

**FRAUD MANAGEMENT STRATEGIES AND PERFORMANCE OF  
MEDICAL INSURANCE PROVIDERS IN NAIROBI CITY COUNTY,  
KENYA**

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## DECLARATION

This research project is my original work and has not been presented for the award of degree in any institution of higher learning. No part of this should be published without permission of the researcher and/ or Kenyatta University.

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This research project has been conducted under my supervision and submitted for assessment with my approval as the officially appointed University supervisor.

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## **DEDICATION**

I dedicate this work to my cherished wife, Alice, and our children, Adrian, Allan, and Andrew, who have continually motivated and inspired me. Their love and unwavering support have been instrumental in actualizing this research project.

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## **ABBREVIATIONS AND ACRONYMS**

<b>ACFE</b>	Association of Certified Fraud Examiners
<b>AKI</b>	Association of Kenya Insurers
<b>BODs</b>	Board of Directors
<b>BSC</b>	Balance Scorecard
<b>EBITDA</b>	Earnings before Interest, Tax, Depreciation and Amortization
<b>FDT</b>	Fraud Diamond Theory
<b>FTT</b>	Fraud Triangle Theory
<b>GDP</b>	Gross Domestic Product
<b>IRA</b>	Insurance Regulatory Authority
<b>RBV</b>	Resource Based View
<b>KShs</b>	Kenya Shillings
<b>MIP(s)</b>	Medical Insurance Providers
<b>NHCAA</b>	National Health Care Anti-Fraud Association
<b>NHIF</b>	National Hospital Insurance Fund
<b>NHS</b>	National Health Service
<b>NSE</b>	Nairobi Securities Exchange
<b>UIA</b>	Uganda Insurers Association

## OPERATIONAL DEFINITION OF TERMS

<b>Business Processes</b>	A series of structured, repeatable activities established by management and performed by employees within an medical insurance providers to systematically achieve specific business goals.
<b>Customer Satisfaction</b>	Are measures of how services offered by medical insurance providers meet and/or exceed customer expectations.
<b>Fraud Detection strategies</b>	Refers to a range of activities and practices, adopted and controlled by medical insurance providers aimed to identify or discover the presence of fraud within their operations.
<b>Fraud Management strategies:</b>	Are the deliberate measures implemented by organizations to assist in mitigating the impact of fraud risk through prevention, detection, and response to fraudulent activities.
<b>Fraud Prevention Strategies:</b>	This refers to approaches that medical insurance providers consider to reduce susceptibilities to risk of fraud.
<b>Fraud Response Strategies:</b>	Refers to the practices employed by medical insurance providers for dealing with identified and/or suspected fraud in a methodical and consistent manner.

<b>Medical Insurance provider:</b>	This refers to health insurers that are licensed under the Kenyan Insurance Act CAP 487 to underwrite medical insurance risk.
<b>Performance:</b>	Refers to the financial and non-financial outcomes realized after proficiently employing fraud management strategies and company's resources.
<b>Profitability</b>	Refers to a measure of medical insurance providers' financial ability to generate underwriting profits from medical insurance premiums earned and incurred.
<b>Regulatory framework:</b>	It incorporates policies and procedures, regulations, and codes of conduct that guides the medical insurance providers in Kenya.
<b>Strategies:</b>	These are high-level plans of action designed and implemented by organizations to achieve specific objectives or outcomes.

## ABSTRACT

Globally, medical insurance is pivotal in financing healthcare, significantly impacting performance of healthcare systems. However, the effectiveness of this contribution is hindered by the pervasive issue of medical insurance fraud, which poses a serious challenge to cost-effective healthcare systems worldwide. Over recent years, medical insurance providers operating in Kenya have consistently reported dismal performance, as evidenced in their financial statements. Between 2016 and 2018, the average annual underwriting loss amounted to KSh. 792 million, with 2018 alone recording an underwriting loss of KShs. 1.1 billion. An alarming 70 percent of medical insurance providers have sustained underwriting losses for a continuous period of more than five years. This chronic underperformance is primarily attributed to the persistent fraudulent activities plaguing these companies. The primary objective of this research was to assess effects of implementing fraud management strategies on the organizational performance of medical insurance providers in Nairobi City County, Kenya. To achieve this, the study's specific objectives delved into investigating the influence of fraud prevention, fraud detection, and fraud response strategies on the performance of medical insurance providers in Nairobi City County, Kenya. The theoretical literature review is draws upon the Fraud Triangle Theory, Resource-Based View, and the Balanced Scorecard model. The study employed a descriptive and explanatory research design, which is cross-sectional in nature. The target population consisted of 2891 employees from the 27 medical insurance providers licensed by the Insurance Regulatory Authority in Kenya and operating across Nairobi City County. The study utilized a convenience sampling approach and collected primary data through self-administered semi-structured questionnaires. The questionnaire underwent a pilot test to ensure content and criteria-related validity. The research instrument's reliability was assessed using the Cronbach alpha coefficient, with a minimum threshold of 0.7. The study's data was analyzed using both descriptive and inferential statistics, and the results are presented in the form of tables, figures, charts, frequencies, and percentages. The research ensured the confidentiality of the gathered information and secured voluntary participation by obtaining informed consent before questionnaire administration. The study's findings revealed a positive and significant influence of fraud prevention, detection, and response strategies on the performance of medical insurance providers. The study underscores the importance for medical insurance providers to follow regulatory guidelines and compliance standards in their fraud prevention strategies, emphasizing a holistic approach integrating prevention, detection, and response strategies, while also highlighting the significance of upholding ethical standards, conducting thorough background checks, and implementing agile fraud response protocols to safeguard against financial losses and preserve organizational reputation. The study emphasizes the need for medical insurance providers to adhere to regulatory guidelines and ethical standards, integrate a holistic approach encompassing prevention, detection, and response strategies, and establish adaptive fraud response strategies, including specialized teams, to effectively combat fraud while safeguarding customer privacy and organizational integrity. The study suggests a follow-up research to verify its findings on fraud management strategies' impact on MIPS' performance in Nairobi City County, urging a broader study across various sectors due to its limited sample size of 71 respondents; as only 60.6 percent of performance influence was explained by three variables, further investigation into unaccounted factors is essential, highlighting the need for future research with wider geographical coverage and diverse research designs for generalizability.

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background of the Study**

World over, medical insurance makes contribute to healthcare financing which has a significant impact on the health system's performance (Thomson, TurnEr, Smith, Sagan, & Mossialos, 2020). However, this contribution is abated by medical insurance fraud which is a serious issue challenging the performance of cost-effective healthcare systems globally. Institutions such as National Health Care Anti-Fraud Association (NHCAA) and National Health Service (NHS) report that fraud has caused significant losses of funds in hundreds of billions of dollars yearly in the world (Crain, Hopwood, Pacini, & Young, 2017). Fraud threatens the sustainability of Medical Insurance Providers (MIPs) globally, negatively influencing their profitability, economic development and social welfare of these companies. The 2007–2009 global financial predicament was an outcome of a number of fraudulent activities in the MIPs alongside other insurers through the conniving of originators, the securities issuers and underwriters.

Ekin, Ieva, Ruggeri, and Soyer (2018) infer that on the ground of the 2690 fraudulent cases observed by many entities in 125 nations, about \$7 billion had been lost among insurance companies. It was revealed that some of these losses to the medical insurers were ascribed to customers losing their trust on the medical insurers because of the tainted reputation by these fraudulent activities. Fraud among medical insurers accounts to 68 percent of the fraud cases globally, though it is not as expensive as

other types of fraud as each fraud case takes \$114,0000 (Gathu, 2018). Li, Lan, Zhu, Xu, & Zhu (2022) also established that the most frequent fraud case perpetrated was bribery and corruption, falsification, misappropriation, and customer fraud. Adequate information support like fraud management systems and strategies have been deemed the only effective strategy for responding to the problem since medical insurance providers (MIPs) work with a large amount of data that may not be effectively managed in any other way. Moreover, Association of Certified Fraud Examine (2020) showed that a normal organization loses about 5 percent of its sales revenues to fraudulent activities annually.

The office of public health at the United States (US) Department of Justice reported that fraud in the healthcare sector had led to about 6 billion dollars of losses (Li et al., 2022). In this report, the department also revealed that about 346 defendants across the US were charged; among them were licensed medical health practitioners (Sowah, Kuuboore, Ofoli, Kwofie, Asiedu, Koumadi, & Apeadu, 2019). The defendants had been charged with releasing above 6 billion dollars in false claims to health care programs (Association of Kenya Insurance AKI, 2018). Statistics by Thomson, TurnEr, Smith, Sagan, and Mossialos (2020) show that the spending in Canadian healthcare that totaled 264 billion dollars in 2019 was accompanied by a loss of 3.85 - 20 billion dollars annually due to medical insurance fraud (AKI, 2021a). Crain, Hopwood, Gendler, & Young, (2017) stated that fraud results in a loss of revenue for the insurance business, which has the knock-on effect of increasing insurance premiums. Fraud extends the time allocated for evaluating claims as the insurer must scrutinize them to ensure the absence of irregularities.

The East African region has estimated fraudulent claims cost at 25 percent of insurance industry income (Deloitte, 2019). Gathu (2018) opines that medical insurance fraud is the most common type of insurance fraud in East Africa which takes different forms that ultimately manifest in the filing of fabricated medical claims. Tanzania's National Health Insurance Fund (NHIF) reported 7558 fraudulent claims between 2020-2021 worth \$29,785, which included identity theft or impersonation of the real card holders (Sowah et al., 2019). Kiprono and Ng'ang'a (2018) elaborated on false claims that health centers submitted worth \$6,211, which included the healthcare centers billing for services they had not offered. These fraudulent cases are also marked in Uganda, whereby the Uganda Insurers Association (UIA) established numerous cases where health facilities submitted nonexistent claims and bills to insurance entities for clearance. In 2021, the Insurance Regulatory Authority of Kenya (IRA) admitted receiving complaints of fraudulent activities worth KShs4.9 Billion, an increase of KShs. 1.9Billion the previous year (AKI, 2021a). The weak systems allow these fraudulent activities to the extent of healthcare centers conniving with even patients to steal from the insurers.

The medical insurance sector in Kenya has become prone to fraudulent activities that have caused remarkable deterioration in the providers' performance and at worst the collapse of some MIPs. The heightened levels of fraud are linked to technological developments that have undermined detecting and eradicating fraudulent activities. The medical insurance industry has repeatedly reported losses between 2016 and 2021 with the exception of 2020. The exceptional performance in 2020 was however largely attributed to the apprehension of visiting the hospital and the higher cases of COVID-19 infections that occurred during that time.

Between 2016 and 2018, the average underwriting loss averaged KShs. 792 million, with above 70 percent of the MIPs reporting perpetual underwriting losses (AKI, 2021b). Thomson, Sagan, and Mossialos (2020) found that Kenya loses about KShs. 33 billion to insurance fraud related to the healthcare segment alone. These dismal performances have been attributed mainly to weak systems, medical fraud, and premium undercutting by insurance companies. Crain et al. (2019) explain that fraud negatively impacts profitability, ultimately leading to insolvency, and costs the reputation of insurance companies as well as consumer confidence. Li et al. (2022) reiterate that healthcare fraud is a major problem affecting not just the standard of care but has caused substantial financial losses. Healthcare insurance fraud overburdens organizations and drives up health insurance premiums.

Over the years, proper governance and fraud control have been the center of discussion for medical insurance providers and regulators due to rising insurance costs. This is accompanied by aggressive competition and pressure from banking institutions that are now also in the medical insurance business, providing financial options to the existing traditional insurance services (Kiprono & Ng'ang'a, 2018). Large organizations, at the same time, have more direct access to various health care services. The increasing fraudulent cases point to the need for fraud management strategies that could be implemented to drive the performance of the medical insurance providers in Nairobi County.

### **1.1.1 Organizational Performance**

Performance describes the measure of an organization's practices and modalities that reflects achieving its objectives and beyond. Mwashhi (2018) defines performance as systematic efforts that enable an organization to achieve its goals, measure success in terms of accomplishing the goals, and implement changes to ensure effectiveness and efficiency. According to Rayan (2019), the definition of performance focuses on achievements and output of an organization that is influenced by their resources, and the external factors. Rayan's definition is quite significant as opposed to others as it suggests that achievement is a constituent of external influence and resources. However, they would generally include the influence of internal factors, in which organization's resources are just one of them. Flasher and Lamboy-Ruiz (2018) explain that performance entails an organization's attempt to leverage its approaches to ensure its competitive advantage over rivals, which reflects in their sales, profits, returns on investment, and returns of shareholders.

Various measures of organizational performance exist however most definitions have traditionally focused on the financial outcomes determined by firms bottom-line such as net incomes, net profit or net earnings. Gathu (2018) evaluated performance from a financial perspective by considering the net incurred medical claims as a key performance parameter that determine the sustainability of insurance firms. According to Nzivulu (2017), the widely used measure of organizational performance is profitability ratios which include Earnings before Interest, Tax, depreciation and Amortization (EBITDA) and EBITDA to Sales. This study evaluates organizational performance from a financial standpoint and also considers non-financial outcomes like efficient internal business activities and customer satisfaction. It also

conceptualizes performance as the outcomes of an MIP's efforts to manage fraud in their system through employing appropriate fraud management strategies. It confirms an entity's effectiveness in maximizing its resources and proper management of the same to guarantee the attainment of its goals.

### **1.1.2 Fraud Management Strategies**

Fraud management strategies refer to the deliberate measures developed and implemented by organizations to assist them in mitigating the impact of fraud. According to Ndichu (2019), fraud management strategies entail health organizations and other players appreciating the place of controlling, monitoring, and managing the loopholes to fraud that are visible or hidden to the organization. Fraud management strategies incorporate the controls instilled to ensure that the healthcare institution deters, detects, and investigates fraudulent activities without compromising the benefits of mechanizations that amount to performance, opportunities, and client advantage Sowah, Kuuboore, Ofoli, Kwofie, Asiedu, Koumadi, & Apeadu, (2019). Although fraud can occur within any organization, irrespective of its size, industry, or location, certain industries are more prone to it than others.

According to Mwashhi (2018), fraud management strategies are those activities within the organization that assesses fraud risks, creates anti-fraud interventional program to counter the fraud before they occur (Li, Lan, Zhu, Xu, & Zhu, 2022) furthers this definition by stating that fraud management strategies are those steps an organization takes to promptly identify eminent and inherent fraud risks and come up with a system that workers to detect, prevent and respond to suspected fraudulent activity, both internally and externally. This definition is more comprehensive as it considers both internal and external environments that influence the operations of the organization.

This is opposed to Ndichu's definition that brings the management functions in the understanding of the term fraud management strategies. However, an organization must assign various functions by team members to achieve effective fraud management strategies.

