terms of responses, medical errors come to the attention of the law through the complaints that arise from the victims or their relatives. However, the healthcare environments do not encourage voluntary reportage of medical errors by health practitioners who committed them. In addition,

because of religious and other sentiments, relatives and victims seldom institute court actions or lodge complaints to regulatory bodies for redress. The identified factors among others, contribute to low public awareness about the challenge of medical errors in the Nigerian health sector. However, Chuwunke (2015) established that victims of medical errors in Nigeria, are mostly the less privileged, who also do not have the wherewithal to file legal actions against the hospital or medical practitioner in the event of medical errors. He stressed further that in an environment where ignorance and poverty are common, people's fundamental rights are often violated, as poor victims may not have the means to seek redress against erring practitioners.

Even though cases of medical errors are common in both privately and publicly funded health facilities, it is worthy of note that most of the cases only appear on the pages of the Nigerian newspapers. While appreciating the roles of mass media in creating public awareness on medical errors, it is important to state that mass media lack capacity to provide comprehensive knowledge about the magnitude of the problem in the country. The importance of the identified knowledge gap must not be underestimated as it is considered a serious limitation to understanding the extent of the challenge posed by medical errors on victims in Nigeria. This study is relevant for implementing measures capable of enhancing the safety of clients, as data generated from it will enhance victims' and healthcare practitioners knowledge the causes of medical errors, the types and consequences of medical errors suffered by victims. This study therefore is

capable of contributing to the stock of knowledge by analyzing the victims' profiles, types of medical errors experienced by the victims and; factors responsible for the errors.

Review of Literature and Theoretical Orientation

Studies have indicated that medical errors exist all over the world's health systems, compromising the patient safety. Report from the United States Institute of Medicine (1999) emphasized that most medical errors are systems related. The identified system failures include poor communication, unclear lines of authority of physicians, nurses, and other care providers. Others are disconnected reporting systems within a hospital, inadequate systems of information about errors etc. Consequences of a poor workplace culture, such as a lack of communication and teamwork, therefore have serious implications for patient outcomes. A study conducted by Alemdar & Aktas (2013) in Turkey found that the causes of medical errors among healthcare providers were tiredness, increased workload and long working hours. Paul (2014) reported that a 3.46 medication related error per prescription due to poor handwriting and recording among healthcare personnel in Bangladesh. The study also identified poor documentation in prescription as a major cause of patient morbidity and mortality in the country as at the time of study.

Khoo, et al. (2012) reported incidence of medical errors among patients on admissions between 2008 and 2011 in different clinics in Malaysia. The distribution of the reported errors were as follows; documentation errors (18.0%), medication errors (21.1%), investigation errors (21.7%), decision-

making errors (14.5%) and diagnostic errors (3.6%). The study also established that most of the errors were preventable and 40% of errors were viewed as having a potential for causing serious harm. Examining the physician and public perceptions of the causes of medical errors, a study conducted by Blendon and Robert (2002) revealed that both differed in their judgments. The study highlighted that the physician believed that the two most important factors contributing to medical errors were the understaffing of nurses in hospitals while the few on duty at shift who are overworked, stressed are fatigue on the part of healthcare professionals. On the other hand, the study established that members of the public identified the shortage of nurses and the overworking of healthcare professionals generally as contributing factors to medical errors. These were important findings because they showed that practicing physician and the public view medical errors differently. Similarly, Warren (2015) revealed that misuse and flaws related to medical equipment and mistakes in the laboratory are common causes of medical errors. The study highlighted that more than 50% of errors are caused by a mistake during the use of devices because the person using the device was not adequately trained on how to use it. Findings from this study contributed to the stock of knowledge on medical errors, as it provides various dimensions on the drivers of medical errors.

Recognizing the importance of patients' socio-economic backgrounds and vulnerability to medical errors, a study conducted by Atiyeh, Gunn & Hayek (2010) attributed the occurrence of medical errors among patients in sub-Saharan Africa to poverty and low level

of education. The study opined that most patients live in rural and semi urban areas and are not able to get to hospital quickly in an emergency. The study further found that these patients were malnourished, could not afford the cheapest medicine and were reluctant to travel long distances for routine checkups and screenings in centralized services of tertiary health institutions in urban area. The study concluded that the socio-economic factors mean that some patients were not likely to afford multiple interventions necessary as part of their care. A critical look at this study shows that poor socio-economic statuses among patients affect their health seeking behavior negatively as the poor patients delay medical treatment and in some cases, patronized quacks.

