


# Optometrists' experience of healthcare fraud, waste and abuse (FWA) and strategies to combat it



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**Background:** South African private healthcare is funded through medical aids and out-of-pocket payments. Annually, R22 billion is lost to medical fraud, waste and abuse (FWA) threatening the sustainability of healthcare delivery. Healthcare providers are often accused of unethical practices and various forms of FWA.

**Aim:** To assess the optometrists' experience of FWA and the strategies to combat FWA.

**Methods:** A quantitative study was conducted amongst optometrists using a structured questionnaire and data was analysed using descriptive statistics.

**Results:** Most (75%) respondents were aware of FWA. About 41% of respondents were audited for FWA, of whom two-thirds were Black males. The Preferred provider Negotiators conducted 27% audits, followed by Discovery (16.5%), Government Employees Medical Scheme (7.8%) and Medscheme (5%). Iso Leso and Opticlear networks conducted 3.9% each. About 7.8% were found guilty of FWA, of whom 87.5% were Black practitioners and 12.5% Indian practitioners. Claiming for spectacles but dispensing sunglasses (5.9%) and over-servicing (4%) were highest ranked offences. Common sanctions were claw-back (75%) and indirect payment (37.5%). Practitioners implement identity checks (94%–96%), coding training (89%) and accurate record keeping (93%) as anti-FWA strategies. Excessive codes and lack of standardised tariffs were challenges to fighting FWA.

**Conclusion:** Optometrists use identity checks, coding and billing training as anti-FWA strategies. Coding and billing complexities are the main sources of FWA cases. Black and Indian practitioners were more likely to be identified for FWA and found guilty than White practitioners.

**Contribution:** The study highlights the forms of FWA and suggest integration of controls to effectively curb FWA.

**Keywords:** audits; fraud triangle; fraud; waste and abuse; optometry and ethics.

## Introduction

Globally, healthcare systems are characterised by a diverse mix of publicly and privately funded services with varying levels of access, affordability and differing cost implications for both patients and third-party payers as well as different levels of care and health outcomes.<sup>1</sup> An analysis of the United States (US) national healthcare expenditures revealed that more than half of the total healthcare expenditure was provided by the private sector mainly funded by large national insurance companies.<sup>2</sup> In countries such as Denmark, Sweden and the United Kingdom, government financed 80% or more of all healthcare spending, while Germany, Japan, France and the Slovak Republic financed more than 75% of all health expenditure through compulsory health insurance.<sup>3</sup> Similarly, healthcare in the African region is funded through a mix of governments reforms, insurance and out-of-pocket payments (OPP).<sup>4</sup> In Botswana, 59% of health expenditure is funded by government while private insurance fund 39% (which provides healthcare services to only 17% of the population).<sup>5</sup>

In South Africa, private healthcare is largely pre-funded by medical aid schemes, insurance and OPP.<sup>6,7,8</sup> The World Health Organization (WHO) recommends that countries should ideally spend at least 5% of their gross domestic product (GDP) on healthcare,<sup>6</sup> while South Africa spends 8.5% of its GDP on healthcare split almost equally between the private sector, which served about 15% only in 2022,<sup>9</sup> down from 16% in 2018, of the population and the public sector (and taxpayers),

servicing the remainder of the population.<sup>6,7,10,11,12,13,14</sup> Private healthcare spending is in the region of 13% of public resources, which is higher than countries with similar economies, with lower health outcomes than those countries.<sup>15</sup> The total healthcare expenditure grew from R173.3 billion in 2018 to R233bn in 2022, covering 8.9 million beneficiaries.<sup>9</sup> Out-of-pocket payments (OPP) rose from R32.9bn of total healthcare spend in 2018 to R39.7bn in 2022.<sup>16</sup>

In the US, inadvertent or intentional fraud, waste and abuse (FWA) siphon off large sums of taxpayer monies intended for healthcare services for those truly in need, aged or disadvantaged individuals.<sup>17</sup> The true total of all FWA in the US is unquantified, but some estimate it to be 20% or greater,<sup>17</sup> while others estimate it to be between 3% and 15% of annual healthcare expenditure with less than 5% of the losses from FWA recovered annually.<sup>18</sup> The US Government Accountability Office quantified the amounts that were either incorrectly paid or should not have been paid to be in the region of \$60bn in 2014. The Federal Bureau of Investigations (FBI) have reported losses because of healthcare fraud to be ~10% of the total health care expenditure,<sup>2</sup> while Ikono et al.<sup>19</sup> estimated that 3% – 10% of annual healthcare expenditure in the US is lost, amounting to between \$100 and \$170bn annually. Healthcare fraud in the US is estimated to account for one-third of all healthcare costs.<sup>20</sup> In South Africa, the healthcare system lost up to 15% of the total annual healthcare expenditure, which was in the region of between R22bn to R28bn to FWA.<sup>9,16</sup>