Kiprono and Ng'ang'a (2018) broadly categorized Fraud management strategies into preventive, detective, and responsive strategies. Considering the ubiquity of fraud and its undesirable impact, there is an insistent argument that shows the need for organizations to develop strong fraud management strategies. Some key fraud management strategies include fraud prevention, detection, and response strategies (Jubilee Insurance, 2017). Fraud prevention approaches are those strategies that medical insurance providers consider to reduce susceptibilities to medical fraud and risks of the same. Saldamli, Reddy, Bojja, Gururaja, Doddaveerappa, and Tawalbeh (2020) expound on these prevention strategies to include leadership and governance structure, processes digitization, effective internal control systems, developing anti-fraud policies and strategies, creation and implementation of ethics and compliance programs, and fraud awareness education and training.

Fraud prevention strategies are not absolute and do not address all kinds of fraud due to the dynamism of fraud patterns and the complicated ways perpetrators commit fraud. Fraud prevention strategies should be complemented with fraud detection strategies. Fraud detection strategies entail the set of activities that are used to identify or discover the presence of fraud. According to Kittoe (2017), fraud is discovered by taking note of any oddities or inconsistencies in the details relating to a medical claim. Fortune (2018) describes that fraud detection utilize many techniques including

focused and random audits, tip-offs from whistle-blowers, and electronic fraud detection to detect anomalies that expose fraud based on pre-existing rules or statistical functions. Fraud response strategies are those approaches designed to guide on how to deal with identified and/ or suspected fraud methodically and consistently. The aim of fraud-responsive strategies is to take appropriate corrective action to remedy the situation caused by the fraud (Kiprono & Ng'ang'a, 2018). This study conceptualizes fraud response activities as those programs undertaken by MIPs to address the systems and processes that help it respond effectively to an alleged fraud when it is detected.

Fraud prevention, detection, and response strategies form general principles of fraud management in insurance institutions. This is premised on the idea that MIPs encounter such huge amounts of data that are processed automatically and can easily be breached. An effective fraud management structure helps entities have controls that prevent fraud from happening, detect fraud when it is being executed, and react appropriately to fraud cases. The aspect of corporate governance entails board or audit committee administration, line management tasks, internal audit, and compliance roles (Waghade & Karandikar, 2018).

Conversely, fraud prevention is focused on the evaluation of any susceptibilities to fraud and misconduct, initiating a code of conduct and appropriate standards that reflect the organization's values, the management and workers' due diligence, proper communication, preparedness through training, and proper risk controls. Fraud detection entails having hotlines and whistleblowing protocols, auditing and supervising, and preemptive forensic analysis of materials (Thaifur, Maidin, Sidin, &

Razak, 2021). Fraud response has to be with the reaction of an entity to an established fraud that has occurred through internal inquiry procedures, implementation and accountability frameworks, disclosure procedures and corrective action measures.

### **1.1.3 Medical Insurance Providers in Nairobi City County, Kenya**

In Kenya, the Insurance Regulatory Authority (IRA) is mandated with functions of regulating, supervising, and promoting of the advancements of the insurance industry in Kenya. The insurance industry is guided by the laws, regulations and standards as stipulated by the Insurance Act, Cap 487 of the Laws of Kenya (Fabrikant, Kalb, Bucy, & Hopson, 2022). The sector is operated under the umbrella of the National Treasury. IRA control the insurance affairs such instituting the frameworks that determine the functions and responsibilities of providers in various sectors including medical. The body is also mandated with the task of authorizing and influencing all the actors in the insurance industry of Kenya.

According to the insurance industry report, IRA oversees 55 insurers in the country (IRA, 2021). There are 498 insurance branches in the country as of November 2021, distributed in 32 counties (Mwashi, 2018). Mwashi further indicates that Nairobi has 139 insurance branches, which is a 28 percent representation. This makes the county to have the highest number of branches, with other counties like Mombasa, Nakuru, Uasin Gishu, Nyeri, Kisii, Kisumu, Meru, and Kiambu having about 20 branches each. Kenya's insurance sector has witnessed strange rise of misconducts in the past few years (Onyango, 2021). The insurance sector is the Kenya is among the fast-rising docket in the African continent covering 3.4 percent of the Gross Domestic Product for general protection and 1.9 percent for life products. The value of the gross direct insurance premium in the insurance sector in Kenya reached about KShs.225

billion as of 2022, which is 20 percent above the net earned premiums of the previous financial year. This can be contrasted with KShs. 86 billion, about 5 years ago, which has almost been tripled.

The Kenyan insurance industry is divided into two segments: General insurance and life (Long-term) insurance. According to Insurance Regulatory Authority, (2022), in the first half of 2022, general insurance continued to be the largest contributor to industry insurance premiums, accounting for 56.7% of total premiums. During this time period, total general insurance premiums totaled KShs. 92.40 billion, with medical insurance remaining the largest contributor in terms of general insurance premiums, accounting for 34.5% of total general insurance premiums.

Medical Insurance Provider (MIP) is a segment of the broad Insurance sector in Kenya, which is generally guided by the IRA. According to IRA (2020), 27 MIPS had been licensed to operate in Kenyans in 2021, as attached in appendix 1. The MIPS are privately owned, as opposed to NHIF that is government sponsored (Flasher & Lamboy-Ruiz, 2018). Resolution insurance Kenya is no longer operational after they continuously slid into operational and financial challenges. Particularly, Resolution Health, which had 90 percent of its policyholders being medical customers, could not settle claims to the detriment of claimants and other stakeholders. Consequently, the IRA placed the company under statutory management when it was unable to adhere to statutory requirements such as capital sufficiency, government frameworks, and submission of returns.

In insurance sector, only 6 insurance companies have been listed on the Nairobi Stock Exchange (IRA, 2021). These are Jubilee Holdings Limited, Sanlam Limited, Liberty

Kenya Holdings, Britam Limited, Kenya Re-Insurance Corporation Limited, and CIC Insurance Group Limited. MIPs have largely witnessed losses before the COVID-19 period. The poor performance is primarily linked to fraudulent strategies and misconduct exhibited in the past few years (Fortune, 2018; Makey et al., 2020). These MIPs provide a number of services to patients, including inpatient and outpatient care, preventive, pediatric, prenatal services, and even mental health cases.

## **1.2 Statement of the Problem**

Globally, medical insurance providers are acknowledged for their contribution to healthcare financing and have a significant impact on the health system's performance. However, medical Insurance providers continue to report dismal performance over the years, and this has been attributed to incessant fraudulent activities witnessed in these companies. Medical insurance fraud takes different forms that ultimately manifest in the filing of fabricated medical claims Gathu (2018). According to insurance industry reports by Association of Kenya Insurance (AKI), over 70 percent of insurance companies in Kenya have consistently posted underwriting losses under medical insurance business. Other medical insurance providers have collapsed or put under statutory management due to inability to settle claims to the detriment of claimants and other stakeholders

Every organization always aspires to improve its performance and given the ubiquity of fraud and the negative consequences it has on the overall performance of businesses, there is a compelling argument that organizations should implement effective strategies management of fraud. Fraud threatens the sustainability of Medical Insurance Providers (MIPs) globally, negatively influencing their

profitability, economic development and social welfare of these companies. Insurance regulatory. Nzivulu (2017) attributed the failure of fraud management strategies among medical insurance providers to include the lack of elaborate systems to prevent, detect and react to fraud.

Previous studies, globally, regionally and locally, have been done on the area of fraud risk strategies and performance. Simuyi (2021) did a study on NHIF on its strategic implementation and performance, which presents a methodical gap according to the present study. A case study in the sense that it relies on one insurer, which does not authenticate generalization of research results to other providers. Ntwali, Kituyi, and Kengere (2020) investigated claims management and financial performance of insurance companies in Rwanda, posing conceptual and geographical gaps. Conceptual, as it concentrated on claims management rather than fraud management strategies. Geographical because the study findings may not be generalized on the case in Kenya as it might not be sufficiently representative of other insurers outside the county of study. Even though Gathu (2018) attempted to assess the fraud risk management strategies, the study did not narrow down to the medical sector, posing a contextual gap.

Hardly have the relevant studies focused on the universal performance of MIPs while employing fraud management strategies, and more explicitly the effects of every aspect of fraud management (prevention, detection, and response). Thus, the study strived to fill these gaps by studying the effects of fraud prevention, detection, and response strategies on performance of MIPs in Nairobi City County.

### **1.3 Objectives of the Study**

This section addresses the study's general and specific objectives.

#### **1.3.1 General Objective**

The primary objective of this study was to evaluate the effects of fraud management strategies on the performance of medical insurance providers in Nairobi City County, Kenya.

#### **1.3.2 Specific Objectives**

Specifically, this research sought:

- i) To appraise the effect of fraud prevention strategies on the performance of medical insurance providers in Nairobi City County, Kenya.
- ii) To examine the effect of fraud detection strategies on the performance of medical insurance providers in Nairobi City County, Kenya.
- iii) To evaluate the effect of fraud response strategies on the performance of medical insurance providers in Nairobi City County, Kenya.

### **1.4 Research Questions**

This study aimed at comprehensively addressing the following research questions.

- i) In what ways does fraud prevention strategies affect the performance of medical insurance providers in Nairobi City County, Kenya?
- ii) What is the impact of fraud detection strategies to the performance of medical insurance providers in Nairobi City County, Kenya?
- iii) How does fraud response strategies affect the performance of medical insurance providers in Nairobi City County, Kenya?

### **1.5 Significance of the study**

The study introduced new insights to the medical insurance providers in Nairobi City County, particularly as far as the adoption of fraud management strategies in managing unavoidable fraud cases is concerned. Medical insurance firms will be advantaged by this study's outcomes as they will recognize the most appropriate fraud management strategies that would guarantee better performance. Management teams was informed through this study to consider a proactive approach toward implementing fraud management strategies. Policymakers would also benefit from this study through identification of best policies for containing fraudulent activities in the field. Moreover, this study expanded the current corpus on the subject of Fraud management strategies. Scholars are open to referencing this work in pursuing this field.

### **1.6 Scope of the study**

The study mainly investigated fraud management strategies and how they affect medical insurance practitioners in Nairobi City County, Kenya. The main survey was done on employees of various carders in 27 MIPs in Nairobi City County, Kenya. Besides the NHIF, a government-owned corporation, there are 27 other medical insurance companies operating in Nairobi City County, Kenya. The study targeted 27 licensed MIPs as at 2022, and notably all of whom are headquartered in Nairobi City County, operating centralized management system structure. This study excluded NHIF, which is government-funded insurance and the biggest health insurer in Kenya, with a coverage of 15.8 percent (Kiprono & Ng'ang'a, 2018). The study focused on various cadres including general managers, internal auditors, quality and assurance officers, risk underwriting and claims officers from their specific departments to help

in addressing the research objectives. The study was limited to fraud prevention, detection, and response strategies. The study focused on the spanning from 2016 to 2021, leveraging on the accessible and comparable annual industry reports from the Insurance Regulatory Authority and Association of Kenya Insurance. A six-year period provides a basis for trend analysis, facilitating objective insights for the study's objectives.

### **1.7 Limitation of the Study**

The study was carried out within some limitations which enabled the researcher to meet the objectives with the available resources and within the time limit. Firstly, the target participants included employees from upper job carders who most likely have tight schedules. Consequently, they might not have free time to react to the questionnaires. The researcher mitigated this challenge by reaching these employees through electronic mails and making follow-up calls. Also, a majority of the insurance institutions within Nairobi City County have placed a number of restrictions and rigid work systems to enable employees meet their target. This made distributing questionnaires a little difficult. In order to overcome this, prior bookings were made with the respondents to ensure availability. Lastly, the respondents might have been reluctant to give some information because of being exposed or their reputation challenges. The researcher limited this through presenting an introductory letter from the university in addition to guaranteeing them that the sought information only served academic purposes and remain confidential.

## **1.8 Organization of the study**

This research project is structured into five chapters. Chapter one provides an outline of the study, including research objectives, issues addressed, significance, scope, and limitations. Chapter two includes the review of relevant theories and empirical literature, leading to the development of the research's conceptual framework, as well as identifying research gaps. The third chapter discusses the research design and methodology, the study's target population, research tools, data analysis, and applicable ethical considerations. Chapter four focuses on data analysis and discussion, while chapter five presents the study's findings, inferences and recommendations.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter reviews the theoretical foundations that underpin the study's variables, explore the existing empirical literature concerning fraud management strategies and their resultant impact on organizational performance, and present a conceptual framework outlining how the study variables are put into practice. This chapter delves into the assessment of how fraud management strategies influence performance within the medical health insurance sector.

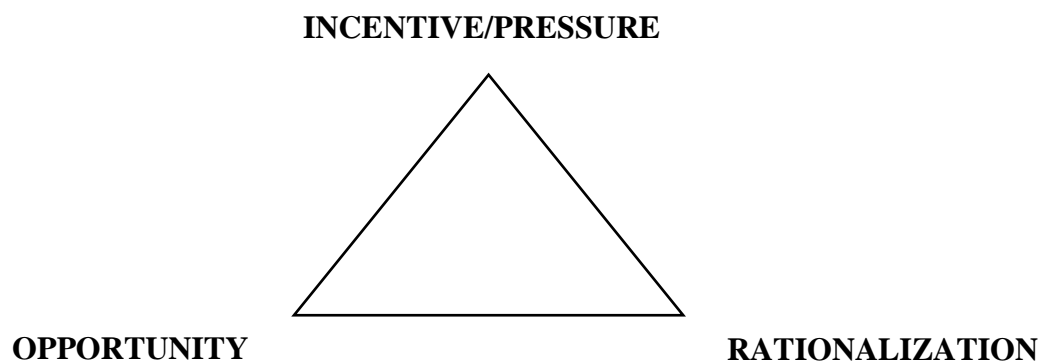
#### **2.2 Theoretical Literature Review**

The research was anchored on Fraud Triangle Theory, Resource Based View theory, and the Balance Scorecard Model.

##### **2.2.1 Fraud Triangle Theory**

Donald Cressy's (1953) is credited with the Fraud Triangle Theory (FTT). This theory outlines the three conditions that lead to instances of occupational fraud. FTT highlights three conditions that drive an individual to indulge in fraudulent activity: perceived opportunity, incentive, and rationalization (Homer, 2020). According to Owusu-Oware, Effah, & Boateng, (2018), FTT explains conditions that must be present to cause an individual's involvement in fraudulent and unethical behaviors. The FTT was further expanded by Wolfe and Hermanson's 2004 to Fraud Diamond Theory (FDT) which included capability, which includes the needed traits, skills and

potentials to commit fraud, as an additional condition that cause individual's involvement in occupational fraud. While the FTT and FDT have been advanced as the main theories attempting to explain conditions leading individuals to commit fraud, the point of convergence these two theories are the fundamental conditions identified in FTT consequently, this study adopted FTT demonstrated figure 2.1 below as the lead theory.