A study conducted by Chukuezi & Nwosu (2010) identified reasons for surgical errors in a tertiary health facility in Nigeria to include delay in treatment, error in judgment, limited hospital resources and poor infrastructure on the ground. Ojerinde, Olabisi and Adejumo (2014) also attributed the incident of medication errors among nurses in a public health facility in Nigeria to multiple factors, which include exhaustion due to work pressure, wrong dose calculation, inadequate knowledge about the drug, poor documentation, wrong prescription, poor labels/packaging, distraction and failure to match patients name with prescription. Others are misinterpretation of prescriptions, confusion between two similar terms, illegible prescription, absent-mindedness and wrong time of administration. Ajemigbitse, Omole, Ezike and Erhun (2014) attributed the occurrence of medication errors among health workers in Obafemi Awolowo

University Teaching hospital, Ile-Ife, Nigeria to many factors, such as workload, multitasking, rushing and tiredness. Other factors were distraction, low morale, unfamiliar patient, lack of support from senior colleagues and nervousness.

Other studies also reveal that medical errors pose negative consequences for victims, relatives and friends. For instance, Duclos, Eichler, Taylor, Quintela, Main, Pace and Staton (2005) found that patients experienced physical, emotional and financial trauma because of medical errors they sustained in medical errors. Gallagher, Waterman, Ebers, Fraser and Levinson (2003) also found that patients described feeling sad, anxious, depressed and often angry that their hospital stay was prolonged due to the medical errors. Gilmour (2006) expressed that the incident of medical errors suffered by victims in Canada resulted in permanent disability, while some victims die because of the errors. A study conducted by Starfield (2000) in the United States found that medical errors are the third leading cause of death. The study also showed that there were 2,000 deaths/year from unnecessary surgery; 7,000 deaths/year from medication errors in hospitals; 20,000 deaths/year from other errors in hospitals; 80,000 deaths/year from infections in hospitals; 106,000 deaths/year from non-error, adverse effects of medications. Osmon, Harris, Dunagan, Prentice, Fraser and Kollef (2004) studied the reporting of medical errors in an intensive care unit experience where it was concluded that medical errors are common among patients in the intensive care unit and that an error can result in the need for additional life-sustaining treatments, which can contribute to patients' death.

Miller and Zhan (2004) reported that medical errors in hospitalized children are associated with significant increases in length of stay, healthcare costs and deaths. A study conducted by Sousa, Uva, Serranheira, Nunes and Leite (2014) revealed that 58.6% of patients who experienced medical errors prolonged the length of stay in hospital on average for 10.7 days, with additional direct costs of €470,380.00. A study conducted by Orkuma and Ayia (2014) in Nigeria revealed that the effects of medical errors on victims include economic and non-economic damages. Economic damages include lost wages and medical expenses on the part of victims. On the other hand, the non-economic damages include pain, sufferings and physical impairments, emotional torture, inconveniences, loss of companionship and humiliation.

Theoretical Orientation: The Political Economy of Medical Errors in Nigeria

This study adopts the Marxian Political Economy framework to explain the intricacies of medical errors, which manifest in Nigeria's health sector. The Political Economy of Medical errors hinges on the materialist conception of the history of healthcare delivery in Nigeria (Falola & Ityavyar: 1991; Milward: 2010; Ticktin: 2010). The Marxian Political Economy approach has three basic theoretical thrust. Firstly, the approach takes as its starting point the assumption, that human society is materially rooted and constituted. The implication of this is that relations of power permeate the way in which a society conducts its economic life, in terms of the production and distribution of scarce resources. This is what is referred to as relations of production. Secondly, relations of production

determine the life chances of individuals and social classes in society in terms of those who benefit from economic transactions, and those who loss out. Thirdly, the Marxian political economy approach posits that the material world has dialectical relations with social existence. This holds that social realities cannot be grasped outside the realms of economic realities. In effect, the Marxian political economy theory sees the economy and politics as dialectically linked (Marx, 1976).

