

Awareness and Patronage of Healthcare Professional Indemnity Insurance: Empirical Evidence among Medical Practitioners in Lagos, Nigeria

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Abstract: Healthcare Professional indemnity insurance (HPPI), otherwise known as medical malpractice insurance or medical errors and omission insurance, is a legal liability insurance that helps rescue the medical practitioners from medical liability lawsuits or negligence that may be brought forward by a patient. It is thus fundamental for managing liability risks that may ensue from the activities of medical practitioners such as surgeons, physicians, dentists, pharmacists, opticians, nurses, physiotherapists and the likes. The thrust of the study, therefore, is to investigate the awareness level and extent of patronage among medical practitioners regarding professional indemnity insurance policy in Nigeria. This study adopted descriptive research design with the help of a survey approach. While judgmental sampling technique was adopted for information selection, a questionnaire was used for data collection. Two hundred fifty (250) medical practitioners that participated in the study were drawn from five (5) divisional areas in Lagos State, which is the population of the study. Two (2) hypothetical statements were tested with statistical intervention of Kolmogorov-Smirnov test and Kendall's tau Correlation technique. It was found out that the level of awareness of healthcare professional indemnity insurance policy is low among the operators of private health facilities in the studied areas. Thus, extent of patronage of PII is low among the operators of private health facilities in the studied areas, and by implication, the extent of patronage of PII is low among the operators of private health facilities in Nigeria. The study recommends that the Nigerian Medical Association (NMA) should advocate Healthcare Professional Indemnity Insurance policy among its members so as to help improve awareness level of this insurance protection. The state can also promote this indemnity insurance awareness as a medical liability risk management technique through the instrumentality of law.

Keywords: Awareness; Patronage; Professional indemnity insurance; Medical malpractice; Nigeria

JEL Classification: I15

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1. Introduction

Errors and omissions arising from medical practices are more of serious public health problems and leading causes of fatalities in many countries of the world. It is a complex issue as it remains challenging to uncover a consistent cause of errors. Thus, health care providers had acknowledged that medical errors create a serious public health issue that poses a substantial threat to patient safety. The size of medical errors has largely been reported by varying research studies (Jena, Seabury, Lakdawalla & Chaudra, 2011; Pituru, Vladareanu, Paun & Nanu, 2015; Rubin & Bishop, 2013); and by geographic expression within and across the global population (Makary & Daniel, 2016; Flotta, Rizza, Bianco, Pileggi, & Pavia, 2012). Medical error is unavoidable in the health systems (Ahmed, Giri, Kashyap, Singh, Dong, Kilickaya, Erwin, Murad, & Pickering, 2015; Khammania & Setoodehzadeh, 2016). Medical errors are said to occur in many health care settings which include clinic, laboratory, health centres, hospitals and the likes. According to numerous studies at the world level, errors due to medications represents 10 to 18 percent in different countries (Alsulami, Conroy & Choonara, 2013; Evans, 2009; Mrayyan, Shishani & Al-Faouri, 2007; Vaziri, Fakouri, Mirzaei, Afsharian, Azizi & Arab-Zozoni, 2019). According to other research sources, the increasing happenings of medical errors ranged from 1 to 40 percent. It is thus estimated further that roughly 17 percent of acceptances in diagnostic and treatment centres often lead to adverse situations (Harrison, Cohen & Walton, 2015; Siddiqi, Elasady, Khorshidi, Fortune, Leotsakos, Letaief, Qsoos, Aman, Mandhari & Sahel, 2012; Vaziri, Khansari, Afsharian, Sayad, Janbakhsh, Asghari-Jafarabadi & Mirzaei, 2016).