**Figure 2.1: Fraud Triangle Theory**

**Source: Donald Cressy (1953)**

This study is premised on the FTT as it believes that fraud management strategies employed in many organizations ought to rely on their distinct character that reflects their operations. FTT inform choice of strategies responsible for continuously monitoring and controlling the strategy as being implemented in an organization, detecting and correct any mismatch. Some standard methods can work in many entities but fail to thwart fraudulent activities Owusu, Koomson, Alipoe, & Kani, (2021). The first condition is an incentive, which includes situational pressure induced by need and/or greed, such as financial stress, personal vices, and addictions. Incentive is always influenced by an individual's current situation as well as an entity's commitment to meeting people's needs. Another condition is the opportunity of fraud, such as deficiencies in internal control systems, ambiguity in policies on

unacceptable behavior, and flawed security systems in the MIP, or lack of proper leadership. Homer (2020) opined that a MIP should embrace adequate internal controls that spearhead the fraud management system so that perpetrators would not have the chance to commit fraud. The final condition is rationalization, which is not an *ex post facto* justification of theft but rather a process of arguing fraud as necessary, justified, or innocuous. MIPs could lessen fraud scenarios through effective and timely attention to the exposed fraud.

The conditions of the FTT must be there for fraud to be executed. Omitting any of these conditions from the triangle reduces the likelihood of these frauds occurring (Homer, 2020; Owusu et al., 2021). FTT is relevant to this study as strategies developed by MIPs to ensure fraud prevention, detection and response can be used to locate susceptible areas of the department and employ preventive strategies that bar the fraudulent activities. Thus, the two fundamental objectives of fraud management strategies should be reducing the likelihood of fraud and minimizing the perpetrator's subjective motivation for the fraudulent action. In this regard, the postulates of fraud triangle theory were used to explain the independent variable of fraud management strategies.

### **2.2.2 Resource-Based View Theory**

The Resource Based View (RBV) Theory advances an argument that to achieve higher organizational performance, companies should focus on their internal resources. The RBV first began with Edith Penrose when she published a book of "Theory of the Growth of the firm" in 1959. The theory proposed that it is was significant for organizations to examine their internal workings and build on

knowledge creation, innovation, and their growth. Thus, Edith made substantial impact in understanding of RBV of the firm. RBV was later advanced by Birger Wernerfelt in 1984, whose paper explored the value of analyzing firms from the resources side as opposed to the external environment. As Edith Penrose coined the term in 1959, Jay Barner was recognized as the initiator of the modern RBV in 1991 (Zahra, 2021). Zahra (2021) proposed RBV by basing success on internal resources, whereby an entity becomes competitive by reinforcing its intangible resources such as skills, processes, intellectual properties, and more. It is the use of these resources that increases the value of the organization above its peers.

The first categorization of resources is whether they are tangible or intangible, displaying their heterogeneity. RBV uses four indicators to establish the capacity of the resources in the organization to provide a sustained competitive advantage. RBV holds that if a resource demonstrates value, rarity, imitability, organization (VRIO) attributes, it enables the firm to have superior performance (Greve, 2021). Resources are valuable when they cause the organization to conceive and execute strategies that enhance its effectiveness and efficiency. Rarity is about the valuable resources being owned and/or controlled by a few firms, where the intangible resources are preferred at this stage since the tangible ones like land, equipment, or machines can be acquired easily by other firms. When the resources are valuable and rare, a company has competitive parity. However, when the resources are imperfectly imitable, then the firm enjoys a temporary competitive advantage.

Resources only generate sustained competitive advantage when they are organized (Zahra, 2021). Imperfectly imitable implies that the resources have distinct historical

conditions and may not be duplicated easily. Organization is about having effective management systems, structures, culture and processes to utilize the resources of the entity. RBV suggests that a resource does not confer a firm any sustained advantage unless it is organized to capture the value of these resources of the company. The theory has been opposed because of focusing on a firm's internal context as the major deciding factor of its competitiveness and does not appreciate the critical components of the external environment, such as an effective management system that would positively affect the company's resources by eliminating any redundancies and wastages in the insurance providers (Greeve, 2021).

The RBV theory is fundamental to the present study as approaches and strategies employed by MIPs such as distinct internal controls are critical in generating and reinforcing innovative assets and competencies of the MIPs. The available resources at MIPs are important elements that depict their performance. The theory helps to understand how MIP's unique resources can be enhanced to detect and prevent fraud. MIPs have a significant task of recognizing, deploying and managing core resources to maximize productivity. MIPs should embrace resources that emphasize the skills and knowledge that help detect and manage fraud in an entity. Insurance companies should also have unique policies and procedures that do not present opportunities to fraudsters who want to exploit them and should have resources that are distinctive and may not be easily imitated by their rivals in the medical insurance sector. RBV is a complementary theory to the lead FTT theory and its postulates can be used to inform both independent and dependent variables of fraud prevention strategies and performance.

### **2.2.3 Balanced Scorecard Model**

In their paper in the early 1990s, the proponents of the Balanced Scorecard (BSC) model, Robert Kaplan and David Norton, introduced the idea of measuring organizational performance across a much broader spectrum than the traditionally financial matrices. Traditional financial metrics such as return on investments (ROI) and share earnings are not a wholistic reflection of an organization's progress for progressive development and innovation (Camilleri, 2021). BSC examines beyond the financial metrics and considers nonfinancial operational measures. Camilleri (2021) expressed that no one measure can offer a clear performance reflection of core segments of the business.

The BSC comprises financial measures that show the outcomes of activities considered in an organization. The framework also appreciates the operational measures that touch on customer satisfaction, learning and growth, and internal processes. A MIP should underscore the contribution of BSC as the operational measures are the drivers of the coveted financial outputs. A focus on the internal processes of a MIP would support smooth operations that would deter fraudsters from interfering with the system, leading to financial losses. MIPs ought to have a corporate mission that exemplifies the customer's place and provides them value. If customers find value while receiving medical cover services, it culminates into more profits for the MIP (Camilleri, 2021). Response time is key for customers as they appreciate it when the MIP promptly meets their needs, even during emergencies.

The current study is anchored on the BSC model as its tenets are critical in understanding and exploring the dependent variable (performance). The postulates of

this model consider the financial and nonfinancial aspects of performance, which this study use to measure dependent construct. MIPs have utilized BSC to improve performance and strategic management. Consequently, BSC has many benefits to institutions alongside other objectives and factors of the organization. BSC enables the management of an MIP to focus on plan, structure and vision, guiding on the implementation of the fraud management programs. Secondly, BSC integrates both financial and nonfinancial metrics so that the management of MIPs can embark on multifaceted corporate procedure and warrant corporate activities and events and long-standing managerial plan.

## **2.4 Empirical Review**

The segment presents an evaluation of available empirical literature that examines the coherence of various authors on the study constructs.

### **2.4.1 Fraud Prevention Strategies and Performance**

Clemente et al. (2018) examined Medicare and the affordable care act by focusing on fraud regulation efforts and outcomes. The study's aim was to establish how recent reforms specific to the law would influence Medicare fraud and abuse and to reveal the most appropriate approaches to deal with such fraud. The study analyzed the legislative restructurings, delivery framework modifications, and other reforms such as the Patient protection and accountable care act as specific variables to answer its research questions. The study's findings revealed that Medicare fraud needed multifaceted detection and prevention measures equitably to effectively fight fraud among MIPs. The authors also established fraudulent cases to include billing for nonexistent services, opting for costlier services and processes, enrolling in

unwarranted medical treatment to generate insurance payments, involving non-covered to obtain insurance payments and fabrication of patients' examination and treatment data.

The study was a theoretical review and therefore did not have an experiential foundation. Waghade and Karandikar (2018) did a detailed study of healthcare fraud detection founded on machine learning, as platform of prevention. They exemplify the need for relying on healthcare data and advanced machine learning techniques to promote the effect of healthcare fraud detection and prevention and ensure high effectiveness and quality of MIP systems. The study recognized that the insurance user also participates in fraudulent and abusive conduct, such as fabricating data regarding their employment history, falsifying medical claims, and false information in their application to receive reduced premium rates. There were also the insurance carrier's fraudulent cases that include fabrications during compensation and service statements. Fraud prevention efforts preempt the loopholes for fraudulent and abusive conduct before they occur. It is, therefore, fundamental to establish measures that would prevent fraudulent cases and bar any abusive conduct that would disadvantage MIPs. Studies were theoretically based and therefore, lacked empirical basis.

Crain et al. (2017) studied fraud prevention, detection, and response and emphasized the aspects of corporate governance, risk issues, and fraud process controls. It was a longitudinal study stretching between 2006 and 2016. The study found that internal controls, and a fraud reporting system positively influenced the performance of a company. The authors established that assessment of fraud risks entails scrutiny of how the management and individual workers within the medical insurance entity

handle the resources under their charge. The availability of incentives and opportunities are among the avenues that form the fraud triangle and are influenced by the insurance provider itself. Consequently, fraud risk assessment and evaluation attempts should be extremely deliberate on how controls, processes, values, policies and procedures interrelate with particular functions of the employees. The fraud risks that must be prevented could emerge externally or internally, particularly in extensively networked and data-reliant procedures. The findings revealed that insufficient research on fraud prevention has made organizations more vulnerable. Based on the concealed way fraudulent activities are hidden as crimes, it becomes challenging to implement effective fraud prevention measures. Longitudinal studies would need more financial input in comparison with cross-sectional studies.

Nzivulu (2018) studied “the effect of fraud management strategies on the profitability of insurance companies in Kenya.” The study found out that the most acceptable fraud management practice begun with prevention as a critical move to fraud response. The author recognized that fraud prevention is significant to MIPs globally and needs greater attention in the organization. The findings also demonstrated that fraud management strategies and policies in insurance organization in Kenya are motivated by the urge to fulfil the ethical guidelines and the necessity of implementing regulatory and supervisory standards guiding the sector. Fraud is majorly done against medical schemes such as MIPs that challenge their fiscal viability as money is redirected from healthcare provision. Kenya is losing up to KShs. 33 billion to insurance fraud in the healthcare field because of collusion and unfavorable systems, constituting about 27 percent of the nation's health budget, which was KShs 121.1 billion in the financial year 2020/21. These alarming rates must send most MIPs in

Kenya to the fraud prevention practice. Semi structured interviews utilized in the study may not warrant honesty of participants.

Kiprono and Ng'ang'a (2018) explored the association between fraud management strategies and financial performance of Kenya Ports Authority. The study evaluated the impact of internal controls, information communication technology adoption, staff management, and fraud reporting systems, relying on descriptive research design. Fraud prevention strategies have advanced since, in the past, it was expensive, time-consuming and labor-intensive. The process entailed verifying cases manually and physically going to the venue where fraud was suspected. Since it is not practical to verify every medical claim, insurance companies are considering significant measures to employ artificial intelligence (AI) and cutting-edge data analytics to promptly discover and prevent fraudulent activities. Fraud in the insurance field is presently more complicated and would require a high level of analytics and intelligent methods. Health insurance companies have to be future-oriented as opposed to being reactive by forming prognostic frameworks that discover and prevent fraud before its manifestation. The study explored a different sector that does not directly apply to MIP context.

Mackey et al. (2020) conceptualized a study on how to fight health care fraud and abuse. The authors developed a framework that utilized block-chain tools and application layers to analyze claims data and transactions, which were critical in fraud detection and prevention among MIPs. The study results showed that many MIPs employed corporate governance practices to address fraud related issues in the sector. He determined that corporate governance had a significant role in fraud detection and

prevention, with his findings supporting the functions of the boards of directors (BODs) and management of the company in sufficiently providing oversight and direction to their organizations. The managers and BODs must endeavor to enhance the corporate environment of health insurance providers as concerns their integrity, honest values and ethical standards. The authors agreed that BODs and auditing boards are majorly answerable to independent supervision of managerial recognition of fraudulent susceptibilities, execution of anti-fraud programs, and forming a proper "tone at the top," in which the management has a higher power of establishing the general governance environment within an organization. The study also realized that the deficiency of effective corporate governance programs would ultimately challenge fraud prevention strategies. Nonetheless, the study findings banked on descriptive statistics which hinders the generality of research outcomes and interpretations.

Flasher and Lamboy-Ruiz (2018) explored healthcare data source and fraud research opportunities by establishing prevalence of fraudulent cases and players involved in fraud schemes. The study set up archival data sources that are significant for this research in responding to healthcare fraud. The authors suggested that the foundational principle for fraud prevention and detection is a framed risk assessment that touches on the real risks that MIPs encounter. Such organizational risks can be explained by their purpose, sector, complexity, susceptibility to cybercrimes, and scale. The goal of assessing fraud risk is to establish the type, probability, and possible cost of risks in a conventional expected value structure. Health insurers could benefit from tailored programs with cost-effective risk alleviation and tolerance. In spite of these numerous findings, there was a common consensus that corporate governance does not entirely give room for fraud to occur within the sector. The study

warns that it is necessary to have a framework that permits checks and balances to improve on corporate governance and manage fraud activities of the MIP. The study insisted absolutely on the direct relationship between explanatory and explained variables and ideas.

Gathu (2018) explored effects of fraud risk management approaches on net incurred medical claims in Kenyan insurance industry.” In his research, he majorly considers the fraudulent risk management strategies. He recognized the commonness of fraud prevention among workers of MIP, their members, and other players in other sectors. The study also revealed that organizations insisted on background checks of customers using the Credit Reference Bureau to understand their creditworthiness and proof of address. These are the common measures utilized in the insurance sector to prevent fraud. Fraud prevention relies on fraud detection software, implementing fraud policies and norms, multifaceted ethics strategies, electronic alerts to medical cover users, monitoring and enhancing controls, training on fraud, vetting of claims, forensic investigative assessment and ensuring good code of conduct. These measures are key in bringing down the cases of medical insurance fraud in the sector. In this study, 63.1 percent supported that a devoted forensic department was successful in its mandate of fraud prevention, with an estimate of KShs. 101,300,500 having been recovered in 2020. Therefore, a dedicated forensic unit plays an essential role in recovering funds that would have been lost through fraud. Studies were theoretical reviews, which is deficient of empirical basis. Exploratory research approached used in this study does not support statistical evaluation and establishing generalizations.

#### **2.4.2 Fraud Detection Strategies and Performance**

Ekin's et al. (2018) study focused on the emerging field of statistical medical fraud assessment, which is critical in reacting to the expanding size and complexity of insurers and related medical programs. The authors present an overview of various kinds of frauds and detection and culminate their study by analyzing medical claims data. The study was an exploration to attract the attention of other scholars to this important area of fraud detection. They discovered that fraud detection is intended to discover common classes of fraud, abuse and corrupt strategies and those inconsistencies that are not directly linked to fraud, emphasizing on the components critical in defining effective spontaneous fraud detection strategies, including data, fraudsters, and the entity. They also highlighted that data has much noise by either being irrelevant, misplaced, missing information, and is low quality. The research explained a direct link between explanatory and explained constructs whereas current research examine direct, and more moderating relationship of fraud detection and as it relates to fraud prevention and response strategies.