Contributing to the debate, Alubo (1995) opined that political economy is a tool for the analysis of mode of production; which also helps us to understand social stratification, the role of State and the dynamics of production and reproduction in human society. Tuohy and Glied (2012) also provided a descriptive narrative of the role of government in the health care system by identifying the factors and forces that determine the direction of that role. They examine the extent to which the political economy applies to our understanding of the challenges associated with healthcare delivery. Their analytical strength draws from both economics and politics to understand the intricacies inherent in the health sector. They emphasized that government policies play a critical role in health care delivery in a polity. This is because the failure or success of healthcare has a dialectical link to existing socioeconomic system. These include the extent to which health care expenditure and quality of health infrastructure is considered as a public good and priority. In an extended contribution, Ohwona (1991) also argued that the British colonial welfare services were restricted to the needs of the colonial military and other officials. This discriminatory approach to health

care in favor of elite became the operating principle in Nigeria even in the post-colonial era, and resulted in the denial of healthcare access to the less privileged. Nigeria's post independent national healthcare policy continues to reflect a health system modeled along the colonial pattern (Ityavyar, 1983). This partly explains why in the 21st century Nigeria, government general hospitals are still poorly staffed and equipped and still primarily serve the poor population who cannot afford anything better. In a similarly study, Adegboyega & Hellandendu (2015) submitted that the challenges associated with the Nigerian health sector predisposed the privileged Nigerians to go for medical tourism abroad.

Similarly, the political economy theoretical approach is useful to explain the correlations between hyper-unemployment, increasing level of poverty among Nigerians and its implications on patients' health seeking behavior and the potential for their vulnerability to medical errors. The paradox of the deepening crisis of mass poverty in Nigeria and the enormous wealth in the country is pathetic. It further shows that indicators of health are a mirror of what goes on in the wider society as majority of the population are deprived of the material benefits of the economy. Balancing this equilibrium is therefore a function of history, politics and economic policies (Stuckler, Feigl, Basu, & McKee, 2010; Gish, 1979). It is within such a context that the volume 'the Political Economy of Health in Africa' by Falola & Ityavyar (1991) is situated. The book took a historical review of major phases of health services in Africa. Their study analyzed health as an integral part of the deepening crises in Africa's

underdevelopment, pointing out that the Western paradigm of health care delivery systems have not only made health care less accessible for most African people, but that it has also created countless number of problems for the health sector. Part of the problems as identified by Ezejiolor, Okafor & Okoro (2013) is that most of the public health facilities in Nigeria have fewer physicians and lack essential tools such as drugs, syringes, needles, coolers and beds. They also explained further that gaps and dysfunctions exist in the area of clinical services, specifically clinical audits, performance appraisals, educational training and re-training of health care personnel, and quality improvement of patient safety. This makes it difficult to enhance or evaluate healthcare performance and patient safety. With these scenarios, the health care environment becomes a fertile ground for the occurrence of medical errors.

Political economy theory enables us to understand the social and economic contexts of medical errors in Nigeria, provides the key to un-lock, and analyzes other components of the problems, such as corruption in the Nigerian health sector and its impact on the quality of services received by patients. Over the years, provision of health services has always been an avenue for primitive accumulation and corruption. Situating how the provisions of health care encourage corruption in the post-colonial Nigeria, Abba, Abdullahi, Abubakar, Kwanashie, Abubakar, Oculli, Kyari and Usman, (1985) opined that health policy in Nigeria was pre-occupied with capital construction, and expensive medical equipment, some of which could not be installed or adequately operated. The

significant of this can be located in the economic contribution of hospital construction to primitive accumulation, corruption, award of inflated contracts for profiteering. This laid the foundation for the problems that continue to ravage the health sector, including the preponderance of medical errors. To buttress this point, the World Health Organization (2011) reports indicates that total public expenditure on the Nigerian health sector which stood at 7.05% in 1995 dropped to a low of 4.22% in 2000, rose slightly to 6.41% 2005 and dropped again to a low of 4.4% in 2010. Similarly, the political economy theoretical approach is useful to explain the correlations between hyper-unemployment, increasing level of poverty among Nigerians and its implications on patients' health seeking behavior and the potential for their vulnerability to medical errors. The paradox of the deepening crisis of mass poverty in Nigeria and the enormous wealth in the country is pathetic. It further shows that indicators of health are a mirror of what goes on in the wider society as majority of the population are deprived of the material benefits of the economy.