Medical errors or negligence can have tremendous costs on families and the society at large and therefore require substantial attention. The errors associated with medical practices have been responsible for loss of lives annually in many countries including Nigeria; bringing great discomfort on those that are involved (Abolarin & Oyetunde, 2013; Iloh, Amadi, Chukwunonye, Ifedigbo & Orji, 2017; Ushie, Salami, Jegede, & Oyetunde, 2013; Yetunde, Kelechi, & Oyediran, 2014). According to Iloh, Chuku & Amadi (2017), in Nigeria and many African countries, medical errors have not been estimated; and there is paucity of research in this regard. Breadwinners and loved ones have been lost through errors or malpractices that are committed by medical practitioners across different tiers of medical care providers in the country. Medical professionals (such as surgeon, dentists, psychologists, pharmacists, dermatologists, physiotherapists, nurses, hematologists, opticians and the likes) face different types of liability risks. Some of which are ordinary to all businesses, and others peculiar to their professional practice. The health risks emerging from the possible errors of medical practitioners include bodily injuries and financial losses suffered by clients. To this end, medical malpractice insurance is required to compensate for the financial liabilities that

may be incurred by medical practitioners from such medical errors and omissions and provide financial protections and alleviate anxieties. According to Seshappa, Rangaswamy and Puttegowda (2018), medical malpractice insurance provides necessary financial protection for professionals in such a precarious situation due to alleged neglect, error or omission whenever and wherever committed or communicated in the conduct of the insured's business in their professional capacity.

Studies have been conducted on Healthcare Professional Indemnity or medical malpractice insurance in countries such as the United States of America (Rutigliano, 2014; Sloan, & Chepke, 2008); India (Bhanushali, Shivakumar, Snehal & Vidya, 2018; Beniwal, 2016); Italy (Scurria, Asmundo, Crino & Gualniera, 2011); Malaysia (Hussin & Ismail, 2016); and South Africa (Dinnie, 2019). While some authors in Nigeria have studied medical negligence from the legal perspective (Enemo, 2012; Chukwunke, 2015), not many studies have been conducted on how the financial responsibilities arising from this medical negligence or malpractices can be managed through insurance. Healthcare Professional indemnity insurance is believed to be a risk management and financial instrument necessary for managing medical negligence and claims cost arising from medical professionals' services. The observations from reports had shown that there seem to be a poor awareness and low patronage among medical practitioners with regards to professional indemnity insurance policy, even though liability claims involving professional services are usually excluded under general liability policies. It is a requirement of the law in Nigeria for medical practitioners and health workers to purchase separate professional indemnity insurance policies to cover losses arising out of their professional negligence for which the clients may take legal actions against them (National Health Insurance Scheme, 2012). The impact of medical practitioners' services in improving the standards of health and wellbeing in the society is important because the healthier the citizens of a nation, the higher productivity and growth of the economy, all other things being equal. The increasing cases of litigations across the world between medical practitioners and patients have made it imperative that medical practitioners in Nigeria should seek ways to protect themselves from such liability risks.

In an attempt to examine an issue of professional indemnity (error and omission) insurance with respect to its awareness and patronage among medical practitioners in Lagos State, the following specific research questions were formulated:

- i. What level of popularity has professional indemnity insurance policy gained among medical practitioners in Lagos State?
- ii. What is the relationship between awareness and patronage of professional indemnity insurance policy among medical practitioners in Lagos State?

The conjectural propositions, therefore, were stipulated as below:

- i. Professional indemnity insurance policy has not gained high popularity among medical practitioners in Lagos State;
- ii. There is no positive relationship between Professional Indemnity insurance awareness and patronage among medical practitioners in Lagos State.

2. Literature Review

Insurance, according to Oyetayo (2001) as cited in Adeleke, Olowokudejo and Ajemunigbohun (2016), is described as a system of compensation for loss, damage, death and any other unexpected circumstances in return for a periodic payment of a predetermined premium. Insurance, thus, is said to be social device, in which a group of individuals (called 'insureds') transfer risk to another party (called 'insurers') in order to combine loss experience, which permits statistical prediction of losses and provides for payment of losses from funds contributed (premiums) by all members who transferred risk (Pritchett, Schmit, Doerpinghans, & Athearn, 1996). According to Pagura (2014) and Olsson (2002), Insurance is a financial risk transfer medium whose importance is usually felt at the time of a loss. Several insurance policies have been designed to cater for the diverse needs of individuals and businesses. One of these insurance policies is the professional indemnity insurance policy which is designed, in part, to fill the gap created by the professional service exclusions in a general liability policy. (Ndekugri, Daeche, & Zhou, 2013; Rutigliano, 2014; Zabrowski, 2013). Professional indemnity insurance (PII) protects doctors, surgeons and other medical practitioners against catastrophic financial loss as a result of a medical liability lawsuits, or allegation of medical malpractice or negligence brought forward by a patient.