Li et al. (2022) investigated health insurance fraud in China and made recommendation on fraud detection and prevention tools that could be applied to MIPs. The study proposed a theoretical framework of medical insurance fraud detection that segregated the variables into elements of time, quantity, and expenses. The study associated fraudulent claims with increased frequency of hospital visits and large medical bills as well as expenditure. Based on the competitive reasons and less efforts in fraud detection, there is deficient labelled data, which hinders organizations from utilizing conventional equipment that supports learning-founded classification systems. The authors that eventual admission of a fraudulent claim will only be

reached following extensive legal procedures and may not be in the limelight since a greater proportion (99 percent) of these procedures ended by settlement. They recommend, however, that fraud detection strategies are be facilitated with proper internal controls. Unfortunately, even after fraud detection, most interventions are employed internally without seeking legal liabilities in the courts. Research was carried out among general insurers in China; therefore, research findings cannot be generalized in other sectors and nations.

Rayan (2018) provides a framework for analyzing and detecting fraud in health insurance in his study. It undermines the conventional approaches of dealing with fraud such as human inspection and heuristic regulations, but applauds the new ways like data mining and machine learning. The older ways require more time, impractical and not sufficient. The study proposes a hybrid framework that integrates domain expertise, supervised and unsupervised learning approaches to recognize fraud from a provided group of outstanding claims. The author also mentions the aspect of omission error, which describes that cases manually determined not to have traces of fraud could still be fraudulent when examined through another lens such as the use of machine learning. Some of the fraudulent instances could exist in the phenomenon via the spectrum of an advanced fraud detection framework, which the investigator could not be cognizant of through manual classification. The professional fraudsters are dynamic in their maneuvers from time to time, shifting their tactics when they discover that the fraud detection system hides their traces. The study further indicates that fraudsters within and outside the insurance company would fight to ensure that fraud cases look like legitimate ones, thus undetectable. The case study method of

relying on one insurer does not authenticate generalization of research results to other providers.

Owusu-Oware et al. (2021) examined the perspectives of employees on the causes of fraudulent activities witnessed in the workplace. The researchers in the study utilized fraud triangle theory as the theoretical lens for their study. They determined that pressure, rationalization, and opportunity were key in conceptualization of the motivations of workers of an MIP to be involved in fraud. MIPs may not want to lose their good consumers, so they ensure due diligence while dealing with fraudulent cases. Through fraud detection strategies, companies can gather sound evidence that may implicate any perpetrators. Thus, the detection components facilitate justification and give a clue of suspected scenarios. Fraud detection strategies have four major objectives, implement effective fraud detection systems, adjust to the dynamic market and demands, contextualize the detected fraud cases or any irregularity, and concentrate on the economic and feasible claims. Other insurance cases that could positively be judged as fraud are also inconsequential and it is not worth responding to, a matter of opportunity cost. Fraud detection systems uncover suspected or any looming fraud cases before they occur or in the process, with could also be done manually. Suspected fraud claims can also be bumped accidentally or by haphazard sampling. These claims also are reported from an outside informant through a hotline. The outcomes of this study do not offer empirical contribution on the application of FTT in the Kenyan context, but provides significant contribution into this discussion of fraud management strategies from the employees' perspective.

Thomson (2020) explores private health insurance history, politics and performance where he focuses on corporate governance attributes in fraud deterrence, emphasizing on the place of institutional setting is creating the space for performance. The authors noted that corporate governance is critical in fraud detection and recognizes three aspects as monitoring tools to ensure effectiveness in governance administration. These aspects include directorship, internal and external auditing, and audit committee. The findings reveal that through the framework provided by corporate governance, other factors like anti-fraud training, processes, policies and procedures, internal anti-fraud controls, values, ethical culture, and more must also be directed and integrated within the system. Simple occurrence and execution of corporate governance are insufficient to deal with the apparent fraud levels. Thus, aggressive implementation of corporate governance is absolute and sufficient to ensure all other organizational activities and functions are consistent and deliver their objectives. Corporate governance framework is founded on the existing code of ethics, internal control factors, and the auditors' and audit committee's independence and competence. Therefore, an effective structure of the monitoring mechanisms of corporate governance would guarantee a reduction of fraud levels and is critical for detecting and preventing such activities. The case study considered made analysis and synthesis of high volume of information time consuming. As a result, the authors could not achieve rigor in the synthesis and contextualization of the findings.

Fortune (2018) studies “a model for the automated detection of fraudulent healthcare claims using data mining methods.” He employed a protocol of first determining the constituents of fraudulent claims that informs the health insurance claim fraud detection system. The study’s findings revealed that employers and managers are

cognizant of the urgency of eliminating fraud and adopting fraud detection programs. Without an inclusive and integrated strategy and actions for fraud management, there will be a persistent challenge in the MIPs. The author commends the dependence on fraud detection as part of the organization's internal controls promotes monitoring and reporting of fraudulent cases, misconducts, or possibilities that lead to faster detection. It was also determined that machine learning methods are utilized by MIPs like cred card and financial claim to uncover fraudulent activities by showing anomalies and variances that constitute fraud. The study used a case study that may not ensure inferential statistics. Moreover, the research utilized purposive sampling approach that is susceptible to biasness.

Yange (2019) investigates a "fraud detection system for National Health Insurance Scheme in Nigeria" aimed at dealing with the fraudulent operations of some stakeholders within the institutions. The findings emphasized the needs for monitoring the user management, enrollment, referral and claims processing to uncover any fraudulent activities within the system such as billing for services not offered, double billing, ghost clients, and self-referral. The fundamental fraud detection strategies incorporate a whistle-blower policy, internal and external audits that alert the organizations of eminent fraud, and consistent reports intended to demonstrate possible and common indications of non-standard results over time. Implementing these strategies only work with the involvement of the management of a MIP. The findings also alluded to the fact that most fraud detection strategies are not always be successful, which leaves insurance companies, particularly in the medical field, to embark on consistent fraud control policies, strategies, and implementation of the same with fraud risk registers. The research recommended the involvement of

external bodies since relying on internal audits may not be sufficient as fraud becomes harder to detect when most executives are part of the scam, and they are involved in manipulating the outcomes of these efforts even if they are detected. Modified surveys are susceptible to encompass some kind of errors that would not favor reliable findings. Of course, being that the study also was done in Nigeria, some of the findings would only be specific to Nigeria and not Kenya, creating a geographic bias.

### **2.4.3 Fraud Response Strategies and Performance**

Onyango (2021) studied “insurance fraud risk management and the financial performance of general insurance companies in Kenya.” The study used casual-descriptive research design to explore 32 general insurance firms that were between 2016 and 2020. Fraud risk and leverage had a negative significant relation with financial performance of general insurers in Kenya. The study established that general insurers in Kenya had to embrace fraud risk management approaches that would enable them limit the fraud risk ratio in the companies. The authors explained that fraud response strategies entailed determining and employing effective and continuous remedies to fraudulent activities, particularly in response to their discovery. These strategies would mean establishing communications procedures and action plans between the investigators and stakeholders. Whereas fraud risk management demonstrated a straight effect on the performance of the general insurance firms, timing of data snapshot among them was not guaranteed to be representative of what occurred among medical insurers in Kenya.

Ntwali et al. (2020) explores “claims management and financial performance of insurance companies in Rwanda.” The study utilized case study research using

exploratory approach that targeted 93 permanent employees and 205 claimants in SONARWA General Insurance Company Limited in Rwanda. Claims control, monitoring and evaluation was frequently done in the company as demonstrated by the weighted means. The study determined a correlation between claims planning, control and monitoring and evaluation on the returns on equity and other performance metrics. It also recommended investigative and corrective actions as part of the most effective strategies in responding to possible fraud in a timely way. The authors noted that if the level of detected fraud rises, it implies that either the detection processes became better or the underlying fraud cases have reached higher levels. They further established that fraud response strategies would improve fraud prevention in these entities so that record recoveries would be reduced, consequently doing the same to fraud risk ratio and the overall performance of the organization. Exploratory research design provides qualitative information, which creates more weight on the analysis process that could also be biased. It also includes a reduced trial; therefore, the results cannot be specifically interpreted for general population that includes MIPs.

Mwashiri (2018) evaluated the effects of fraud on competitiveness of insurance firms in Kenya. The study utilized a census survey design that examines 55 insurance companies licensed by IRA. The study findings revealed that fraud caused a rise in the cost of handling businesses, influenced the premium rates, closure, and huge claim reserve ratios. An effective system shows an organization's assets and compares skills with a particular end goal to fulfil the expectations and objectives. Processes allow for a robust culture among employees so that the organization minimizes the occurrences of fraudulent activities. The ensuing uncertainty in the risen number of detected frauds interfere with fraud control reporting. Other subsequent quantitative procedures

and cautions in the fraud control processes are compromised as well. Achievements in the process of fraud detection as well as prosecution can be similarly seen letdowns in the prevention process. Other MIPs prioritize fraud prevention other than investment in detection systems, which also enhances their competitiveness with rivals. The census survey study design is rigid as it cannot be altered conveniently even when the researcher sees the need. If the researcher utilizes the approach from the beginning, he has to maintain it in the entire study.

Fabrikant et al. (2022) explore health care fraud, specifically narrowing down on enforcement and compliance. The study emphasizes on the significance of enforcement and compliance on law enforcement officials, healthcare providers and any entity focusing on health care sector. It explores fraud initiatives, the efforts of enforcement agencies and the private sector, as well as the criminal procedures involved in fraud response. The study emphasizes on the dependence on health care fraud laws to tackle fraudulent schemes and emphasize on compliance issues. The power of the investigation processes is determined by the number of resources assigned to the investigation docket of the organization. RBV, as mentioned earlier, would appreciate processes that allow for consistent accountability through unique policies and procedures that prevent fraud. Therefore, the investigation function thrives in the availability of both financial and operational resources like skills and competence. The research findings showed that the audits focus on where fraud is likely found within the organization and recommend proper response by checking the entity's controls, assessing the susceptibilities to fraud, and assessing fraud risk. It is through investigations that there is a platform for enforcement and ensuring

compliance issues in light of fraud laws. Exploratory research approach used in the investigation did not allow for statistical evaluation and generalizations.

Ndichu (2019) investigated “the fraud risk management strategies and financial performance of insurance companies in Kenya.” Fraud reporting and monitoring strategies should be well organized, comprehensive, objective and quantifiable. Only through these processes would an organization be able to mitigate fraud timely and promptly. MIPs should not just depend on internal auditors to be the fraud detectives but install fraud prevention measures spearheaded by the senior management alongside the internal auditors. The study revealed that 70 percent of fraud among MIPs is done by insiders, and therefore reinforcing the internal audit department goes a long way to seize the intentions of fraudsters. External audits are significant in pointing out sophisticated ways of performing fraudulent activities. Organizations can be guided into establishing the anti-fraud control procedures that facilitate fraud detection, prevention and response strategies. The study recommended tech solutions that could reduce the cases of fraudulent activities, and thereby increasing the performance of insurance companies. Survey study approach used in the investigation was rigid as it cannot be shifted if the researchers opt to use it from the start. The study was also biased towards financial performance and ignoring other metrics that are critical in measuring the general performance of an insurance entity.

The literature reviewed in this section reveal that the existing studies have less focus on the impacts of fraud management strategies on MIPs performance. Literature further showed that there is few empirical researches on the intervening and moderating effect of fraud management strategies that could influence the regulatory

framework and other strategies that determine the performance of MIPs beyond just their profitability. Moreover, diverse location contexts and approaches adopted in this study limits application of the outcomes to the local settings. Table 2.2 presents a synopsis of existing literature that have been reviewed so far and summarizes the research gaps that this currently seeks to address.

## **2.5 Summary of Literature Reviewed and Research Gaps**

This section examines three theories that explicate the effects of fraud management strategies on the performance of Medical Insurance Providers (MIPs) in Nairobi City County, Kenya. Specifically, these theories encompass the Fraud Triangle Theory, the Resource-Based View (RBV) Theory, and Balanced Scorecard (BSC) model. In a broad context, the empirical review underscores that the utilization of fraud management strategies does influence the performance of MIPs. The existing literature indicates that the implementation of fraud prevention, detection, and response strategies contributes to the enhanced performance of organizations, including MIPs. Table 2.1, presents a summary of reviewed literature highlighting the identification of research gaps and suggesting areas of focus for this study that aim to address these gaps.

**Table 2.1 Summary of Empirical Review and Research Gaps**

<b>Author/Year</b>	<b>Focus of the Research</b>	<b>Observations/Findings</b>	<b>Research gaps</b>	<b>Current study's Focus</b>
Clement et al., (2018)	Medicare and the affordable care act: fraud control efforts and results	The legislative reforms, delivery framework reforms, and other reforms are critical in fraud prevention.	Study was a theoretical review and did not have an experiential foundation.	Current study considered both theoretical and empirical basis.
Crain et al., (2017)	Fraud Prevention, Detection, and Response.	Internal controls and a fraud reporting system positively influenced the performance of the company.	Longitudinal studies would need more financial input in comparison with cross-sectional studies.	Current study used cross sectional research approach, which are less expensive compared to longitudinal studies.
Mackey et al., (2020)	Combating Health Care	Many MIPs employ corporate governance strategies to address	Descriptive statistics which hinder the generality of	The current study adopted both descriptive and inferential

<b>Author/Year</b>	<b>Focus of the Research</b>	<b>Observations/Findings</b>	<b>Research gaps</b>	<b>Current study's Focus</b>
	Fraud and Abuse	fraud related issues in the sector.	research outcomes and interpretations.	statistical analysis.
Waghade & Karandikar (2018)	A study of healthcare fraud detection based on machine learning.	Healthcare data and advanced machine learning techniques are critical in promoting the effect of healthcare fraud detection and prevention and ensure top quality of MIP systems.	Studies were theoretically based and therefore, lacked empirical basis.	The study considered empirical foundation.
Nzivuli (2017)	The effect of fraud management approached on profitability of insurance	Fraud management policies in insurance organization in Kenya are motivated by the urge to fulfil the ethical guidelines and the necessity of implementing regulatory and supervisory standards guiding the	Interviews utilized in the study may not warrant honesty of respondents.	The Current study used questionnaire to collect data from participants

<b>Author/Year</b>	<b>Focus of the Research</b>	<b>Observations/Findings</b>	<b>Research gaps</b>	<b>Current study's Focus</b>
	companies in Kenya.	sector.		
Kiprono and Ng'ang'a (2018)	Fraud management practices and financial performance of Kenya Ports Authority.	Companies have to be future-oriented as opposed to being reactive by forming prognostic frameworks that discover and prevent fraud before its manifestation to guarantee their financial performance.	The study explored a different sector that does not directly apply to MIP context	The current study focused solely on MIP while examining fraud management strategies.
Gathu (2018)	The effects of fraud risk management approaches on net incurred	Fraud prevention relies on use fraud investigative assessment, monitoring and enhancing controls, and a dedicated forensic unit that can oversee fraud management	Exploratory research approached used does not support statistical evaluation and establishing generalizations.	The Current study used descriptive and explanatory research techniques.