The terms FWA are often used interchangeably even though there is a very clear distinction among them. Fraud is defined as a false representation of a material fact, whether by words or conduct, false or misleading allegations or concealment of that which should have been disclosed, which deceives another so that he acts, or fails to act, to his detriment,<sup>21</sup> with the main purpose of obtaining personal gain or competitive business advantage by the perpetrator.<sup>22</sup> The Association of Certified Fraud Examiners (ACFE) adds that this deliberate action is for personal enrichment,<sup>19</sup> while the Council for Medical Schemes (CMS) emphasises the resultant action of gaining unauthorised benefit or payment for which no entitlement would otherwise exist.<sup>23</sup> Waste, on the other hand, involves the public not receiving reasonable value for money in respect of any government-funded activities owing to an inappropriate act or omission by players with control over or access to government resources.<sup>21</sup> Ikono et al.<sup>19</sup> define waste as the unnecessary or wrong use of resources. Waste according to the CMS involves overuse of healthcare services leading to extra costs incurred or presenting incorrect bills usually caused by a mistake rather than illegal or intentional wrongful actions.<sup>23</sup> Abuse is defined as a behaviour that is deficient or improper when compared with behaviour that a prudent person would consider reasonable and necessary practice given facts and circumstances.<sup>21,24</sup> The CMS describes abuse as practices that are inconsistent with sound fiscal, business or medical practices and which result in an

unnecessary cost to a medical scheme or in reimbursement for services that are not medically necessary.<sup>23</sup>

Cressey's fraud theory, also known as the fraud triangle, describes the three factors that increase the risk of fraud, namely pressure, opportunity and rationalisation by the offender.<sup>21,25,26,27,28,29</sup> Firstly, pressure or motivation, the first condition to committing fraud occurs when an individual or a firm is under external pressure. Secondly, the existence of an opportunity to commit an act of fraud such as loose internal controls. Thirdly, rationalisation of the act by the individual is justifying their action by citing reasons why they committed the unethical act.<sup>21,29,30,31,32,33</sup> In the fight against FWA, opportunity is one of the elements in the fraud triangle that organisations have an ability to control.<sup>34</sup> Over the years, the study of fraud has developed and improved from just a fraud triangle, to include another variable, capability.<sup>26,27</sup> This refers to the individual's capability to commit fraud, which consists of personal traits and abilities that can determine whether fraud can happen or not in the presence of the other three conditions.<sup>35</sup> This means that many cases of fraud would not have happened if there was no person with the necessary capabilities involved.

The most common forms of FWA committed by healthcare practitioners are misrepresentation of services with incorrect tariffs or Current Procedural Terminology (CPT) codes; billing for services not rendered (phantom billing); altering claim forms and costs upwards for higher payments (upcoding and unbundling); altering of treatment dates; falsifying information on medical record documents, such as diagnostic codes (ICD10 codes) and treatment histories; billing for services that were not performed or misrepresenting the types of services that were provided; billing for supplies or products not provided and providing medical services that are unnecessary based on the patient's condition (bill padding), self-referral and kickbacks and services rendered by unqualified personnel.<sup>18,19,23,36,37,38</sup>

The fee-for-service (FFS) payment system is the leading motivation for FWA because of the temptation to perform or bill for unnecessary services by providers, while the lack of uniform standardised fraud prevention laws was the second reason, and the complexity of the medical aid claim systems was the third highest reason for fraud.<sup>2</sup> Other reasons included placing absolute confidence and faith in doctors to do the right thing thereby paying all claims in good faith provided a temptation for committing fraud, inaccurate coding and billing,<sup>2</sup> while the CMS cited the fact that various stakeholders are operating in silos as one of the reasons why FWA thrives in healthcare.<sup>23</sup>

Although non-healthcare expenditure such as administration and managed care drive up healthcare costs, increased prevalence of fraud in recent times has been added to the list of factors that drive up cost of healthcare<sup>10</sup> and is a material obstacle to achieving universal access to affordable, timely and quality healthcare.<sup>23</sup> As a direct result of FWA, medical

scheme membership has not grown over the years with more members leaving and/or downgrading and fewer new members joining, owing to unaffordability of medical aid cover.<sup>23</sup> The effects of FWA lead to premium rate increases in healthcare and across the insurance industry.<sup>39</sup> Healthcare fraud burdens honest providers, taxpayers and beneficiaries.<sup>40</sup> It is important to have a general understanding of healthcare services reimbursement and payment process in order to understand how individuals and organisations are involved in committing the most common types of fraud schemes.<sup>41</sup>