Professional indemnity insurance is defined as an insurance which indemnifies the insured professional against pecuniary loss arising out of the professional's negligent act, error or omission which causes loss to be suffered by his or her client or a third-party (Hooker & Pryor, 1990). According to Pricewaterhousecoopers Consulting (2019), PII is a form of liability insurance which helps protect professional advice and service-providing individuals and companies from bearing the full cost of defending against a negligent claim made by a client and damages awarded in such a civil lawsuit. PII is specially meant for professionals (such as accountants, lawyers, doctors and the likes) in order to cover liabilities falling on them as a result of errors, negligence, and malpractices committed by them while rendering their professional service (Bhanushali, Shivakumar, Snehal & Kadashetti, 2018). Medical professional liability insurance, therefore, is purchased to safeguard a physician or healthcare institution from financial risks, that is, the liability of practicing medicine. It is thus seen as an insurance cover purchased through a contractual agreement called the policy, in exchange for premium, and in

which the insurance company agrees to financial responsibility for the defense and payment of claims against the policyholder (physician) up to a fixed ceiling of coverage (liability limit) for a specified policy period (American College of Emergency Physicians, nd).

Professional indemnity insurance policy as a class of insurance designed, in part, to fill the gap that is created by the professional service exclusion in a general liability policy. (Rutigliano, 2014; Ndekugri, Daeche, & Zhou, 2013; Zabrowski, 2013). According to Yadukul, Prasanna, Venkataraghava & Devadass (2011), medical indemnity insurance is a cover for medical experts against liabilities arising from errors or omissions by them while rendering their professional services to the society. They remarked further that this policy protects the amount which an insured medical professional becomes licitly responsible to pay as damages to his patient who suffered from his medical errors and the legal costs incurred in defense of the situation. The main essence of a professional indemnity insurance policy is to protect the medical practitioners from the financial risk that may emanate if they are sued for unprofessional conduct, negligence, or mistakes during the treatment of their patient. However medical negligence and errors have been described by Agarwal & Swapnil (n.d); Chukwuneke (2015); Olaleye (2018); Enemo (2012) as an improper, unskilled, or negligent treatment of a patient by a physician, dentist, nurse, pharmaceutical or other health care professional. Its cost in financial terms has been high over the years thus limiting the ability of some healthcare professionals to achieve their business objectives. One of the mitigation measures is professional indemnity insurance (PII) which undertakes to indemnify the damages caused by the faults and negligence of the professionals committed in the ordinary course of his business (Ramachandra & Gamage, 2018).

According to Gupta, Thomas, Dagli, Solanki, Bhateja, and Mahajan (2014), professional indemnity insurance is into two categories. First is the occurrence policy coverage, while the second is claim-made policy. While the former is concerned with situation in which after the expiration of the policy, the insurance company ought to defend the policyholder and pay any judgment awarded by the court that does not exceed the policy limits; the latter covers malpractice incidents that happen and are communicated to the insurers while the policy is in operation. According to Chilekezi (2019), the PII is a requirement under the National Health Insurance Scheme (NHIS) Act 1999 which provides coverage against professional negligence, error, omission or commission by healthcare professionals in carrying out their duties. It covers losses to patients who suffer death, permanent disability, sickness, partial disability, injuries, etc. in the hands of insured medical professionals. Earlier submission by Abbott, Weber, and Keller (2005), depicted medical indemnity insurance as an integral policy for an individual professional or an establishment providing medical services. They reiterated that the insurance

cover ensures that liability payment of a successful negligence claim by the patient is no longer the duty of a medical professional but is transferred to an insurer.

According to Rejda and McNamara (2014), indemnification is seen as the restoration of an insured to his or her approximate financial position prior to the occurrence of the loss. It is the process of restoring an individual or an organisation to a pre-loss financial condition (Nyce, 2007). It is further described as the compensation to the victim of a loss, either in whole or in part, by payment, repair or replacement. Vaughan and Vaughan (2014) stipulate that the insureds are entitled to payment from the insurance company only if they have suffered a loss and only to the extent of the financial loss sustained. They further posited that the principle of indemnity maintains that individuals should not be permitted to profit from the existence of an insurance contract but should be restored to the same financial condition that existed prior to the occurrence of the loss. However, the potential for over-indemnification can constitute a moral hazard (Nyce, 2007). Trieschmann, Hoyt and Sommer (2005) earlier postulated that insurance is designed to merely indemnify or restore insureds to the situations that existed prior to a loss; while the likelihood of intentional losses is greatly curtailed because payment for losses will not exceed the value of the property destroyed regardless of the amount of insurance that may have been purchased. They thus suggested the inclusion of clauses regarding the existence of other insurance in an indemnity contract. To ensure necessary inclusion of clauses, awareness must be created on such clauses to prevent the insured from taking out duplicate policies with different insurers in the expectation of recovering more than the actual loss.