<b>Author/Year</b>	<b>Focus of the Research</b>	<b>Observations/Findings</b>	<b>Research gaps</b>	<b>Current study's Focus</b>
	medical claims in Kenyan insurance industry.	practices.		
Ekin et al., (2018).	The emerging field of statistical medical fraud assessment	Fraud detection is intended to discover common classes of fraud, abuse and corrupt practices and those inconsistencies that are not directly linked to fraud	The research explained a direct link between explanatory and explained constructs	The current research examined direct, and more moderating relationship of fraud detection and as it relates to fraud prevention and response strategies.
Li et al., (2022)	Health insurance fraud in China and recommendations	The study associated fraudulent claims with increased frequency of hospital visits and large medical bills as well as expenditure, which	Research was carried out among general insurers in China and cannot be generalized in other sectors	The current study targeted regulated MIPs headquartered in Nairobi City County.

Author/Year	Focus of the Research	Observations/Findings	Research gaps	Current study's Focus
	for fraud detection and prevention	should be detected and prevented	and nations.	
Rayan (2019)	Framework for analysis and detection of fraud in health insurance	The study confirms that a hybrid framework that integrates domain expertise, supervised and unsupervised learning approaches should be adopted to recognize fraud from a provided group of outstanding claims.	The case study method of relying on one insurer does not authenticate generalization of research results to other providers	The study focused on all the 27 licensed MIPs in Kenya as of 2022.
Thomson et al., (2020)	Private health insurance history, politics and performance	Corporate variables such as anti-fraud training, policies and procedures, internal anti-fraud controls, values, ethical culture, and	The case study considered made analysis and synthesis of high volume of information time consuming.	The present study used inferential statistics to interpret data on the selected MIPs.

Author/Year	Focus of the Research	Observations/Findings	Research gaps	Current study's Focus
		more must also be directed and integrated in fraud management system to guarantee performance.		
Owusu et al. (2021)	Biometric Technology for Fighting Fraud in National Health Insurance	Fraud detection strategies using biometric technology have four major objectives, implement effective fraud detection systems, adjust to the dynamic market and demands, contextualize the detected fraud cases or any irregularity, and concentrate on the economic and feasible claims	Outcomes do not offer empirical contribution on the application of fraud fighting technology in the Kenyan context.	The current study focused on MIP in Kenya, while appreciating the discussion of fraud management strategies from the employees' perspective
Fortune (2018)	Model for the automated	Employers and managers are cognizant of the urgency of	The research utilized purposive sampling approach	Current research utilized stratified random sample

<b>Author/Year</b>	<b>Focus of the Research</b>	<b>Observations/Findings</b>	<b>Research gaps</b>	<b>Current study's Focus</b>
	detection of fraudulent healthcare claims using data mining methods	eliminating fraud and adopting fraud detection programs, and they need to have an inclusive and integrated strategy and actions for fraud management	that is susceptible to biasness	approaches.
Yange (2019)	Fraud detection system for National Health Insurance Scheme in Nigeria	A proper system ensures monitoring the user management, enrollment, referral and claims processing to uncover any fraudulent activities within the system such as billing for services not offered, double billing, ghost clients, and self-referral.	Some of the findings would only be specific to Nigeria and not Kenya, creating a contextual bias.	The current study focused its variables within Kenya to eliminate contextual bias.
Onyango (2021)	Insurance fraud	Fraud risk had a negative	Timing of data snapshot was	The Current study used various

Author/Year	Focus of the Research	Observations/Findings	Research gaps	Current study's Focus
	risk management and financial performance of general insurance firms in Kenya	significant relation with financial performance of general insurers in Kenya	not guaranteed to be representative of what occurred among medical insurers in Kenya	sampling techniques to enhance representations.
Ntwali, Kituyi, & Kengere (2020)	Claims management and financial performance of insurance companies in Rwanda	There is a correlation between claims planning, control and monitoring and evaluation on the returns on equity and other performance metrics	Exploratory research design provides qualitative information, which creates more weight on the analysis process that could also be biased.  It also includes a small sample, which complicates generalization	The study used a mixed method providing for quantitative and qualitative data. All affected MIPs would be considered as part of the sample to allow for generalization of this study.

<b>Author/Year</b>	<b>Focus of the Research</b>	<b>Observations/Findings</b>	<b>Research gaps</b>	<b>Current study's Focus</b>
Mwashi (2018)	The effects of fraud on competitiveness of insurance companies in Kenya	Findings revealed that fraud led to increase in the cost of doing business, influenced the premium rates, closure, and huge claim reserve ratios.	Census survey study design that was adopted was rigid	Study used descriptive and explanatory research technique that focus on the 27 MIPs and the design can be flexibly adjusted
Fabrikant et al., (2022)	Health care fraud: Enforcement and compliance	The study emphasizes on dependence on health care fraud laws to tackle fraudulent schemes & emphasize on compliance issues.	Exploratory research approached used in this study does not support statistical evaluation and establishing generalizations.	The study used explanatory research technique that applies to the sector in a general sense.
Ndichu (2019)	Fraud risk management practices and the	Organizations can be guided into establishing the anti-fraud control procedures that facilitate fraud	Survey study methodology used in the study was rigid. The study was also biased	Explanatory research approach was utilized and the study emphasized on all dimensions

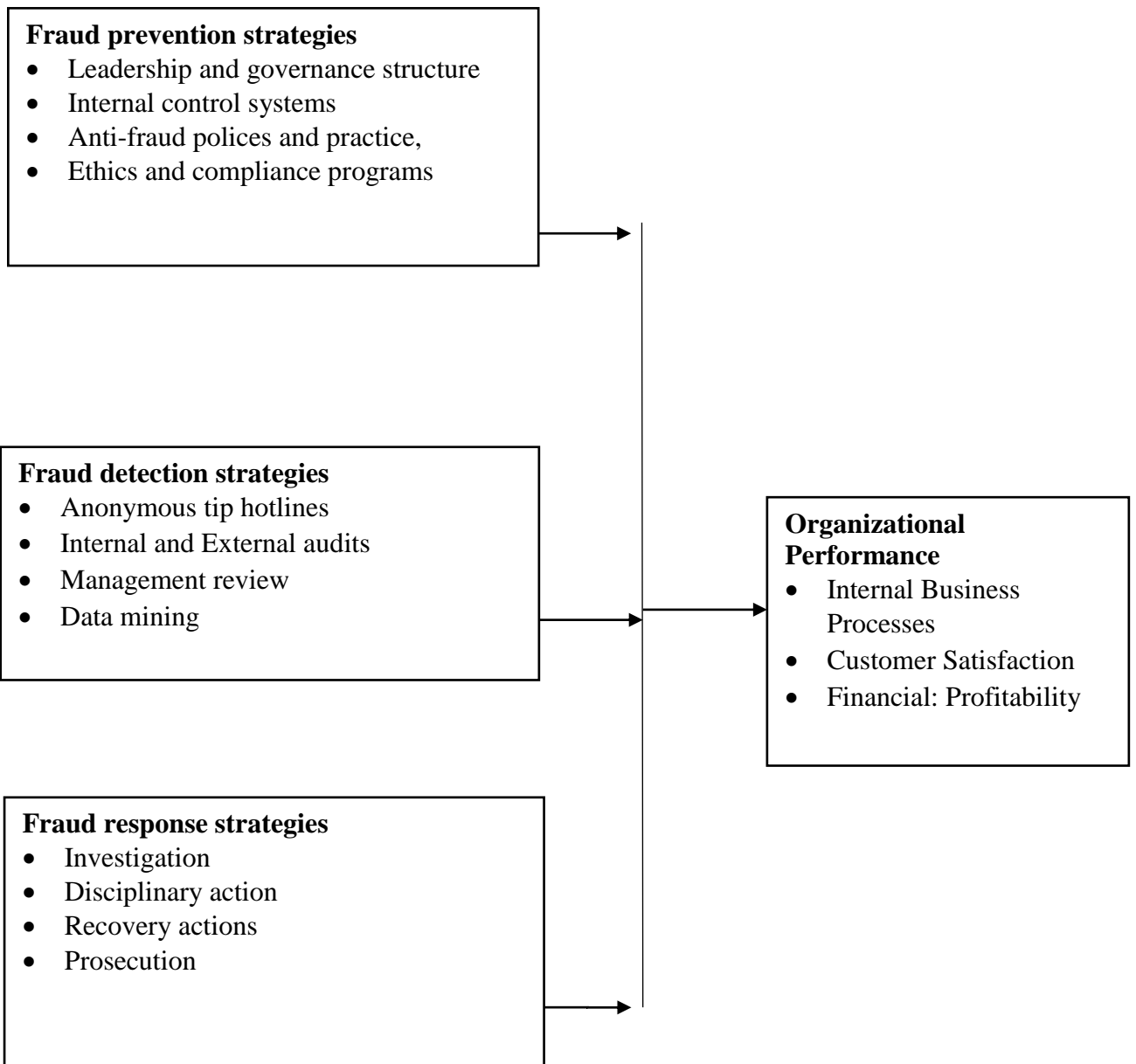
Author/Year	Focus of the Research	Observations/Findings	Research gaps	Current study's Focus
	financial performance of insurance companies in Kenya	detection, prevention and response practices	towards financial performance	of performance of MIP.

*Source: Researcher (2023)*

## 2.6 Conceptual Framework

A conceptual framework expounds a researcher's conceptualization of variables chosen for the study. Ekin et al. (2018) explain that a conceptual framework matches its ideas in a way that reflects the theoretical and empirical contexts through which the variables have been examined. Fuertes, Alfaro, Vargas, Gutierrez, Ternero, and Sabattin (2020) explain that through the conceptual framework, a researcher demonstrates the effects of variables on each other and provides a framework for the presentation. The relationship between independent variables and dependent variable is observable when a model is presented as a figure, as evident in Figure 2.2 below. The independent variables in this study include fraud prevention, detection and response strategies. In contrast, the dependent variable was organizational performance, as it was influenced by variables factors as depicted in **figure. 2.2**.

## Independent Variables



**Figure 2.2: Conceptual Framework**

Source: Researcher (2023)

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter outlines the procedures for obtaining, processing, synthesizing, and drawing inferences from the data to address the research questions in this study. The elements covered in this chapter encompass the research design, the defined target population, the determination of the sample size, the selected sampling technique, the data collection instrument, which includes details regarding the pilot test, the validation and reliability assessment of the instrument, data analysis methods, and ethical considerations pertinent to this research.

#### **3.2 Research Design**

The study considered a descriptive and explanatory research design to investigate the variables. Such a design is fundamental in exploring “self-reported facts” on respondents’ background, ideas, and reactions to many issues being examined. The design helps in understanding and explaining the general happenings of a study population and other field aspects (Ipfohen, 2020). Mishra and Alok (2022) confirmed that a descriptive research design is key in data collection “in a one-shot grounds,” which demonstrates its inexpensiveness and effectiveness. The design supports responses of participants to be incorporated in a closed-ended questionnaire such that the needed information that requires a successful synthesis of the performance of MIPs as orchestrated by the adopted fraud management strategies. A quantitative research approach was utilized in the production and analysis of data collected to make sense of their responses concerning fraud management strategies and performance of MIPs.

### 3.3 Target Population

Target population as the anticipated group of respondents or items of interest that have a similar characteristic and relate to the research objectives Pandey and Pandey (2021) explain. The target population of this study was the 27 MIPs licensed by IRA. There are a total of 2891 employees within the licensed MIPs (AKI, 2021a). Employees in the MIPs are better placed to share on fraud management strategies as it applies to their companies as they manage and interact with the systems.

### 3.4 Sample Size and Sampling Technique

Sampling is the final section of a subsection of a respondents or items from a statistical population, which is considered as the representative of the rest. The study utilized a stratified and convenience sampling technique, which can ensure a fair chance for all the expected participants from the MIPs. Asenahabi (2019) suggested that sampling is core in determining a representative subsection of the target population. Convenience sampling technique was appropriate for selecting participants that were involved in this study. This was necessary considering the budget and time constraints that is limiting the researcher. The choice of a proper sample size followed a sample technique by Slovin (1973), which is presented as  $n = \frac{N}{1+N(e)^2}$  (where  $n$  = sample size;  $N$  = sample frame; and  $e$  = confidence level at 90%).

$$\begin{aligned} n &= \frac{N}{1+N(e)^2} \\ &= \frac{2891}{1+2891(0.10)^2} \\ &= 96.65 \\ &= 97 \end{aligned}$$

Thus, 97 respondents from any of the licensed MIPs were selected. These participants who are employees in MIPs were chosen randomly to establish fairness without bias, using a simple random stratified sampling.

### **3.5 Data Collection Instrument**

The study used semi-structured questionnaires as the main data collection instrument to investigate effects of fraud management strategies on the performance of Medical Insurance Providers (MIPs). A total of 97 questionnaires were circulated to possible respondents for self-administration after undergoing validation through a pilot test. Questionnaires were selected as the data collection method for this research, given their ease of completion by respondents and cost-effectiveness compared to other alternatives. Each questionnaire comprised separate sections: Section A gathered demographical information, while Sections B, C, and D contained closed-ended questions. The questionnaires incorporated a Likert scale for respondents to indicate their level of consensus with statements presented. Section B delved into the realm of fraud prevention programs, Section C explored fraud detection strategies, and Section D focused on fraud response strategies. The Likert scale allowed participants to express their agreement level with the questionnaire's content. This instrument demonstrated reliability as it facilitated precise assessment of respondents' attitudes (Mishra and Alok, 2022).

#### **3.5.1 Pilot Test**

A pilot survey was randomly done on MIPs preceding the actual research. A pilot test was done by getting the necessary information from a part of the expected population. Mugenda and Mugenda (2003), propose that a pilot study with a sample of ten percent of the overall sample with homogeneous characteristics is apposite. Questionnaires

was randomly administered to fourteen chosen employees from Jubilee Health Insurance Limited. The questionnaires were hand delivered to the participants of this study for their responses. The goal of the pilot survey was to detect any unclear and obscure questions in the research tool, and allow for proper amendments of accordingly. Participants in the pilot study were not considered in the final study.