Healthcare systems are usually heterogeneous in nature. There is the caring for patients by multiple stakeholders or healthcare practitioners of all levels, who generate, store and make use of (clinical) data for a variety of reasons, including insurance claims.<sup>19</sup> These systems are inherently susceptible to FWA because of the huge volumes of data processed and money involved with inadequate monitoring and surveillance systems.<sup>19</sup> There are no mechanisms to verify that claims submitted are *bona fide* in order to prevent FWA from happening; hence all medical aid claims submitted by providers in respect of services rendered to patients are paid by schemes in good faith, in most cases without verification within 30 days.<sup>42</sup> As a result, preventing medical aid fraud becomes a challenging process because of a lack of or inadequate safeguards and controls in the system.<sup>43</sup>

Fraud detection in healthcare includes identifying fraud as soon as it is perpetrated, auditing strategies as well as data mining methods.<sup>23</sup> Artificial intelligence, distributed and parallel computing, econometrics, pattern recognition and visualisation, expert systems, fuzzy logic, machine learning, genetic algorithms and neural knowledge are some of the major approaches that are used in fraud detection.<sup>44</sup> In 2011 already, the US government's Fraud Prevention System (FPS) introduced predictive algorithms and other sophisticated analytics against all Medicare FFS claims prior to payment.<sup>2</sup> One of the popular and widely used methods involved comparisons of transactions with the benchmarks of expected occurrences and flagging all unexpected observations for investigation.<sup>44</sup> These outlier detection methods help to unravel emerging fraud schemes. More than three quarters (77%) of insurers suggested a requirement for proof of payment for expenses incurred and 46% suggested electronic tools that verify visits to validate claims, as strategies to mitigate for FWA.<sup>39</sup> Other strategies for detecting and preventing FWA include increased scrutiny of billing patterns as well as data analytics techniques,<sup>45,46</sup> whistle-blower programmes, refresher marketing programmes and updating ethical training for practitioners, as well as performing fraud risk assessment.

Not much academic attention is given to FWA in healthcare because of the dynamic nature of fraud and changes in legislation over time as well as confidentiality and privacy issues.<sup>19</sup> It is for these reasons that this study was undertaken to understand the optometric professionals' knowledge of FWA, the factors involved in committing and perpetuating FWA and how they mitigate for it in their practices. The study also sought to find out which FWA schemes are encountered

in practice and whether anyone would be predisposed to be selected for FWA audits. This will assist in bolstering the prevention, detection and reducing the incidences of FWA.

## Methods

This quantitative cross-sectional research study used a random sampling method where 206 valid responses were received from the determined sample size of 317 participants out of a database of approximately 1800 optometric professionals in private practice in South Africa. An online application (platform), accessible at <http://www.randomizer.org/form.htm>, was utilised to randomise participants. The online questionnaire hosted on a Google Forms platform enabled participation in a convenient setting using smartphones, tablets, laptops and personal computers. The questionnaire was divided into four sections. Section 1 mainly focused on the demographic information of respondents, section 2 examined the respondents' knowledge, awareness and experience of FWA, while section 3 focused on strategies in practice to detect and prevent FWA and section 4 focused on challenges of fighting FWA.

A Likert scale was used to rate declaratory statements regarding the practices, attitudes and experience of optometric practitioners about FWA, which consisted of five rating scales ranging from strongly agree to strongly disagree.<sup>47,48,49</sup> While the Likert scale was preferred, where it did not cater for all scenarios, yes or no or true or false options were used.<sup>49</sup>

Data were exported and organised for processing and analysis with Statistics Package for Social Sciences (SPSS) version 26 analysis software. Descriptive statistics and percentages for each variable of interest were used for interpretation.<sup>50</sup> All questions were piloted with a small group of 10 practitioners before the main research to assess their value, validity and reliability with feedback received factored in on the final questionnaire.<sup>47,48,50</sup>

## Ethical considerations

Ethical clearance was obtained from the University of KwaZulu-Natal Humanities Ethics Committee (HSS/0228/018M) and informed consent was obtained from the participants where they were assured of confidentiality and anonymity of their participation.<sup>51</sup>

## Results

### Demographic characteristics

The median age was 38 years with the interquartile range of 5 years (i.e. from 38 to 33 years). The distribution of the respondents' age groups is shown in Figure 1.

Most respondents (62.1%) were female. Black practitioners constituted 47.5%, followed by 28.2% of Indian practitioners and 24.3% White practitioners, likely consistent with the

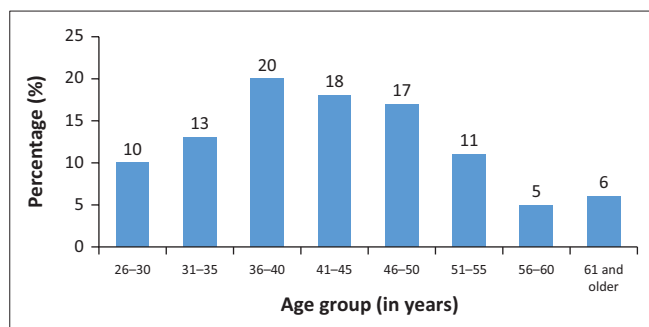


FIGURE 1: Practitioner age group distribution.

demographics of the country. Among the male respondents, most were Black practitioners at 70.3%, whereas for females 82.1% and 76% were Indian practitioners and White practitioners, respectively. There was a significant association between the gender and the race of the respondents ( $P = 0.000$ ) and the large effect size (Cramer's  $V = 0.349$ ) suggested a strong association.