Awareness has been described as a state of ability to perceive, to feel or to be conscious of events, objects or sensory pattern (Inegbedion, 2015, Fill 2005). Customer awareness is a factor for the choices people make when selecting products and services. Customer awareness influences their expectations, likes, dislikes, motivations and inclinations that could drive their purchasing decisions. Customer awareness can assist in explaining customer behaviour. (Yoon, 2013; Alinvi & Babri, 2007). However, a consumer could buy more insurance either because of a higher expected probability of making a claim, being more risk averse (Ericson, Kircher, Spinnewijn, & Starc, 2016) or to meet regulatory requirement. According to Outreville (2014) and Chiappori & Salanie (2003), in their studies of policyholders behaviours toward insurance, the consequence of not having sufficient awareness can affect insurance consumption, and a missed opportunity for the insurance company to improve its sales. Tomczyk, Doligalski and Zaborek (2016) mention that a company will be better equipped, if they create adequate awareness of their products and services offering, to attract customers and eventually become more competitive and profitable. The basic patronage for insurance arises from the satisfaction that a consumer gains from the increase in financial security achieved by transferring the risk of loss to an insurer. Some

major studies have been conducted with reference to insurance patronage and demand (Badru, Yusuf & Isola, 2013; Dragos, 2014; Fofie, 2016; Sehhat & Kalyani, 2011; Tooth, 2015). Graven (2007) as cited in Adeleke, Olowokudejo, & Ajemunigbohun (2016) gave a demonstration of insurance demand equation that explained four cases of logarithmic utility such as: effect of changes in wealth, effect of changes in the probability of loss, effect in changes in loss severity, and effect of changes in insurance premium. Seog (2010) expressed that full insurance is easily purchased under an actuarially fair premium, while partial insurance occurs whenever there is an unfavourable premium.

3. Research Methods

This study employed a descriptive survey design. The rationale for the adoption of this design was because it gave the researchers the profiles of crucial facets of the concept of interests as well as helping in scrutinising happenings around sample variables to prevent manipulative attempts (Asika, 2008; Sekaran & Bougie, 2016). In addition, survey design has been found useful due to its tenacity to predict attitudinal characteristics of individuals as well as relevant in data gathering of all sample environments (Easterby-Smith, Torpe, & Jackson, 2008). A total of 50 medical facilities were selected across five divisional areas of Lagos state, consisting of Lagos Island division, Ikeja division, Ikorodu division, Badagry division, and Epe division. This is an indication that 10 medical facilities were chosen in each division of the state. These medical facilities were taken from private medical facilities of the state.

Considering the size of the medical practitioners that were examined, at least five medical officers were chosen in each medical facility, which brings the number of medical officers per divisional area to 50. This indicated that 250 copies of questionnaires were distributed across all 50 medical facilities in all divisional areas of the State. This research instrument for data gathering, questionnaire, was selected because of its appropriateness to the selected research design, its inexpensive nature, wider coverage of sample representation, and simple administration of the instrument (Creswell & Creswell, 2018; Kothari & Garg, 2016). This study employed a judgmental sampling technique. This sampling technique is appropriate because the selected participants have expert opinion of the information sought for (Sekaran & Bougie, 2016). For thorough and genuine responses, research assistants were engaged to hasten the proper filling and returning of the questionnaires. Out of the 250 copies of the questionnaire distributed, 191 copies were useful for analytical purpose, giving a 76% response rate. In order to process collected data successfully, the Kolmogorov-Smirnov test and Kendall's rank correlation coefficient technique were employed. Accordingly,

five Likert scaling measurements of “strongly agree”, “agree”, “indifferent”, “disagree” and “strongly disagree” were adopted.