### **3.5.2 Validity of the Instrument**

The research instrument's validity pertains to its to effectively measures its intended purpose. As noted by Ipfohen (2020), it is a measure of how well the questionnaire accurately assesses the variables under study, reflecting the accuracy of the study's outcomes. In this study, two key aspects of validity were considered: criteria-related validity and content validity.

Criteria-related validity examines the ability of one measure to predict the results of another. Strong correlations indicate that the questionnaire is likely to effectively measure the intended variables. Content validity focuses on assessing the aptness of the questionnaire's content to accurately capture the intended aspects. In this study, the questionnaire's content validity was ensured through comprehensive review, which confirmed its alignment with the relevant aspects and concepts related to the study's variables, in accordance with both theoretical and empirical literature.

### **3.5.3 Reliability of the Instrument**

In research, reliability refers to the degree to which consistent and stable results are obtained when using the same values in the research tool. According to Mugenda and Mugenda (2003), reliability is a measure of the degree to which information gathering procedures consistently yield dependable and replicable results. In this study, the

research instrument was designed to produce consistent, precise, repeatable, and trustworthy results. To assess reliability, the Cronbach alpha coefficient was computed using statistical package for social sciences (SPSS) Version 26. A Cronbach alpha coefficient value above 0.7 indicates reliability of measurement procedure, as noted by Mishra and Alok (2022).

### **3.6 Data Analysis and Presentation**

Qualitative data collected through semi-structured questions was subjected to content analysis for synthesis. In contrast, quantitative data from questionnaires was analyzed using descriptive and inferential statistics, allowing for evaluation and interpretation of the findings. Descriptive statistics encompassed measures of central tendency including frequencies, means, and standard deviation for the assessment of each variable. Inferential analysis involved the interpretation of correlation and regression coefficients.

The researcher utilized SPSS Version 26 to facilitate both descriptive and inferential analyses. Analysis of variance (ANOVA) was employed to test the significance level at a 95 percent confidence interval. The dependent variable, organizational performance, was regressed against independent variables, which included fraud prevention strategies, fraud detection strategies, and fraud response strategies. The equation illustrating the relationship among the variables is as follows:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon$$

Where: Y is the dependent variable (organizational performance),

$\beta_0$  is regression coefficient (coefficient of intercept),

$\beta_1$ ,  $\beta_2$ , and  $\beta_3$  are the gradient of the regression equation,

$X_1$  = Fraud prevention strategies,

$X_2$  = Fraud detection strategies,  
 $X_3$  = Fraud response strategies, and  
 $\varepsilon$  = the error term.

The correlation coefficients from the regression analysis showed the influence of the independent variables on organizational performance.

### **3.7 Ethical Considerations**

Ethical standards are of paramount importance in any research study as they serve as a guide for the selection of research design and ethical practices. In this study's context, a commitment was made to ensure the utmost confidentiality of data collected from willing participants, aligning with the recommendations of Iphofen (2020). This study strived to comply with various research ethics. These research ethics include: First, the researcher placed a strong emphasis on securing the voluntary participation of the study's participants, obtaining their informed consent before they engaged with the research tool.

Secondly, the researcher obtained a research authorization letter from Kenyatta University's Graduate School Board. Thirdly, the researcher sought research permit from the National Commission for Science, Technology and Innovation (NACOSTI), an organization responsible for overseeing scholarly work and ensuring adherence to all mandatory ethical considerations. The permit was granted following a thorough evaluation of the research tools, deeming them suitable for data collection.

## **CHAPTER FOUR**

### **DATA ANALYSIS, FINDINGS AND DISCUSSION**

#### **4.1 Introduction**

Chapter four presents the outcomes of data analysis on fraud management strategies' influences on the performance of MIPs presented. The chapter is further subdivided into different sections including response rate, participants' background information, and descriptive and inferential results.

#### **4.2 Response Rate**

The study targeted 97 potential respondents, consisting of employees from various Medical Insurance Providers (MIPs) based in Nairobi City County, Kenya. To facilitate data collection, the researcher adopted a drop-and-pick approach in addition to employing interactive Microsoft forms to conveniently engage the target respondents. A total of 97 questionnaires were distributed to the intended participants, which included managers, administrators, and employees associated with medical insurance services. The researcher received responses from 71 employees, representing a response rate of 73.20 percent, while 26 prospective respondents (28.80 percent) did not participate in the study. The return rate was considered high and deemed sufficient for achieving the study's objectives. As per the recommendation of Pandey and Pandey (2021), a 60 percent response rate is considered good, while a rate in excess of 70 percent is considered very good. The response rate is presented in Table 4.1.

**Table 4.1 Response rate**

<b>Response Rate</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Questionnaires Returned	71	73.20
Questionnaires not Returned	26	28.80
<b>Total</b>	<b>97</b>	<b>100.00</b>

**Source: Survey Data, (2023)**

### **4.3 Reliability Analysis**

A pilot study was done on 14 participants from Jubilee Health Insurance Limited that were randomly picked. The pilot study was done to establish the reliability of the research tool. Reliability analysis was done by calculating the Cronbach's alpha value that showed the internal consistency of the variable items in respect to the similar construct they measured. Table 4.2 below indicates the results of the reliability test as the fraud response strategies having the highest Cronbach value ( $\alpha = 0.786$ ), implying the highest probability among the variables. Subsequently, there are the fraud detection strategies at ( $\alpha = 0.779$ ), organizational performance at ( $\alpha = 0.747$ ), and fraud prevention strategies at ( $\alpha = 0.734$ ). This determines that the chosen study variables were reliable as their Cronbach's values were above recommended 0.7 threshold.

**Table 4.2: Reliability Test**

<b>Scale</b>	<b>Cronbach's <math>\alpha</math></b>	<b>Number of items</b>
Fraud prevention strategies	0.734	6
Fraud detection strategies	0.779	5
Fraud response strategies	0.786	6
Organizational performance	0.747	3

**Source: Survey Data, (2023)**

#### 4.4 Demographic Information

Demographical information that the study was interested in included the respondent's gender, length of service in the current organization, and the level of MIP specific experience.

##### 4.4.1 Gender

The study investigated the genders that participated in the study with the outcome as shown in Table 4.3 below.

**Table 4.3 Gender**

<b>Gender</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
Male	52	73.2	73.2
Female	19	26.8	100.0
<b>Total</b>	<b>71</b>	<b>100.0</b>	

**Source: Survey Data, (2023)**

Table 4.3 shows the outcome of the participants' gender which showed that the males were the majority at 73.2 percent, whereas the female respondents were only 19 at 26.8 percent. The findings revealed that the MIP is still male dominated, which indicates that they have not complied to the two thirds gender principle. As such, the results would not be fully gender responsive. The participants' gender was also important for showing the representativeness of the men and women involved in the study. This complements the study by Waghade and Karandikar (2018) which reiterated that it is key to present equal opportunity to both genders in the workplace to be involved in implementing fraud management strategies. The finding suggests that the male-dominance in MIPs may impact the responsiveness of fraud management strategies to gender-specific needs or considerations.

#### 4.4.2 Length of Service in the Organization

The length of service in an organization is critical especially in decision-making processes, since the respondent can provide insights based on their professional judgment and real-world experience. Table 4.4 shows the results on the length of service in the organization in which the respondents served. Majority of them had been in the organization between 1 to 5 years at 36 percent, followed by those between 5 to 10 years (31 percent), less than 1 year (18.3 percent), and the least of them were above 10 years at 14.1 percent as shown in table 4.4 below.

**Table 4.4 Length of work in the organization**

<b>Length of Service</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
Below 1 year	13	18.3	18.3
1 to 5 years	26	36.6	54.9
5 to 10 years	22	31.0	85.9
Over 10 years	10	14.1	100.0
<b>Total</b>	<b>71</b>	<b>100.0</b>	

**Source: Survey Data, (2023)**

This demonstrated that the turnover rates were considerably moderate, and that most of the employees were new entrants. There was a balance in each category demonstrating a stability in the sharing of information and engagement in the workplace activities. Kiprono and Ng'ang'a's (2018) results are contrary to the current finding as it showed less stability of the workforce in the insurance sector, which was marked by higher turnover rates. However, the results by Rayan (2018) was concurrent with the current study as there were new entrants who also demonstrated an inexperienced workforce. The finding underscores the importance of considering the length of service in MIPs as a significant factor shaping decision-

making , workforce dynamics and stability in implementing fraud management strategies in MIPs.

#### 4.4.3 Experience Level

Table 4.5 shows the outcomes of experience of the participants with the medical insurance providers. The highest percentage was recorded with those that had experience between 1 – 5 years at 36.6 percent, followed closely by those with above 10 years’ experience at 35.2 percent. Those with 5 – 10 years were at 21.1 percent, whereas those with less than 1-year experience were at 7 percent.

**Table 4.5: Experience Level**

<b>Experience Level</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
Less than 1 year	5	7.0	7.0
1 - 5 years	26	36.6	43.7
5 - 10 years	15	21.1	64.8
Above 10 years	25`	35.2	100.0
<b>Total</b>	<b>71</b>	<b>100.0</b>	

**Source: Survey Data, (2023)**

This currently presented respondents who are competent enough to handle the research questions. A majority of them (above 90 percent), had at least a 1-year experience of understanding the activities in the MIP. Therefore, the study outcomes could be relied upon as it reflected views from respondents who understood the subject of investigation. The study by Ndichu (2019) determined that only about 48 percent who had above 1-year experience. It can be deduced therefore that the current study has more weight in terms of the respondents having sufficient experience to interact with the tool and answer questions correctly.

## **4.5 Descriptive Analysis**

This section provides a summary of the descriptive statistics for various aspects, including fraud prevention strategies, fraud detection strategies, fraud response strategies, and the organizational performance of Medical Insurance Providers (MIPs) in Nairobi City County. The descriptive measures considered in the analysis encompassed the mean, standard deviation, and percentage. Mean serves as a measure of central tendency, while standard deviation indicates the degree of distribution and its deviation from the mean. The results presented in this section align with the study's objectives, which aim to assess the impact of fraud management strategies on the performance of MIPs in Nairobi City County, Kenya. The data was assessed using a scale ranging from 1 to 5, where 1 was strongly disagree, 2- disagree, 3-uncertain, 4- agree, and 5-strongly agree.

### **4.5.1 Fraud Prevention Strategies on Performance**

The study sought to understand the effect of fraud prevention strategies on the performance of MIPs in Nairobi City County, Kenya. From the study outcomes, most of the respondents were in concurrence on existence of manual and IT-dependent control systems to prevent fraud with a mean of 3.8732. This was followed by those who concurred that ethics existed and compliance programs that were designed to prevent fraud at a mean of 3.8143. The respondents also contended that MIPs have in place anti-fraud policies and procedures and that their leadership and governance structures supported fraud prevention with a mean of 3.8028 and 3.7324. Also, the respondents concurred that the organization has digitized its processes to prevent fraud, and it conducts periodic fraud awareness training, displaying a mean of 3.6338, and 3.5775, respectively.

**Table 4.6 Statistics on Fraud Prevention Strategies**

	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
The organization's leadership & governance structures support fraud prevention	71	3.7324	1.06848
The organization has digitized its processes to prevent fraud	71	3.6338	1.05883
There exist manual and IT-dependent control systems to prevent fraud	71	3.8732	.90915
The organization has established anti-fraud policies and procedures	71	3.8028	.98008
There are ethics and compliance programs designed to prevent fraud	71	3.8143	.88944
The organization conducts periodic fraud awareness training	71	3.5775	.98070
<b>Aggregate Mean</b>	<b>71</b>	<b>3.7390</b>	<b>.98111</b>

**Source: Survey Data, (2023)**

This implies that fraud prevention strategies influence performance of MIPs in Nairobi City County. The aggregate mean of 3.7390 proved that a majority of the respondents were in concurrence that fraud prevention strategies influenced the performance of MIPs. The results agree with Crain et al.'s (2017) findings that determined that fraud prevention strategies affect the performance of MIPs. The standard deviations ranged from 0.88944 to 1.06848. The aggregate standard deviation of 0.98111 was relatively low for fraud prevention strategies. This demonstrated that the values as suggested by the respondents were closely packed around the mean. Therefore, the responses were relatively consistent as they agreed on fraud prevention strategies.

Thematic analysis is a widely used qualitative research method that involves identifying, analyzing, and reporting patterns (themes) within the data. Further

comments were sought on fraud prevention strategies on their opinions regarding the subject. The first theme was prevention before occurrence. One of the respondents cited, “The number of cases of fraud will be reduced through the application of fraud prevention strategies.” Another indicated, “Prevention will contain risks and fraudulent activities before they even exist.” The respondents acknowledged that prevention should be prioritized as opposed to response strategies when fraudulent cases have already occurred. Therefore, if the MIPs focus on prevention strategies, they can seal all loopholes that fraudsters can take up to infringe resources at their disposal.

Another theme that was evident was staff awareness. Another respondent noted, “Assessment is a powerful proactive tool to prevent fraud,” and “data sharing within the insurance industry helps to identify fraudsters.” Therefore, it can be explained that staff awareness allows the management of the MIP to recognize vulnerabilities. Fabrikant et al. (2020) concurred that the managers and leadership of the MIPs need to understand their own weaknesses and be vigilant about situations that might trigger fraudulent behavior. Staff awareness helps employees understand their motivations, which can help deter fraudulent activities. One of the respondents alluded to the fact that there were ethical and legal implications to fraudulent actions.

Prediction of trends and adherence to underwriting policies were capitalized as aspects that could enable fraud prevention strategies. Respondents indicated, “making use of claims data analytics to predict trends,” “adherence to underwriting policies are a proactive way to prevent fraud,” and “insurance companies should continually verify the credibility of intermediaries (brokers) and medical facilities.” In his study, Yange (2019) determined that due diligence was ensured so that the management of

the organization implemented adherence to policies, prevention strategies would hinder fraudulent cases before their occurrence. This confirms the current study that overemphasized adhering to policies of risk assessment, consistency and fairness, verification of applicant-provided information, recognizing red flags, and compliance with regulations. Adherence to underwriting policies ensures compliance with legal and regulatory requirements. Likely, non-compliance lead to legal consequences, making MIPs more diligent in following established policies to prevent fraud.

#### **4.5.2 Fraud Detection Strategies on Performance**

This variable of fraud detection strategies was measured using the indicators such as anonymous tip hotlines, internal and external audits, management review, and data mining. Participants were requested to indicate their level of concurrence relative to statements around the objective and variables on a scale of 1 to 5, where 1 was strongly disagree, and 5 represented strong agreement. The data outcomes showing the level of agreement are suggested in table 4.7 below.