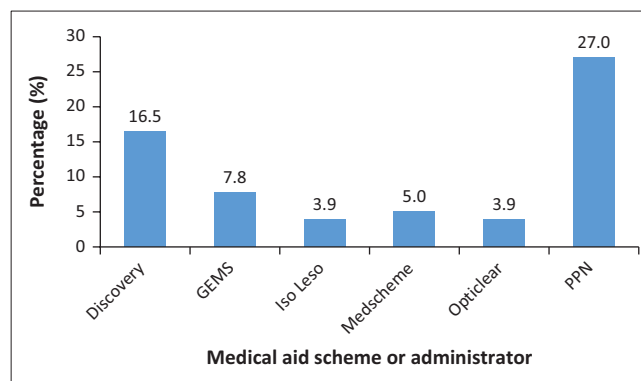
About 60.2% of the respondents were members of the South African Optometric Association (SAOA). Most respondents (84.5%) were in solo or independent practice, while 10.7% were in the franchise business model and 4.9% were in group practice. Only 1% of the optometric practices outsourced their medical aid claims and submission to a claims bureau and 99% of practices were responsible for their medical aid claims and submissions in-house, performed by their either frontline staff or the optometrist(s) or dispensing optician(s) in practice.

Gauteng province had the most participants (46.6%), followed by KwaZulu-Natal (25.2%), Limpopo (11.7%), Mpumalanga and Eastern Cape (4.9% each), Free State (2.9%) and North West and Western Cape provinces (1.9% each).

### Practitioner knowledge and experience of fraud, waste and abuse

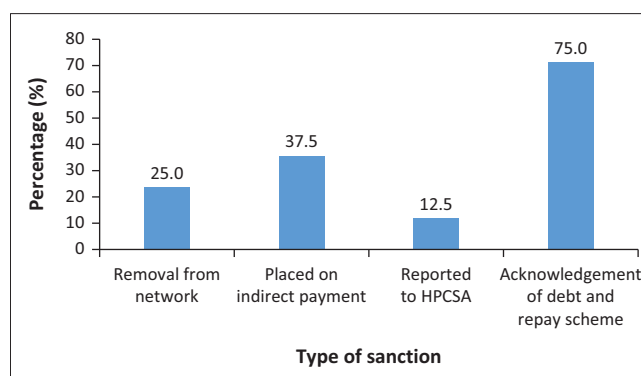
Three quarters (75%) of the respondents were aware of FWA in healthcare, 50% of whom were SAOA members and 25% were non-members. The remaining 25% comprised of 11% SAOA members and 14% non SAOA members. Of the 11% SAOA members, 5% were not aware of FWA, while 6% were unsure if they knew of FWA, whereas, of the 14% non SAOA members, only 3% did not know about FWA, while 11% were unsure if they knew about FWA.

Medical schemes or their appointed administrators had audited 41% of the respondents for FWA. Of these audits, 59.5% of the audits were random audits, 38% were practice profile audits while 2.5% were classified as peer review audits. About 43.5% SAOA members and 36.6% non-SAOA members were audited for FWA, of which both are close to the percentage of the audited respondents at 41% ( $P = 0.320$ ), with a small effect size of 0.069. Approximately 31% of practitioners were audited by more than one medical aid scheme or administrator. Of the 41% respondents who were audited for FWA, 63.4% were Black practitioners. There is a statistically significant association between race and being audited ( $P = 0.000$ ) with a moderate effect size (Cramer's  $V = 0.274$ ).



GEMS, Government Employees Medical Scheme; PPN, Preferred Provider Negotiators.

FIGURE 2: Distribution of audit activity by medical aid schemes.



HPCSA, Health Professions Council of South Africa.

FIGURE 3: Sanctions against practitioners found guilty of fraud, waste and abuse.

Figure 2 shows the schemes that conducted FWA audits on practitioners.