It is also instructive to state that the political economy theory influences victims and healthcare providers' responses to medical errors. Illustrating this statement, Ahmed-Kazeem (2016) explained the legal options available to victims of medical negligence in Nigeria, with emphasis on the Code of Medical Ethics (Rule 29.4), which stipulates professional negligence. The rule includes failure to attend promptly to a patient requiring urgent attention when the practitioner is in position to do so, incompetent assessment of the condition of a patient, making wrong

diagnosis even when clinical features are glaringly obvious to have informed a correct diagnostic exercise. Others are making a medical error in terms of amputation of the wrong limb, wrongly terminating pregnancy, prescribing a wrong drug or dosage; failure to refer a patient to a more competent and qualified medical consultant; failure to do be reasonable in handling a patient; failure to see a patient and relatives as frequent as the medical condition required. While the foregoing rules are given, in actual practice, the social, political and economic realities of every society are the main determining factors that can ensure that medical professionals meet the requirement enshrined in such medical rules and ethics. Karodia and Soni (2015:123) located the heart of the Political Economy of Medical Errors in their discourse of the intersection of politics with utilization of scarce resources thus:

It is therefore important to concentrate upon the political economy of healthcare management in relationship to public health issues. Advances in preventive medicine or public health depend on the prior allocation of scarce economic resources, primarily through actions in the political arena... It therefore, has to be clearly understood that demand for health expenditures must compete with other priority areas such as defense, education, social security and housing... more difficult, and this places a huge burden on the resources available and the mobility of the labor force. The length of stay in health institutions, levels of disease (acute) and chronic lead to far more work and greater responsibilities for healthcare professionals and managers.

Healthcare statutory bodies must serve to enhance patients' rights and serve as watchdogs to ensure the delivery of healthcare strictly abiding by ethical codes of conduct. The ethical and moral dilemmas that healthcare professionals and managers are faced with daily, place additional strain on the system.

As a theoretical tool used in this study, the 'Political Economy of Medical Errors' reveals that Nigeria's corrupt and weak healthcare system, which is characterized by primitive accumulation; inadequate health facilities; ill-trained medical professionals; low socio-economic background and poor awareness by majority of Nigerian patients; all combine to contribute to the incidence of medical errors in the country. Arguing on a similar theoretical thrust, Ichoku, Fonta & Ataguba, (2013) demonstrated that lack of progress towards universal health care coverage and other related health challenges in sub-Saharan Africa (Nigeria inclusive) is largely due to the elitist, pro-capitalist, primitive capital accumulation and 'free market' system that drives it. This economic structure set the foundation for many challenges that are associated with the health care delivery in the sub-continent.

From the foregoing, the political economy theory has demonstrated the basis for the occurrence of medical errors, in Nigeria, as it describes how systemic factors, such as inadequate funding of health sector, primitive accumulation of health resources, ill-equipped health facilities and ill-trained medical providers predisposed patients to medical errors. It could therefore be stated that the Nigerian healthcare environment is fertile for the occurrence of medical errors.

Methodology

The study was carried out in Osun State, Nigeria. The health situation in the State is very much like the national one characterized by poor health, such as shortages of competent health facilities and absence of regulatory mechanisms historically worsened by rapidly growing population that stretches health resources.

The research design was exploratory, employing qualitative research approach. To capture the issues and questions raised, in-depth interviews (IDIs) were conducted with the victims and other research participants in the study area. Interview guides designed for data collection were semi-structured to accommodate flexible and adaptable sessions during data collection. Eighty (80) laypersons comprising victims of medical errors, their relatives and community leaders participated in this study. The samples were selected using snowball sampling, where participants were drawn based on their availability and their knowledge of the research topic. Such participants referred the researcher to others known to them who had suffered medical errors. All research participants agreed to participate in the study by giving verbal consent and approval. Before commencing interviews, participants were asked if they were willing to be audio-recorded and reassured that any information provided would be treated with a strict confidence.

Presentation and Analysis of Findings Profiles of Identified Victims of Medical Errors in Osun State

This section presents and analyzes profiles of the victims of medical errors in the study location. This is done in order to have full knowledge of categories of patients and members of

the public that have suffered medical errors in Osun State. A total number of 80 victims of medical errors participated in the study. The distribution of the victims indicate that there were 28 males (35.0%) and 52 females (65.0%). The result indicates that females were more than males, it can therefore be concluded that there is relationship between gender and patient vulnerability to medical errors in the study area. The plausible explanation is that females experience gynecological diseases and as such, making women susceptible to medical errors. The study also revealed that most of the victims were between the ages of 31 and 40 years while a few were aged between 10 and 20 years.