**Table 4.7 Statistics on Fraud Detection Strategies**

	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
There exists hotline platform that supports anonymous fraud reporting	71	3.5634	.95218
Internal audit activity periodically assesses fraud risk	71	3.8028	1.17862
The external auditors provide assurance on fraud risk management	71	3.7465	1.02425
The company's management regularly reviews fraud detection strategies	71	3.8043	.90427
The organization utilizes data analytics to detect fraud	71	3.6761	1.03888
<b>Aggregate Mean</b>		<b>3.71862</b>	<b>1.01964</b>

**Source: Survey Data, (2023).**

Table 4.7 shows the outcomes of the study on the influence of fraud detection strategies on the performance of MIPs in Nairobi City County. The results demonstrate that fraud detection strategies are continually applied by MIPs with an aggregate mean score of 3.71862 and a low standard deviation of 1.01964, showing that most participants in the study accepted this practice. Moreover, higher means of 3.8043 and 3.8028, alongside standard deviations of 0.90427 and 1.17862 respectively, show that the participants in the study generally accepted strategic detection strategies need to be implemented in MIPs. The outcomes are congruous with previous research by Yange (2019) that showcase the significance of fraud detection strategies in significantly reducing the number of fraudulent cases before their onset or in the process, boosting the overall performance of the MIP.

Respondents also voiced their opinions on fraud detection strategies. Respondents suggested, "checker controls," "exceptional reporting," "there is existence of weak systems," "organizations having fraud response teams in place," "effective internal investigations", and "deficiency of vigilance." Exceptional reports on fraud detection strategies require a combination of clear communication, thorough research, and insightful analysis such as data analysis, anomaly detection, and machine learning algorithms. Predictive measures help to anticipate and prevent fraudulent activities. Another respondent noted "rapidly evolving fraud techniques and resource limitations in MIPs today. The limitations of the existing fraud detection methods and technologies need to be addressed to reinforce the measures. MIPs that prioritize fraud prevention and detection often establish specialized teams dedicated to responding to incidents of fraud. In their finding, Mackey et al's (2020) further elaborated this finding by exposing that fraud response teams are essential in effectively managing, investigating, and mitigating the impact of fraud. Effective internal investigations are essential for organizations to address various issues such as fraud, misconduct, policy violations, and ethical breaches. Conducting internal investigations in a thorough, objective, and legally compliant manner is crucial to maintaining the integrity of the organization. Therefore, if the MIPs focus on detection strategies, they are able to arrest any suspicious actions at their onset.

#### **4.5.3 Fraud Response Strategies on Performance**

The investigation, disciplinary action, recovery actions, prosecution, control review post-fraud discovery, and public disclosure were the indicators to measure fraud response strategies. The respondents were asked to rate their suggestions on a scale of

1 to 5, where 1 is strongly agree, and 5 is strongly disagree. Table 4.8 presents the descriptive statistics for the fraud response strategies.

**Table 4.8 Statistics on Fraud Response Strategies**

	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
The company ensures all fraud cases are thoroughly investigated	71	4.0000	.87831
Appropriate disciplinary actions are applied after fraud detection	71	3.8732	.95513
Recovery measures are initiated following suspected fraudulent activity	71	3.6479	1.01557
Law enforcement authorities are involved in prosecuting fraudulent violations and ultimate recoveries	71	3.7042	.97679
The company ensures immediate review of controls post-fraud discovery	71	3.9155	.87418
The organization makes public disclosures of cases of fraud	71	3.3521	1.07036
<b>Aggregate Mean</b>		<b>3.7488</b>	<b>0.96172</b>

**Source: Survey Data, (2023)**

Table 4.8 shows that the aggregate average of the items explaining fraud response strategies is 3.7488, with a standard deviation of 0.96172. Considering the 5-point Likert scale, 3.7488 confirms a general concurrence among the participants that fraud response strategies are critical in the performance of MIPs. A thorough investigation of fraudulent cases, disciplinary actions, recovery measures initiated, engagement of law enforcement authorities, review of controls post-fraud recovery, and public disclosures of fraud cases have been proven to contribute to the performance of MIPs. A smaller standard deviation of 0.96172 shows that the reactions are closely around

the mean, showing a reliable projection of the respondents' perspectives. The outcomes agree with the determination of Crain et al.'s (2017) and Mackey et al.'s (2020) that fraud response strategies are critical in ensuring investor confidence and informing prevention techniques of the fraud cases, which constitute performance. However, the study also emphasized the integrity of the MIPs so that the stakeholders can effectively do business.

The respondents also made their qualitative views regarding fraud response strategies. A number of themes were also extrapolated, 'joint review of processes by the MIP,' "the existence of audit risk and compliance," "alternative dispute resolution as opposed to prosecuting fraud as civil or criminal cases that are time-consuming," and "to inform and improve on better fraud response strategies." One respondent cited the need for "MIPs collaborating to deal with fraud through a rating of service providers." By integrating rigorous audit procedures and ensuring compliance with relevant laws, regulations, and internal policies, MIP can proactively prevent, detect, and respond to fraudulent activities. Alternative Dispute Resolution (ADR) methods, such as mediation and arbitration, offer viable alternatives to prosecuting fraud through civil or criminal cases. The study by Nzivuli (2017) complements this finding as it determined that ADR methods are often favored since they can be quicker, more cost-effective, and less adversarial compared to traditional court proceedings. The theme of collaboration among various departments and other oversight institutions for a joint review of processes can be highly beneficial for MIPs. In their study, Thaifur et al. (2017) recommend that collaboration enables shared understanding and knowledge exchange of better practices in fraud response.

## **4.6 Inferential Analysis**

Inferential statistics deals with making inferences or predictions about a population based on a sample of data taken from that population. The results of inferential statistics are essential in scientific research, enabling the researcher draw conclusions about the population without studying the entire population. The study performed correlation and regression analyses as sections of the inferential analyses.

### **4.6.1 Correlation Analysis**

Correlation analysis refers to a statistical technique for assessing the strength and direction of the relationship between two quantitative variables within a study. The outcome of a correlation analysis is expressed as a correlation coefficient, quantifying the extent to which changes in one variable relate with changes in another. The correlation coefficient is assessed on a scale from -1 to +1, with +1 representing a perfect positive correlation, indicating an increase in one variable corresponds precisely to an increase in the other. A correlation of -1 signifies a perfect negative correlation, where an increase in one variable results in a decrease in the other. It's important to note that, as pointed out by Pandey and Pandey (2021), correlation does not imply causation. This mean, the relationship observed does not indicate one variable causing changes in the other.

To assess the correlation between the mean values of fraud detection strategies, fraud prevention strategies, and fraud response strategies, a correlation analysis was performed. The results of this analysis can be found in Table 4.9.

**Table 4.9 Correlations**

		Fraud Prevention Strategies	Fraud Detection Strategies	Fraud Response Strategies	Organizational Performance
Fraud Prevention Strategies	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	71			
Fraud Detection Strategies	Pearson Correlation	.727**	1		
	Sig. (2-tailed)	.000			
	N	71	71		
Fraud Response Strategies	Pearson Correlation	.135	.120	1	
	Sig. (2-tailed)	.266	.319		
	N	70	71	71	
Organizational Performance	Pearson Correlation	.201	.171	.520**	1
	Sig. (2-tailed)	.095	.154	.000	
	N	71	71	71	71

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

**Source: Survey Data, (2023)**

There existed a high correlation between fraud detection strategies and fraud prevention strategies at 0.727. The high correlation suggests a possible connection between the independent variables and the performance of MIPs in Nairobi City County. However, it is key to be cautious not to make a determination of causation based solely on the high correlation results. Fraud response strategies correlated with the performance of MIPs at 0.520. Rayan (2018) proved a high positive correlation between the implementation of a proactive fraud response strategy and performance in terms of the accuracy of incentive payments by MIPs. Another correlation was determined between fraud response strategies and fraud prevention strategies at 0.201. Subsequently, fraud detection strategies related with fraud response strategies with a coefficient value of 0.120, but with organizational performance at 0.171. As opposed

to the current findings, Kiprono and Ng'ang'a (2018) found a high correlation of 0.76 between fraud detection strategies and fraud response strategies. The authors reiterated that efficient detection methods lead to prompt and effective responses, minimizing financial losses and possible legal consequences. There was a relatively low correlation between fraud prevention strategies and fraud response strategies at 0.135. All of the variables related positively but variably. That is, an increase in one variable is causing an increase in the other.

#### **4.6.2 Regression Analysis**

Regression analysis is a statistical method used to model the relationship between a dependent variable and independent variables, (Tabachnick & Fidell, 2013). This technique is utilized for the purpose of predicting and explaining the behavior of a dependent variable based on the values of independent variables. In this study, a multiple linear regression analysis was conducted to examine the relationships among the variables. The data was processed and analyzed using the Statistical Package for the Social Sciences (SPSS), which facilitated data coding, input, and computation for each variable. Through this analysis, the researcher aimed to gain insights into the linkage between the independent variables and performance, the individual impact of each independent variable on performance, and the identification of the most significant variables. The results are presented in the model summary, as shown in Table 4.9.

**Table 4.9 Model Summary**

R	R Square	Adjusted R Square	Std. Error of the Estimate
.779 <sup>a</sup>	.606	.247	.65814

a. Predictors: (Constant), Fraud Response Strategies, Fraud Detection Strategies, Fraud Prevention Strategies

**Source: Survey Data, (2023)**

Table 4.9 indicates coefficient of determination. From the outcomes demonstrated above, it has been determined the existence of a strong positive relationship between the study variables as reflected by the value of 0.779. The R square is 0.606, which demonstrates that the three independent variables that were examined explained 60.6 percent of their influence on performance. Therefore, it implies that the other factors that had not been captured in the research contributed 39.4 percent of performance. Such variables are very significant and may need to be incorporated to increase the performance of MIPs. Thus, the study recognizes the variables as core elements of performance. Furthermore, the highly low standard error of the estimate value of 0.65814 shows that the data associates smoothly with the regression line, continue to support the model's validity, and reliability status. Therefore, the outcomes provide value determinations into the linkage between fraud management strategies and the performance of MIPs in Nairobi City County, Kenya.

The study also utilized ANOVA to determine the alignment of the model with the data and outcomes as shown in Table 4.10 below. The model also demonstrates the good of fit, which is how well the sample selected in the study reflects the true population. A probability (sig.) that is higher than 0.05 shows that the elements do not

reflect the true population. A probability of lesser than 0.05 demonstrates that the variables represent and reflect of the true population. The outcomes are recorded in table 4.10 below.

**Table: 4.10 F-Static Test**

	Sum of Squares	df	Mean Square	F	Sig.
Regression	11.095	3	3.698	8.538	.000 <sup>b</sup>
Residual	28.588	66	.433		
<b>Total</b>	<b>39.683</b>	<b>71</b>			

**Critical value = 3.306**

**Source: Survey Data, (2023)**

The model was in table 4.10 was determined as valid as ( $F_{(3, 71)} = 8.538, P < .000$ ) showing that the independent variables were good predictor of variations in performance and the model was fit is illustrating the connection of the variables. The computed value was greater than the critical value ( $8.538 > 3.306$ ), showing that fraud detection strategies, fraud prevention strategies, and fraud response strategies all influenced the performance of MIPs. The significance value below 0.05 indicates significance of an extrapolated model.

The study considered a multiple regression analysis of the variables to establish the effects of fraud management strategies on organizational performance of MIPs in Nairobi City County, Kenya. According to SPSS generated table below, the ( $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon$ ) becomes:  $Y = 0.74 + 0.39X_1 + 0.32X_2 + 0.574X_3$

Where Y is the dependent variable (organizational performance),  $X_1$  is the fraud prevention strategies,  $X_2$  is fraud detection strategies, and  $X_3$  is the fraud response

strategies. The possible value (constant of Y), when all predictor variables are equivalent to zero was 0.74 as shown in Table 4.11 below.

**Table 4.11 Regression Coefficients**

	Unstandardized		Standardized		Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta	t	
(Constant)	0.74	.568		2.153	.035
Fraud Prevention Strategies	.39	.136	.111	.725	.471
Fraud Detection Strategies	.32	.147	.034	.220	.826
Fraud Response Strategies	.574	.123	.492	4.664	.000

a. Dependent Variable: Organizational Performance

**Source: Survey Data, (2023)**

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATION

#### 5.1 Introduction

This chapter draws conclusions on account of the primary findings of the study and offers recommendations derived from these conclusions. The researcher aimed to evaluate the impact of fraud management strategies on the performance of Medical Insurance Providers (MIPs) in Nairobi City County, Kenya. Therefore, the conclusions presented in this section are aligned with the research objectives.

#### 5.2 Summary of Findings

The study's general objective was to evaluate effects of fraud management strategies on the performance of medical insurance providers in Nairobi City County, Kenya. The specific objectives were to investigate the effect of fraud prevention strategies, fraud detection strategies and fraud response strategies on the organizational performance of MIPs. Having used a descriptive research design, a survey was done MIPs in Nairobi City county. A simple random stratified sampling was adopted to sample participants of the study who were considered for replying the questionnaires. Analysis was done through descriptive statistics and regression analysis. A number of observations were determined thereafter.

The first specific objective was to appraise the effect of fraud prevention strategies on the performance of MIPs. The study had fraud prevention strategies as the first independent variable under investigation which had leadership and governance structure, processes digitization, internal control systems, anti-fraud policies and

practices, ethics and compliance programs, and fraud awareness training. The outcomes showed that fraud prevention strategies influence the performance of MIPs. Based on the regression analysis, with all factors remaining constant, 39 percent of the performance was explained by the fraud prevention strategies. Nonetheless, there is a need for the management of the MIPs to establish strong internal controls, strict access controls such as password policies and consistent updates, fraud risk evaluation, whistleblower hotlines, and compliance with regulations. Moreover, the top management of the MIPs should be actively involved and offer oversight of all the activities of their organizations. They should set a strong ethical tone and demonstrate a commitment to fraud prevention strategies.

The second objective was to assess the effect of fraud detection strategies on the performance of MIPs in Nairobi City County, Kenya. The study had fraud detection strategies as another independent variable containing anonymous tip hotlines, internal and external audits, management review, and data mining. The results proved that performance of MIPs was heightened because of fraud detection strategies. With all factors held constant in the multiple regression analysis, fraud detection strategies explain 32 percent of the performance of MIPs. However, there is a call, as indicated by the study outcomes, for MIPs to adopt the latest technologies to understand predictive models of anticipating possible fraud, conduct real-time monitoring, and employ digital identity verification tools. Technology was proposed as critical to authenticating customer identities during online transactions, reducing the risk of identity theft and account takeovers. Again, the management of the MIP is at the center of ensuring that they conduct regular internal audits to evaluate the effectiveness of internal controls and identify potential weaknesses.