Less than a tenth, 7.8%, of respondents were found guilty of one or more forms of FWA. There was a significant association between being audited and being found guilty of FWA ( $P = 0.000$ ), with a strong association and moderate effect size of 0.276. A high percentage (62.5%) of males who were audited were found guilty of one or more forms of FWA. There was a significant association between gender and being found guilty of FWA ( $P = 0.030$ ) with a moderate effect size (Cramer's  $V = 0.152$ ). About 87.5% of Black practitioners were found guilty of FWA, while 12.5% of Indian practitioners were guilty and no White practitioners were found guilty. There was a significant association between race and being found guilty ( $P = 0.003$ ) and a moderate relationship (Cramer's  $V = 0.241$ ). Table 1 lists the forms of FWA for which practitioners were found guilty.

Figure 3 shows the sanctions against practitioners who were found guilty of one or other forms of FWA.

### Practitioner practices on fraud, waste and abuse

Practices that optometric professionals have put in place to detect and prevent FWA in their daily routine are depicted in Table 2, whilst Table 3 lists factors contributing to and challenges faced by practitioners in dealing with FWA.

**TABLE 1:** Types of fraud, waste and abuse practitioners for which practitioners were found guilty.

Types of fraud	Number (N)	%
Prescribing unnecessary treatment/over-servicing	8	4.00
Excessive mark-up on frames	4	2.00
Tariff code manipulation/unbundling	2	1.00
Split billing	2	1.00
Invoicing of wrong dependent	2	1.00
Charging for services not rendered	2	1.00
Treating non-covered patient using covered dependent benefits	2	1.00
Offering patients cash in exchange for their medical aid benefit	2	1.00
Charging for spectacles in lieu of sunglasses provided	12	6.00

Sensitivity and specificity of the tests and variables were performed using a logistic regression model that assessed the adequacy of the model, and the goodness of fit test using the Omnibus test of model coefficients showed high significance with  $P = 0.001$ . The Hosmer–Lemeshow test also supported this model as the reliable model fit with a high significance value of  $p = 0.132$ . The model found that the observed No responses and predicted No responses scored a 78% while the observed Yes and predicted Yes responses were 52%. The overall correctly classified percentage is 64%. The odds ratio for both the White and Indian respondents to be selected for audit are less than 1.00, whereby the odds of a White of being audited are lower than of an Indian practitioner and even

**TABLE 2:** Strategies used to reduce fraud, waste and abuse with mean Likert scores as counts and percentages.

Description of the activity	Practitioner responses					Total	Means	s.d.
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree			
Our practice policies and procedures require Patients to present an ID document and medical aid card prior examination								
Count	2.0	0.0	10.0	54.0	140.0	206	4.60	0.675
Percentage	1.0	0.0	5.0	26.0	68.0	100	-	-
Our protocol requires that the practice verifies that presenting medical aid patient is the rightful member or beneficiary and keeps proper records before examination								
Count	0.0	0.0	8.0	58.0	140.0	206	4.64	0.556
Percentage	0.0	0.0	3.9	28.1	68.0	100	-	-
The practice conducts training to the staff to ensure adequate knowledge on code rules and protocols								
Count	0.0	4.0	18.0	78.0	106.0	206	4.39	0.729
Percentage	0.0	2.0	8.7	37.9	51.4	100	-	-
Our practice makes out a pro forma invoice or quotation to verify that appropriate and correct tariff codes are used as fraud, waste and abuse detection mechanism								
Count	2.0	22.0	48.0	56.0	78.0	206	3.90	1.059
Percentage	1.0	10.6	23.3	27.2	37.9	100	-	-
Our practice compares the invoices to the lab orders in order to ensure that the services or products billed for are the exact same ones rendered, ordered and dispensed.								
Count	0.0	8.0	28.0	70.0	100.0	206	4.27	0.840
Percentage	0.0	3.9	13.6	34.0	48.5	100	-	-
Our practice has an enabling culture to identify and report fraud, waste and abuse activities								
Count	0.0	12.0	64.0	66.0	64.0	206	3.88	0.919
Percentage	0.0	5.8	31.1	32.0	31.1	100	-	-
Our practice maintains an accurate, un-tempered medical records								
Count	0.0	0.0	10.0	68.0	128.0	206	4.57	0.586
Percentage	0.0	0.0	5.0	33.0	62.0	100	-	-
Our practice engages in fraud, waste and abuse campaigns and other ethics-related activities								
Count	38.0	34.0	66.0	36.0	32.0	206	2.95	1.306
Percentage	18.5	16.5	32.0	17.5	15.5	100	-	-
Our practice has adequate resources available to combat fraud, waste and abuse								
Count	8.0	22.0	36.0	80.0	60.0	206	3.79	1.097
Percentage	3.9	10.7	17.5	38.8	29.1	100	-	-
Our practice has internal controls aimed at detecting and curbing fraud, waste and abuse								
Count	2.0	16.0	42	82.0	64.0	206	3.92	0.954
Percentage	1.0	8.0	20.0	40.0	31.0	100	-	-
Our practice has a policy on that does not allow for altering and tempering of medical records								
Count	2.0	2.0	34.0	76.0	92.0	206	4.23	0.829
Percentage	1.0	1.0	16.5	36.9	44.6	100	-	-

s.d., standard deviation.