In terms of the formal educational attainment, significant numbers of the victims were holders of primary school/senior secondary school certificates. However, some participants possessed higher educational qualifications such as NCE, OND, HND and First Degree in various disciplines not related to medicine; while some participants were in various higher institutions of learning as at the time of conducting this research. The implication of finding is that there is relationship between patient educational attainment and vulnerability to medical errors. This is because patients' educational attainment influences their health seeking behavior. It should not be considered an overstatement to say that patients of low educational background may not possess relevant information capable of influencing where they could seek health services, thereby predisposing to patronizing unqualified health practitioners and those who do not understand the standards of care. The low educational attainment therefore exposed the clients' to suffer

medical errors. Inference from this study therefore is that patient with little or no formal educations were more vulnerable to medical errors.

This study also found that 65.3% of the victims resided in rural areas. Given the fact that most of the rural dwellers in Nigeria find it difficult to receive treatment from competent health facilities, rural dwellers patronize the available healthcare providers in their communities. While most of the health practitioners in the rural areas did not operate within the rules and regulations guiding the safety of clients, the chances are therefore higher for the occurrence of medical errors when clients patronize the existing health facilities in their communities. The absence of appropriately staffed and equipped healthcare facilities in the rural communities therefore has effect on the health seeking behavior of the rural dwellers.

In terms of occupational status, this study revealed that most (68.8%) of the victims were dependents (students, unemployed or retirees). The results also provided information about the economic status of the victims, which suggest that most of the victims of medical errors did not have regular incomes. Given the fact that most of the victims were dependents, their health seeking behavior would be directly influenced by their income or by the predisposition of the person, they depend on. This implies that patients who were financially weak would find it difficult to patronize reliable health facilities and in a bid to seek medical help from cheaper but less effective healthcare facilities, they become vulnerable to medical errors. The occupational statuses of the victims' also explains why most (56.3%) of them

patronized patent medicine vendors who were not competent enough to render quality healthcare delivery to clients. This could be explained from economic point of view that most of the patent medicine vendors render services at lower rates and therefore attracting clients from low economic status.

Types of Medical Errors Experienced by the Victims

To identify the types of errors, the victims were asked about the genesis of the errors made on them. Prompts were made to elicit the full context of victims' experiences of the medical errors. Most victims also presented stories of both their own mistakes and errors experienced by their friends and relatives. The narratives indicated that medical errors such as delay in treatment/errors of protocol, injection, medication, surgical errors and wrong discharge from hospitals were common in the studied area.

The participants, who experienced errors of delay, attributed it to some workers' poor habits of delaying to the extent of ignoring patients who need urgent medication. Others perceived health workers as people who did not have human feelings at heart, especially, when it was expected that health workers were trained to save lives by rendering prompt medical services to the sick. Responses from the participants further revealed some of the challenges facing government-owned health institutions. These include health workers' poor attitudes towards their responsibilities, thereby exposing patients to suffer delays and other inconveniences.

Other victims attributed the delays to excessive bureaucratic protocols in various health facilities. The participants in this category cited instances where

healthcare workers insisted on seeing official report from the security personnel before providing medical services (including first aid treatments) to survivors of road accidents and including patients in critical conditions, who died before security reports could be obtained. They further explained that no matter the position of the hospital management, health workers are supposed to render first aid medical attention to patients in critical conditions, while observing other protocol related issues. A participant narrated how such bureaucratic protocols in a tertiary health facility led to the death of a motor accident victim thus:

My uncle was involved in a motor accident along Ibadan-Ife road in 1998. Though, I boarded a different vehicle, I got to the accident spot immediately after it happened. We then took the survivors to a tertiary hospital in Osun State. As we arrived the emergency unit of the hospital, we were asked to submit police report, to ensure that the victims were not armed robbers. We pleaded that the victims were motor accident survivors but our pleas were ignored; saying that it was part of their professional ethics and protocols. As we tried to convince the health workers, my uncle became hypertensive and died (a 65-year and relative of a deceased of victim of error of delay).