The third objective was to evaluate the effect of fraud response strategies on the performance of MIPs in Nairobi City County, Kenya. This objective was attained as shown by the previous results. The study considered fraud response strategies as the third independent variable that influenced performance having the following measures: investigation, disciplinary action, recovery actions, prosecution, control review post-fraud discovery, and public disclosure. The results demonstrated that fraud response strategies affected the performance of MIPs. With all factors held constant, 57.4 percent of performance was explained by fraud response strategies. A well-prepared and executed fraud response plan can minimize the damage caused by a fraud incident and facilitate faster recovery for the organization. Regular testing and simulation of response plans can also ensure that the organization's response team is prepared to handle real-time incidents effectively.

### **5.3 Conclusions of the Study**

On fraud prevention strategies, adherence to regulatory guidelines and compliance standards is non-negotiable. MIPs must stay updated with evolving regulations, ensuring their fraud prevention, detection, and response strategies align with legal requirements. Regular audits and assessments are necessary to confirm compliance. While combating fraud, ethical considerations should remain at the forefront. Balancing fraud prevention measures with customer privacy and data protection is crucial. Insurance providers must uphold ethical standards while implementing stringent anti-fraud strategies. Continuous training programs for employees, partners, and stakeholders are essential. Raising awareness about emerging fraud tactics and

emphasizing ethical practices within the organization can empower staff to recognize and report potential fraud effectively.

On fraud detection strategies, the study underscores the place of adopting a holistic approach that integrates prevention, detection, and response strategies. MIPs need to implement multifaceted solutions that address vulnerabilities at different stages of the insurance process. The management of MIPs should conduct comprehensive background checks and credentialing for healthcare providers before allowing them into the network. The MIPs can verify licenses, qualifications, and past performance to prevent fraud at the source. The study has also advocated for integration of external data sources, such as public records and social media, into the fraud detection process. This additional information can provide insights into the lifestyle and activities of policyholders and healthcare providers, aiding in the identification of potential fraud.

Fraud response strategies should be adaptive and agile. Insurance providers must have protocols in place for immediate response when fraud is detected. Timely and decisive action can mitigate financial losses and protect the reputation of the organization. It was also determined that MIPs should create a specialized fraud response team within the organization. This team should consist of experienced professionals trained in fraud detection, investigation, and legal procedures and dedicated to ensure that responses are prompt and focused. The study found that MIPs should strengthen internal controls and review existing processes to recognize vulnerabilities. This would mean implementing additional checks and balances to prevent similar fraud schemes in the future.

#### **5.4 Recommendations of the Study**

The recommendations presented in this study were first targeted to MIPs in Nairobi City County and the entire sector. Considerations have been determined to establish the effect of fraud management strategies on the performance of MIPs.

MIPs encounter unique challenges when it comes to fraud management strategies. As informed by the outcomes of this study, the number of recommendations has been determined. First, there is a need to implement sophisticated data analytics tools to identify patterns and anomalies in claims data, allowing for early detection of fraudulent activities. This is especially true in the present times with emerging trends. MIPs need to utilize predictive modeling to anticipate potential fraud based on historical data and industry trends.

Secondly, MIPs need to strengthen their identity verification as informed by the objective of fraud detection strategies. Organizations need to employ multi-factor authentication methods to verify the identity of policyholders, especially in online transactions and access to sensitive information. MIPs need to regularly update member records and verify patient identities to prevent identity theft and insurance fraud.

Thirdly, in terms of fraud prevention strategies, MIPs need to enhance claims processing controls. The organizations can implement automated systems to cross-verify claims data, looking for inconsistencies or duplicate claims. They can conduct periodic audits of high-value claims and claims with unusual patterns to ensure accuracy and legitimacy. Fourthly, as a fraud response strategy, MIPs can invest in

educating their employees and top management. They should provide comprehensive training to employees about common fraud schemes, red flags, and the importance of reporting suspicious activities. Employees should be educated about insurance fraud risks and be encouraged to verify patient identities and insurance coverage before providing services.

### **5.5 Suggestion for Further Research**

There is also a need for a confirmatory study. The current study determined the effects of fraud management strategies on the organizational performance of MIPs in Nairobi City County. There are other fields of insurance providers, hence the need to establish the research problem on other dimensions and related sectors. The findings were also deduced from a small size sample of 71 respondents. A replica study with a larger sample size is worthwhile to confirm the validity of such a study. The study was centered on MIPs in the Nairobi region, and other studies that could cover the whole of the country would enrich the subject.

The study recommends another similar study in the future that could capture all the fraud management strategies that could not be explained by the model. This is based on the fact that the three independent variables (fraud prevention strategies, fraud detection strategies, and fraud response strategies), only explained 60.6 percent of their influence on performance. Therefore, it shows that other factors that had not been captured in the research contributed to 39.4 percent of performance. These are critical factors of fraud management strategies that would influence the operations of MIPs in terms of dealing with fraud. Further research into these factors with probably

another research design and including MIPs across the country can be done to support the generalization of the findings to the sector.

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## APPENDICES

### Appendix I: Licensed Medical Insurance Companies in Kenya

1. AAR Insurance Company Limited
2. Allianz Insurance Company of Kenya Limited
3. APA Insurance Limited
4. Britam General Insurance Company (K) Limited
5. CIC General Insurance Limited
6. Directline Assurance Company Limited
7. Fidelity Shield Insurance Company Limited
8. First Assurance Company Limited
9. GA Insurance Limited
10. ICEA LION General Insurance Company Limited
11. Jubilee Health Insurance Limited
12. Kenindia Assurance Company Limited
13. Kenya Orient Insurance Limited
14. Madison General Insurance Kenya Limited
15. Metropolitan Cannon General Insurance Company Limited
16. MUA Insurance (Kenya) Limited
17. Pacis Insurance Company Limited
18. Sanlam General Insurance Company Limited
19. Star Health Discover Insurance Limited
20. Takaful Insurance of Africa Limited
21. Tausi Assurance Company Limited
22. The Heritage Insurance Company Limited
23. The Kenyan Alliance Insurance Company Limited
24. The Monarch Insurance Company Limited
25. Trident Insurance Company Limited
26. UAP Insurance Company Limited
27. Xplico Insurance Company Limited

*Source: Insurance Regulatory Authority (2022)*

## **Appendix II: Introductory Letter to Respondents**

To whom it may concern

Dear Sir/Madam

Re: **Request for assistance in Data Collection**

I am a Kenyatta University Masters of Administration (MBA) in Strategic Management candidate, currently conducting a research on the effects of fraud management strategies on the performance of medical insurance providers in Nairobi County, Kenya.

To enable me achieve the objectives of this research, I kindly request for your assistance in collecting data related to the topic through filling in the research questionnaire. The information provided shall entirely be used for academic purpose and will be treated with the highest level of confidentiality.

I thank you in advance and look forward to your assistance

Kind Regards,

**Maina, Antony Kinyuru**

Cell Phone: +254725753291

Email: - mainakinyuru@gmail.com

## **Appendix III: Research Questionnaire**

### **QUESTIONNAIRE**

**GUIDELINE:** This questionnaire is a guide to examine the effects of fraud management strategies and performance of medical insurance providers in Nairobi County, Kenya. The information gathered during this study will be used for academic purposes, and will be handled with the highest level of confidentiality possible.

The questionnaire is divided into three (3) sections. The first section contains background information about the respondent, the second section contains information on fraud management strategies and the third section contains the contribution of fraud management strategies on the performance of your organization.

I acknowledge your sincere responses to this tool.

### **SECTION A: DEMOGRAPHIC INFORMATION**

1. What is your Gender: Male ( ) Female ( )

2. How long have you worked in the organization:

Less than 1 year      [ ]                                      1-5 Years                      [ ]

5 to 10 years              [ ]                                      Above 10 years              [ ]

3. What is your cumulative experience working in the medical insurance business?

Less than 1 year      [ ]                                      1-5 Years                      [ ]

5 to 10 years              [ ]                                      Above 10 years              [ ]

**SECTION B: FRAUD MANAGEMENT STRATEGIES**

**4. FRAUD PREVENTION STRATEGIES IN MEDICAL INSURANCE**

**PROVIDERS**

Kindly indicate with an “X” or “√” the level of agreement with the statements in each section. This represents your position by rating the responses on a scale of 1-5 **where: 5=Strongly Agree, 4=Agree, 3=Uncertain, 2=Disagree and 1=Strongly Disagree.**

No	Statements	1	2	3	4	5
<b>B.11</b>	The organization's leadership and governance structures support fraud prevention.					
<b>B.12</b>	The organization has digitized its processes to prevent fraud.					
<b>B.13</b>	There exists manual and IT dependent control systems to prevent fraud					
<b>B.14</b>	The organization has established anti-fraud policies and procedures					
<b>B.15</b>	There are ethics and compliance programs designed to prevent fraud					
<b>B.16</b>	The organization conducts periodic fraud awareness trainings.					

Do you have other comments on the effect of fraud prevention strategies on the performance \_\_\_\_\_ of \_\_\_\_\_ your organization.....  
 .....  
 .....  
 .....

**5. FRAUD DETECTION STRATEGIES IN MEDICAL INSURANCE**

**PROVIDERS**

Kindly indicate with an “X” or “√” the level of agreement with the statements in each section. This represents your position by rating the responses on a scale of 1-5 **where: 5=Strongly Agree, 4=Agree, 3=Uncertain, 2=Disagree and 1=Strongly Disagree.**

No	Statements	1	2	3	4	5
<b>B.21</b>	There exists hotline platform that supports anonymous fraud reporting					

<b>B.22</b>	The internal audit activity periodically assesses fraud risk.					
<b>B.23</b>	The external auditors provide assurance on fraud risk management.					
<b>B.24</b>	The company's management regular reviews fraud detection strategies					
<b>B.25</b>	The organization utilizes data analytics to detect fraud					

Do you have other comments on the effect of fraud detection strategies on the performance of your organization:

.....  
.....  
.....  
.....

**6. FRAUD RESPONSE STRATEGIES IN MEDICAL INSURANCE PROVIDERS**

Kindly indicate with an "X" or "√" the level of agreement with the statements in each section. This represents your position by rating the responses on a scale of 1-5 where: 5=Strongly Agree, 4=Agree, 3=Uncertain, 2=Disagree and 1=Strongly Disagree.

No	Statements	1	2	3	4	5
<b>B.31</b>	The company ensures all fraud cases are thoroughly investigated					
<b>B.32</b>	Appropriate disciplinary actions are applied after fraud detection					
<b>B.33</b>	Recovery measures are initiated following a suspected fraudulent activity					
<b>B.34</b>	Law enforcement authorities are involved in prosecuting of fraudulent violations and ultimate recoveries					
<b>B.35</b>	The company ensures immediate review of controls post fraud discovery.					
<b>B.36</b>	The organization makes public disclosures of cases of fraud					

Do you have other comments on the effect of fraud response strategies on the performance of your organization:

.....  
 .....  
 .....  
 .....

**SECTION C: PERFORMANCE OF MEDICAL INSURANCE PROVIDERS**

Kindly indicate with an “X” or “√” the level of agreement with the statements in each section. This represents your position by rating the responses on a scale of 1-5 **where: 5=Strongly Agree, 4=Agree, 3=Uncertain, 2=Disagree and 1=Strongly Disagree.**

No	Statements	1	2	3	4	5
C.01	The organization is more efficient in internal processes when it prioritizes fraud management strategies.					
C.02	The customer satisfaction index has improved because of prevention, detection and response to fraud risks					
C.03	The organization is profitable when the implement fraud management strategies.					

What has been the main challenge affecting the performance of medical insurance in Nairobi County, Kenya.....  
 .....  
 .....  
 .....

**Thank you for your participation in this study.**

## Appendix IV: Data Collection Approval from Graduate School



### KENYATTA UNIVERSITY GRADUATE SCHOOL

E-mail: [dean-graduate@ku.ac.ke](mailto:dean-graduate@ku.ac.ke)

Website: [www.ku.ac.ke](http://www.ku.ac.ke)

P.O. Box 43844, 00100  
NAIROBI, KENYA  
Tel. 810901 Ext. 4130

#### Internal Memo

FROM: Executive Dean, Graduate School

DATE: 23<sup>rd</sup> August, 2023

TO: Maina Antony Kinyuru  
C/o Business Administration Dept.

REF: D53/CTY/PT/21954/2020

#### SUBJECT: APPROVAL OF RESEARCH PROJECT PROPOSAL

This is to inform you that Graduate School Board at its meeting of 16<sup>th</sup> August, 2023 approved your Research Project Proposal for the M.B.A Degree Entitled, "Fraud Management Strategies and Performance of Medical Insurance Providers in Nairobi City County, Kenya."

You may now proceed with your Data Collection, Subject to Clearance with Director General, National Commission for Science, Technology and Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed Supervision Tracking and progress report Forms per semester. The Forms are available at the University's Website under Graduate School webpage downloads.

Also, please ensure that you publish article(s) from your project before submitting it to Graduate School for examination as per the Commission for University Education and Kenyatta University guidelines.

Thank you.

**ANNBELL MWANIKI**  
**FOR: EXECUTIVE DEAN, GRADUATE SCHOOL**

c.c. Chairman, Business Administration.

Supervisors:

1. Dr. Njeri Njuguna  
C/o Department of Business Administration  
Kenyatta University

AAM/mo

## Appendix VI: Research Authorization from Graduate School



KENYATTA UNIVERSITY  
GRADUATE SCHOOL

E-mail: [dean-graduate@ku.ac.ke](mailto:dean-graduate@ku.ac.ke)

Website: [www.ku.ac.ke](http://www.ku.ac.ke)

P.O. Box 43844, 00100  
NAIROBI, KENYA  
Tel. 8710901 Ext. 57530

Our Ref: D53/CTY/PT/21954/2020

DATE: 23<sup>rd</sup> August, 2023

Director General,  
National Commission for Science, Technology  
and Innovation  
P.O. Box 30623-00100  
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR MAINA ANTONY KINYURU – REG. NO. D53/CTY/PT/21954/2020

I write to introduce Maina Antony Kinyuru who is a Postgraduate Student of this University. The student is registered for M.B.A degree programme in the Department of Business Administration.

Maina intends to conduct research for a M.B.A Project Proposal entitled, “**Fraud Management Strategies and Performance of Medical Insurance Providers in Nairobi City County, Kenya.**”






Any assistance given will be highly appreciated.

Yours faithfully,

  
PROF. ELISHIBA KIMANI  
EXECUTIVE DEAN, GRADUATE SCHOOL

AM/mb

## Appendix VII: Research License

 REPUBLIC OF KENYA	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
Ref No: <b>300220</b>	Date of Issue: <b>26/September/2023</b>
<b>RESEARCH LICENSE</b>	
	
<b>This is to Certify that Mr.. Antony Kinyuru Maina of Kenyatta University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: Fraud Management Strategies and Performance of Medical Insurance Providers in Nairobi City County, Kenya for the period ending : 26/September/2024.</b>	
License No: <b>NACOSTI/P/23/29804</b>	
Applicant Identification Number <b>300220</b>	Director General  NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
Verification QR Code	
	
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