**TABLE 3:** Factors contributing to fraud, waste and abuse.

Description of the activity	Practitioner responses							
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Total	Mean	s.d.
Coding errors and irregularities because of the extensive number of codes and code combination								
Count	8.0	10.0	68.0	78.0	42.0	206	3.66	0.983
Percentage	3.9	4.9	33.0	37.8	20.4	100	-	-
Application of coding rules is responsible for some of the fraud, waste and abuse cases								
Count	8.0	14.0	72.0	76.0	36.0	206	3.57	0.984
Percentage	3.9	6.8	34.9	36.9	17.5	100	-	-
Medical schemes regulations require practitioners to make claims after delivery of goods constrain our operation								
Count	10.0	24.0	32.0	68.0	72.0	206	3.82	1.175
Percentage	4.9	11.7	15.5	33.0	34.9	100	-	-
A lack of single tariff leading to each medical aid scheme having their own tariff (multiple tariffs) leads to balance and split billing								
Count	6.0	24.0	42.0	68.0	66.0	206	3.80	1.103
Percentage	2.9	11.7	20.4	33.0	32	100	-	-
Patients coerce practitioners to offer them cash in return for their medical aid								
Count	36.0	50.0	48.0	40.0	32.0	206	2.91	1.326
Percentage	17.5	24.3	23.3	19.4	15.5	100	-	-
A lack of platform for practitioners to report patients who commit fraud waste and abuse								
Count	8.0	10.0	36.0	80.0	72.0	206	3.96	1.035
Percentage	3.9	4.9	17.5	38.8	34.9	100	-	-

s.d., standard deviation.

lower for Black practitioner. The White practitioner is 0.268 times likely to be audited compared to the Black practitioner and 0.340 times for an Indian practitioner to the Black practitioner.

## Discussion

The distribution of optometric professionals in this study is consistent with the results of other studies that show that Gauteng province has the highest number of optometric professionals.<sup>52,53</sup> With almost all (99%) practices processing and submitting claims to medical schemes in-house, any human error or deliberate action that can lead to FWA can only be blamed on the practice itself.

The results of this study suggest that FWA is a well-known phenomenon in healthcare and optometry in particular with most respondents (75%) reporting that they were aware of it and 41% of them having been audited by one or more medical scheme or administrator. Fraud, waste and abuse in healthcare is a growing phenomenon worldwide just like other forms of white-collar crimes, such as money laundering, e-commerce and insurance fraud,<sup>44</sup> and this study found that 7.8% respondents were found guilty of one or more forms of FWA from the various audits and utilisation verification that administrators of the schemes perform on the practices.

Although being a member of the SAOA had no association to selection for FWA audit, race and gender had significant association with being audited and being found guilty of one or more forms of FWA. The study found that Indian

practitioners are 0.340 times likely to be audited and 0.268 times for White practitioners compared to Black practitioners. This means that the odds of Black practitioners are 2.94 times and 3.73 times higher to be audited for FWA compared to Indian and White practitioners, respectively. Although no evidence of racial bias was found on the algorithms used to identify FWA by medical schemes during the Section 59 investigation into allegation by Black practitioner groups, the commission of inquiry found that Black practitioners are 1.5 times to 2.5 times (across different disciplines) more likely to be identified for FWA audit and 1.4 times more to be found guilty of FWA.<sup>54</sup>

Practitioners were mainly found guilty of charging or billing for services not rendered, claiming for spectacles when sunglasses were provided, over-servicing and split billing, these being consistent with early studies.<sup>13,23,55</sup> A 2015 study on the ethical transgressions of practitioners registered with the Health Professions Council of South Africa (HPCSA) showed that the profession of optometry ranked third highest in offences after psychology and medicine.<sup>56</sup> Most (51%) ethical conduct cases recorded (fraud, negligence, incompetence and unprofessional misconduct) results from coding and billing.<sup>56</sup>

Over half (56%) of respondents believed that many of the coding errors and irregularities are a result of the extensive number of codes and code combinations. Coding is a complicated system and submission of claims to medical schemes is very important.<sup>57,58</sup> Third-party payers, medical aid

schemes, healthcare providers and provider groupings developed and maintain a comprehensive, standardised system for billing known as coding.<sup>59</sup> The SAOA clinical standards of care are used as a base for understanding billing for services and SAOA coding system is a widely used comprehensive set of codes, yet very extensive. There are thousands of codes that are used for billing of goods and services with various coding combinations. These clinical standards are a collection of clinical protocols that link to the rules that are followed when coding for services. The intricate link between tariff codes and coding with reimbursement usually leaves room for dishonest providers to commit fraud schemes.<sup>57</sup>