The plausible explanation to the narratives above is that the health care setting is a complex structure, guided by rigid rules. The workers in the public health facilities follow stringent protocols while carrying out their responsibilities. In this case, clients are at the receiving end. This backfires in

form of delay of treatment, subsequent complications and deaths.

Other participants, especially, enrollees of the National Health Insurance Scheme (NHIS) complained about the delays they experienced whenever they sought for medical interventions in primary healthcare institutions. These included poor response to laboratory test requests and deliberate refusal by personnel to dispense drugs to them, even when those drugs were covered and available in the NHIS pharmacies. The problems associated with delay in response to patients' requests as documented by this study were cases where patients developed complications such as fainting, unconsciousness and deaths.

Some participants also reported that they suffered errors attributable to faulty administration of injections. These emanated from child immunization, wrong combinations of injections, and injections at the wrong sites of the bodies, among others. Interviews conducted with some victims' showed that errors related to immunization were attributable to lack of competence on the part of adhoc personnel to render the health services. The participants in this category said that the majority of the personnel employed to render the immunization services were appointees of political stakeholders and people who had not acquired any skills in any of the medical sub professions. The participants also alleged that healthcare providers in most of the communities were poorly qualified. The narratives from the participants revealed that it was a common practice to see people who did not acquire any medical training rendering medical treatment to clients in various communities. The participants attributed this to paucity of well-trained

medical practitioners in various communities. Very poorly qualified people therefore provide medical services for serious ailments such as malaria, antenatal care, typhoid and even delicate services like heart related illnesses, among others.

Apart from the immunization vaccines related errors, some participants reported cases where healthcare providers either gave them wrong injection or injected them at wrong sites. One of the participants who experienced error of wrong injection recalled:

Six weeks ago, I went to a clinic close to my house when I noticed that I had malaria symptoms. The nurse on duty told me that I would receive four different types of injection, though I cannot recall their names. I received all the injections as recommended (simultaneously). Three days later, one of my legs started swelling. ... I did not understand what went wrong, until my daughter; a medical student came home to check the affected leg. Based on my explanation of the illnesses, she concluded that the nurse who administered the injection had committed an error, as she was not supposed to combine the injections (a 53-year-old man who suffered error of injection).

Procedural errors in this study, which some victims suffered include failure of healthcare providers to embark on thorough diagnoses of patients' before services are rendered and failure of healthcare providers to refer complicated illness to appropriate levels of care where required. Others are wrong documentation of patients' record, wrong diagnoses, surgical error and poor handling-over of patients' medical details to other health personnel. It is worth noting that the

major trust in the medical profession is the need for the providers to adhere to protocols while rendering services to patients' to advance standard of care. Here, the participants gave graphic accounts of how healthcare providers breached protocols while rendering healthcare services to them.

Other victims of medical errors, especially those who patronized patent medicine vendors (PMVs) narrated their own experiences too. The affected victims in this category were those living in rural areas, suburbs and slums where there were no modern healthcare facilities. This is in addition to the challenge of transportation to facilitate their movement to more available health facilities. Thus, most of the participants in this category stated that the PMVs served as their first point of care whenever they were ill. They justified their stance by highlighting that the PMVs provided them medical treatment promptly at affordable costs. The identified factors, among others enhanced higher patronage of the PMVs by the participants. One major revelation from this study was that majority of the PMVs had no formal training in any field of medicine. Rather, the participants explained that the PMVs obtained their training as apprentices and on-the-job-training. The study also revealed that the PMVs operated as general practitioners and therefore claimed to be able to treat various categories of illnesses such as malaria, typhoid, antenatal/post-natal services, dysentery, tuberculosis, and hypertension, among others.

Factors Responsible for Occurrence of Medical Errors Experienced by the Victims

The major assumption among the participants is that patients' low socio-

economic status predisposed them to medical errors. Given the fact that most of the victims of medical errors were from low socio-economic background, this study revealed that the factors responsible for the medical errors suffered were social and economic in nature. These were poverty among the victims, victims' ignorance of useful healthcare information and poor access to effective modern healthcare facilities.