Regarding the correctness of the instrument, congruent and logical types of validity were adopted. While the former validity was effected through variables explained from past literatures, the latter was employed by administering the chosen instrument to selected medical professional needing professional indemnity insurance policy insurance and academia in the insurance and medical profession. Eventually, experts thoroughly examined this instrument and came up with suggestions and advice which assisted the researchers in designing the instrument for easy understanding of the respondents.

4. Data Analysis and Discussions

Hypothesis one

Our first hypothesis states that professional indemnity insurance policy has not gained high popularity among medical practitioners in Lagos State. Table 2 underneath shows a result of the calculated D value of the point of the greatest difference between the cumulative distributions and cumulative observations, which stands at (-0.1267). The estimated D value through the Kolmogorov-Smirnov test techniques is given as:

$$F_o(X) - F_r(X) \quad (1)$$

where:

$F_o(X)$ observed cumulative frequency distribution of a random sample n observation,

$F_r(X) = k/n = (\text{number of observations} \leq X) / (\text{Total number of observations}),$

$F_i(X)$ the theoretical frequency distribution.

The critical value of D is established from the K-S table values for one sample test or determined as below:

$$D = \alpha = \frac{1.36}{\sqrt{N}} = \frac{0.0984}{\sqrt{191}} \quad (2)$$

where:

D calculated value

α alpha

N population size

Acceptance Criteria: If the calculated value is less than critical value accepts null hypothesis.

Rejection Criteria: If calculated value is greater than table value rejects null hypothesis

Table 1. Responses to the Testing of Hypothesis 1

Scaling measurements	Responses	Percentage (%)
Strongly agree	73	38.2
Agree	41	21.5
Indifferent	35	18.3
Not Agree	28	14.7
Strongly disagree	14	07.3
Total	191	100

Source: Authors, n=191

Table 2. Kolmogorov-Smirnov Frequency Table for Hypothesis 1

Hypothesis	Strongly agree	agree	Indifferent	disagree	Strongly disagree
F= professional indemnity insurance policy has not gained high popularity among medical practitioners in Lagos metropolis	73	41	35	28	14
$F_0(X)$ = Theoretical cumulative distribution of choice Under H_0	.20	.40	.60	.80	1
$F_i(X)$ = Cumulative distribution of observed choices	0.3821	0.5968	0.7801	0.9267	1
$ F_0(X)-F_i(X) $	-0.1821	-0.1968	-0.1801	-0.1267	0

Source: Authors' computation, 2019

With the above analysis, the estimated/calculated D value (-0.1267) is less than the critical value of 0.0984, indicating that the null hypothesis (H_0) that professional indemnity insurance policy has not gained high popularity among medical practitioners in Lagos State is accepted at $\alpha = 0.05$ (see table 2). This therefore implies that the alternate hypothesis that professional indemnity insurance policy has gained high popularity among medical practitioners in Lagos State is rejected in reference to the participants' responses. This result is divergent from earlier

studies (such as Secureno-Blogger, 2016; Shetty, 2015; Seshappa et al., 2018) that shows that with the increase in affordability, individuals' expectation concerning the standard of professional care and services will be high. Those studies also reveal that with increasing level of consumer's awareness, the extent of damage (financial damage at least) can be curtailed.

Hypothesis 2

Our second hypothesis states that professional indemnity insurance awareness has a positive but low relationship with its patronage among medical practitioners in Lagos State. In an attempt to establish any significant relationship between insurance awareness and patronage of professional indemnity insurance among medical practitioners in Lagos State, the Kendall's rank correlation coefficient technique is adopted for analytical purpose. The Kendall's rank correlation coefficient technique is a statistical formula that measures the ordinal relationship between two quantifiable variables. The Kendall *tau* is a nonparametric hypothetical instrument for statistical reliance based on the *tau* co-efficient. The Kendall's *tau b* is a well-known statistical test for delineating the strength of the monotonic nexus between two varying concepts. The positive correlation signifies that the ranks of both the variables are increasing. On the other hand, the negative correlation signifies that as the rank of one variable is increasing, the rank of the other variable is decreasing (Bolboaca & Jantsch, 2006; Fredricks & Nelsen, 2007). *Tau (r)*, a nonparametric rank order correlation statistic, has been applied. The Greek letter *r* is arithmetically bound between -1 and +1 and its value characterises the extent of relationship between two ordinal variables (Xu, Hou, Hung, & Zou, 2013).