In this study, 90% of the practices maintain accurate and unaltered medical records. This is a very important aspect as practitioners are required, by HPCSA regulations, to keep a medical record safe for a period of 6 years, up to 21 years of age in the case of minor children and for lifetime in the case of mentally handicapped individuals.<sup>60</sup> Maintaining accurate medical records and adopting electronic health records (EHRs), and maintaining not only adequate but accurate accounting records are basic requirements to meet for widely accepted standards of accountability.<sup>61,62</sup> Furthermore, an inability of an organisation to maintain adequate records increases its risk of being subject to fraud, and if an entity is unable to produce adequate supporting documentation in the process of an audit involving healthcare expenditures, such an entity is more likely to be found guilty of FWA.

Medical schemes regulations provide that a patient is only billed or charged for goods and services after they have been delivered.<sup>42</sup> In the business of optometry, spectacle lenses are custom made and some payment or guarantee is required before they are ordered in order to avoid costly cancellations. Therefore, any claim to a medical aid scheme before the spectacles are supplied may be construed to be or result in a form FWA. The complexity of the medical aid claim systems was placed as the third highest reason for fraud.<sup>2</sup> Although medical scheme regulations as well as the Competition Act allow for each medical scheme to have and use their own tariffs, the lack of a single tariff has been cited as one of the contributing factors, according to 65% of practitioners, which lead to balance and split billing that is considered FWA because one medical scheme tariff does not necessarily apply to other schemes. It should be observed, however, that when a provider enters into a participating agreement with medical aid scheme, the provider may agree to abide by the reimbursement rates set by the scheme and submits claims for reimbursement directly to the scheme, whereas, if the provider is not participating in scheme, then the provider sends the bill to the patient that he or she has to pay beforehand and then he or she requests reimbursement from medical aid scheme.<sup>20</sup>

Sound internal controls in a consolidated business model, resources together with processes, procedures, employee initiatives and data processing are critical in preventing FWA, in particular, the use of information technology.<sup>31,63</sup>

The use of information technology can prevent medical identity theft, by incorporating biometric technology to verify patient identity,<sup>64,65</sup> while the use of EHRs can assist with combating FWA.<sup>61</sup> Sixty-eight per cent of practices indicated that they have adequate resources to deal with FWA. They also indicated that there are internal controls within their organisation to detect and identify as well as curtail the scourge of FWA, with 82% of practices not allowing altering and tampering with medical records.

There are three general strategies used to deter providers from committing FWA that fall under general category of crime prevention, namely punitive, defence and interventionist methods.<sup>29</sup> Punitive methods involve increasing punishment in order to make individuals more fearful to commit fraud, while the defence method concentrates on limiting opportunities for people to commit fraud. The interventionist method is considered the most effective FPS and is based on observation that the two first methods are not effective, which suggests that fraud rates can be reduced significantly by identifying the conditions that lead to fraud and then changing and/or eliminating them.<sup>29</sup> The most common sanctions against practitioners found guilty was clawing back paid benefits and making the practitioner sign an acknowledgement of debt and repaying the money unduly received to the medical scheme (75%) followed by being placed on indirect payment (37.5%).

Fraud prevention requires some controls and accurately processing claims often takes time and slows down claims processing and hinders system productivity.<sup>44</sup> On the other hand, medical claims processing on time enables faster payment turnaround, which is important as regulatory authorities prescribe that providers are reimbursed for legitimate and *bona fide* claims within 30 days,<sup>42</sup> and therefore, as a result of the high volumes of claims, no thorough evaluation of these claims as fraud control measures is performed.

Only about a third (34%) of practices engage in FWA campaigns as well as ethics-related activities aimed at preventing FWA. The practitioners attitude rating on conducting FWA campaigns and ethics activities (at 2.95) fell just below the average rating of 3. Fraud, waste and abuse is an ethical issue that has gained prominence in the recent past, and ethical practice needs to be infused in the minds of practitioners if the sector is serious and intentional about a fight against FWA. However, 61% of the respondents work in organisations that have a good culture that allows for the organisation to report and deal with FWA. Controls must be people centred rather than systems of policy manuals and forms, and therefore organisations must consider implementing a written code of ethics that all employees, managers and members sign.<sup>63</sup> Organisations can put in place internal controls as a strategy to prevent FWA, and these consist of organisational elements like resources, processes, organisational culture and tasks that cumulatively assist in achieving organisational goals and objectives.<sup>66</sup> In South Africa, less than a third of medical schemes (29.4%)

estimate the quantum of money lost because of FWA, and these estimates are a basis for deciding how much can be invested in efforts to mitigate and counter these practices.<sup>67</sup>