For the victims who attributed the medical errors they suffered to their low economic status, they blamed the combinations of unemployment, irregular payment of monthly salaries, low-income among others, which made them vulnerable to medical errors. The major trend among the victims in this category is that most of them lack definite and sustainable source of economic livelihood, and subsequently affecting their health seeking behavior. Therefore, in the event of sickness, such as malaria, typhoid, body ache, and even routine clinic visit like antenatal and postnatal care and child immunization, the participants said that they patronized patent medicine vendors, pharmaceutical shops and any available healthcare providers in their neighborhoods. Some participants in this category also said that the financial costs of treatment in most of the patent medicine stores and pharmaceutical shops were affordable, which encouraged their patronage. However, the victims also observed that their 'partnership' with the owners of patent medicine vendors and pharmaceutical shops for utilization of health services made them suffer medical errors.

Similarly, some participants opined that the medical errors they suffered were attributable to poor awareness of quality of health facilities prior to their

patronages. This manifested in the form of victims poor knowledge of where effective medical services should have been sought, victims' difficulty in understanding medical instructions and their failure to seek for clarifications on issues related to illnesses and treatments. The findings further established that health information and patients' awareness were important determinants of patients' vulnerability to medical errors. In a situation where patients' did not have information on health care providers from which to make choice, the chances are higher that such patients' might experience medical errors. In this regard, the victims were mostly ignorant of basic relevant health information, which could have prevented them from being vulnerable to medical errors. Therefore, rather than attributing medical errors, they suffered due to negligence from healthcare providers; they stated that ignorance on their parts served as the major driver of the medical errors.

Deduction from elicited data is that there is a connection between the costs of care, patients' ignorance of constitutes competent care, poverty and patronage of substandard health facilities and victims vulnerability to medical errors. Thus, patients' prior knowledge about quality of health facilities could serve as a driver for their involvement in medical errors. In other words, the social and economic statuses of the patients influenced their health seeking behavior and where medical interventions are sought. The combination of these factors determines patient vulnerability to medical errors.

Conclusion

The occurrence of medical errors when patients receive care from healthcare providers constitutes public health

challenge in most countries of the world, Nigeria inclusive. In specific terms, medical errors constitute threat to patients' safety, as it exposes them to injuries, delay hospitalization and may lead to patient death. This study therefore provided evidence on the extent and gravity of medical errors suffered by health consumers in the study area. Specifically, the systemic factors, which include shortages of competent health personnel, non-conducive working environment, weak regulation, poor awareness among patients' and professional negligence, among others predispose patients to medical errors. Findings from this study revealed that patients who are able to access medical services receive sub-standard care in many cases due to negligence on the part of one health care provider or the other, even in tertiary health establishments. Those who cannot afford the services of professionals go to quacks that may provide cheaper but sub-services, with a greater risk of harm or damage to the patients and their families. The occurrence of medical errors in patients' care is therefore a serious public health problem with major implications for health policy, planning and resource allocation. Healthcare providers are prone to commit medical errors but the existence of comprehensive structure and framework could mitigate such occurrences. The foregoing is an indication that medical errors cannot be isolated from the politics, economy and society of Nigeria.

Recommendations

Based on the findings, this study recommends the following;

The spate of medical injuries in Nigeria gives renewed weight to the importance of regulation in preventing and

managing incidents of medical negligence. Patients should also be more proactive in their health and medical treatment; while medical personnel should take more responsibility for the cases that they handle. The government should also begin to take citizens health more seriously by building more hospitals and better equipping the existing ones, in order to see a decline in cases of medical errors. Similarly, proper awareness should be given to the citizens by relevant government agencies and mass media about the dangers associated with the patronage of ill-equipped health facilities. This will not only reduce the proliferation of incompetent health practitioners but also mitigate the occurrence of medical errors.

Since good quality of healthcare delivery encourages individual to seek for health care promptly, clinicians and healthcare providers should because of their obligations endeavor to deliver safe and ethically sound clinical care always even in the face of adverse economy. Clinicians should also be aware of the existence of the basic human rights and equity considering the values and dignity of patients before making decisions or taking actions that may affect them.

Victims of medical errors or their relatives should also be encouraged to report any erring healthcare providers to the appropriate regulatory bodies, government agencies and non-governmental organizations for clarifications, compensation and redress. This will not only serve as deterrent to the erring healthcare practitioners but also serves as checks and balances among the various healthcare providers in Osun State, Nigeria.

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