Brossart, Laird and Armstrong (2018) spelt out the following concerning Kendall's *tau* that:

- As a rank correlation statistic, it indicates how familiar two variables order a set of individuals or data points. As value of $r_{(x, y)} = +1$, it signifies that two variables, *x* and *y*, order a set of data points in exactly the same way the same data point occupying the same rank position in with variable.
- A value of $r_{(x, y)} = -1$ indicates that two variables order a set of data points in exactly the opposite way, with one data point occupying the first rank in one variable and the last rank in the other variable.
- When $r_{(x, y)} = 0$, there is no nexus in the way that the two variables rank a set of data points .i.e. the two variables are independent.
- *H₀* is the null hypothetical symbol that *r* is zero. *H₁* is a representative symbol for the alternate hypothesis that the exact *r* is none-zero. Selecting the value $Z\alpha$, based on the normal distribution, means that the probability of rejecting *H₀* when *H₀* is true is equal to a specified value, α .

Interpretation: using Kendall's *tau b*, the coefficient value of 0.138 shows that there is a positive but very low relationship between insurance awareness and patronage of professional indemnity insurance among medical practitioners in Lagos metropolis.

Decision: by the result generated above, it is evident that the null hypothesis (H_0) is rejected and the alternate hypothesis (H_1) is accepted. Acceptance of (H_1) means that professional indemnity insurance awareness has a positive but low relationship with its patronage among medical practitioners in Lagos State. This result conforms with the findings of some recent studies of Adamu (2018), Ajemunigbohun and Adeoye (2018), Jeremiah, Joseph and Innocent (2019), Osho and Ademuyiwa (2017); who also established a positive but low level of relationship between insurance awareness and patronage in their respective research findings. In a related submission, Amoako (2019) claimed that inexperience in terms of individual education, inadequate information on insurance and individual attitude to risk remain the causes of low patronage.

Table 3. Correlations

Insurance awareness		Insurance patronage	
Kendall's tau b	Insurance awareness	Correlation Coefficient	1.000
		Sig. (2-tailed)	.138
		N	191
	Insurance patronage	Correlation Coefficient	.138
		Sig. (2-tailed)	1.000
		N	191

***Correlation is significant at the 0.01 level (2-tailed)

Source: Authors' computation, 2019

Conclusions and Recommendations

The consequences of medical error or malpractice for patients' safety are critical; yet, medical practitioners' awareness and patronage of professional indemnity insurance policy as a risk management tool, though important, remain low. This policy helps in mitigating the effects of liability claims that are associated with patients instituting legal action against the medical practitioner for his errors or omission. However, the use of PII is one of the methods in which a professional could decide to limit the financial consequences of an action brought against him for professional negligence. To this end, there is a need for greater awareness on the concept and application of professional indemnity insurance, and greater emphasis and encouragement of its use in the healthcare sector. An important measure of protection for a medical professional against outcome of litigation would be to go for an insurance cover. PII cover is one of the best risk management

tools that could be used to meet the claim of compensation awarded against medical practitioners or hospitals, as negligence or errors can drain an organisation of its resources or even lead to its eventual collapse.

Having considered the findings, the research recommended thus that:

- i. The Nigerian Medical Association (NMA) should endeavor to promote Healthcare Professional Indemnity Insurance policy among its members so as to help improve awareness level;
- ii. Due to the usefulness of Professional Indemnity Insurance policy to other professional bodies, there should be proper monitoring and enforcement to ensure compliance with the provisions of the National Health Insurance Scheme Act;
- iii. The Nigerian insurance industry should collaborate with the health services provider to ensure that adequate awareness of Professional Indemnity Insurance (PII) policy is created, especially its benefits;
- iv. Professional indemnity insurance, as one of the best risk management tools, should be embraced among the medical practitioners as most desirable financial instrument that can safeguard them from medical liability risks;
- v. Insurance regulators (such as the National Insurance Commission and the Nigerian Insurers Association) cum Nigerian Medical Association (NMA) should endeavour to review PII, on continuous basis, to guarantee safety net not only for the medical professionals but to ensure peace of mind and confidence in health services users.

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