The fight against FWA can be hindered by personnel who may resist the adoption and implementation of FWA reduction efforts within an organisation, because of their desire to protect income streams arising from fraudulent activity,<sup>68</sup> while a lack of fraud control education and training is cited as contributing factors to healthcare providers to FWA.<sup>29,66</sup> Up to 95% of practices verify that the presenting patient is the *bona fide* member or beneficiary of the medical scheme by insisting on patients presenting an identity document (ID document) and a medical aid card. This is in view of the fact that medical identity theft is a growing form of fraud that occurs in healthcare facilities where an imposter is able to or enabled to obtain medical treatment that they are not entitled, thereby defrauding the healthcare provider, defraud patients of their benefits, insurers and government programmes.<sup>69</sup> This is achieved usually by someone obtaining details of a medical scheme beneficiary and without their consent fraudulently obtaining medical treatment that they are not entitled to.<sup>19,36,37</sup>

Insufficient fraud control education and training for healthcare providers are contributing factors to healthcare FWA to the extent that a coordinated training with emphasis on ethical practice is recommended.<sup>66</sup> The majority (90%) of the practices conduct staff training on coding, including protocols that govern the billing to ensure accurate claims are made and 62% of them issue a quotation to the patient before invoicing to verify and ensure that correct tariff codes have been used by discussing with the patient the details of the services rendered and products dispensed and getting consent to proceed. In 79% of practices, verifying that invoices issued correspond with services and products dispensed was practiced to mitigate for FWA before it occurred. The majority of respondents (74%) felt that the effort of fighting FWA is hampered by the lack of a platform to report patients who commit fraud or coerce practitioners to commit fraud, as a result of which patients move on from one practitioner to another, referred to as hit and run phenomenon.<sup>19</sup> Up to 41% of practitioners reported that patients coerce them to offer them cash in return for their medical aid benefit.

A comprehensive study performed by the ACFE found that confidential reporting mechanisms usually reduce fraud losses dramatically.<sup>43</sup> The use of whistle-blower programme, hotlines and anonymous tip-offs, continued professional development such as refresher marketing programmes and updating ethic training as well as performing fraud risk assessment can be used as ways of detecting and mitigating for FWA.<sup>29,70,71</sup>

## Conclusions

This study underscores the critical need for comprehensive strategies to combat FWA within the healthcare and optometry sectors. The findings reveal that while practitioners

are aware of FWA and have implemented various controls and safeguards, significant challenges remain in effectively mitigating these issues. Additionally, practitioners have an appreciation of the existence of FWA and to a degree have controls, safeguards, resources, policies and procedures as strategies in place to detect and prevent it. However, to strengthen these efforts, organisations must adopt deliberate and comprehensive strategies. These should include written policies and procedures, sound internal controls and a healthy and enabling organisational culture. The integration of information technology, such as biometric technology and EHR systems, as well as ongoing training and reskilling of staff, particularly in coding and ethical practices, are an essential component of a robust anti-FWA strategy.

Coding and billing complexities are at the centre of many FWA cases, driven by pervasive unethical behaviour. The lack of a standardised medical aid tariff exacerbates these issues, contributing to a high proportion of coding and billing-related FWA cases. The FFS reimbursement model also contributes to these problems, indicating a need for the sector to explore alternative reimbursement models that can sustain practice operations while combating FWA. Effective FWA prevention requires stakeholders, including practitioners, to be intentional about their strategies. This involves not only detecting and preventing FWA but also creating an enabling environment for reporting it. Allocating adequate resources towards these efforts is vital. The study highlights that the lack of disincentives for medical scheme members who commit fraud undermines the fight against FWA, as these individuals are not held accountable and can easily move on to other practitioners. Encouragingly, practitioners in this study utilised various methods to detect and prevent FWA, such as maintaining accurate medical records and conducting staff training on coding protocols. However, the study also points to the need for greater emphasis on ethics-related activities and campaigns. Only about a third of practices engage in such initiatives, which suggests that more effort is needed to foster a culture of ethical practice.

A multi-faceted approach is thus required to effectively combat FWA in the healthcare and optometry sectors. This approach should involve punitive, defensive and interventionist strategies, addressing the root causes of fraud and fostering a transparent and accountable healthcare system. By adopting comprehensive anti-FWA strategies and creating an enabling environment for ethical practice, the sector can make significant strides in reducing the incidence of FWA, ultimately leading to more equitable and effective healthcare delivery. This study serves as a call to action for healthcare providers, policymakers and administrators to work collaboratively towards achieving this goal. It is concerning that the audits have revealed higher incidence of findings against Black and Indian compared to White practitioners. A further qualitative study on these reported cases may unearth the motivation and characteristics of FWA perpetrators with the view to develop anti-FWA profile.



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## Data availability

Data collected has been stored and kept safely protected, accessible by the authors.

## Disclaimer

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