

# Eye care services and benefits paid by medical schemes in South Africa



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**Background:** Vision impairment (VI) affects people worldwide, and demographic factors like age are significantly linked to VI. Routine eye exams and other eye care treatments can detect and prevent common eye illnesses. However, many lack access to these services.

**Aim:** This study's major objective was to analyse the distribution and funding of eye care services by medical schemes in South Africa.

**Setting:** The study was conducted in the private sector in South Africa for benefits paid by medical schemes to optometrists, ophthalmologists and orthoptists.

**Methods:** A retrospective, longitudinal study of eye care services claim data from the Council for Medical Schemes (CMS) annual reports. The review period was 2020, and scheme-level data were gathered and analysed at the aggregated rather than benefit option level.

**Results:** In 2020, eye care benefits comprised 3.1% of total benefits paid; this proportion remained at the same levels throughout the review period. Closed schemes spent more per beneficiary per year than open schemes for optometrists, orthoptists and ophthalmologists. Self-administered schemes had 11% copayment for ophthalmology services, whereas outsourced schemes had less than 10%.

**Conclusion:** Optometrists had higher copayments than ophthalmologists and orthoptists. Medical schemes with capitated models had a lower average expenditure than other types of models, and the operating model affected expenditure; self-administered schemes spent less on optometry benefits when adjusted for beneficiaries. The study suggests reviewing eye care benefit funding models (risk vs savings), administration activities and managed care models for cost savings and health quality.

**Contribution:** This research contributes to the discussion and implementation of universal health insurance coverage through national health insurance in South Africa. The research shows that there are not enough eye care services in the public sector and that there are different funding gaps in the private sector.

**Keywords:** eye care; medical schemes; optometry; ophthalmologists; visual impairment; benefits.

## Introduction

### Eye care services

Blindness and other types of visual impairment (VI) are serious public health challenges, particularly in nations with incomes that fall between the lowest and highest quartiles. There is no uniform distribution of the burden of VI across the globe.<sup>1</sup> Recent World Health Organization (WHO) statistics estimated that 2.2 billion people worldwide have near or far VI (world population: approximately 8bn).<sup>1</sup> The least developed countries have the highest burden, with most of the world's burden of VI. According to Enactus, 90% of people with vision impairment are in low- and middle-income countries.<sup>2</sup> Low- and middle-income countries' high levels of VI are because of an uneven distribution of eye care service providers and surgeons, which is even more prevalent in South Africa. Lecuona stated that the ratio of eye surgeons to the population was 1:505721, significantly lower than the indicated ratio of 1:250000.<sup>3,4</sup> Common eye disorders can be identified and prevented with the help of appropriate eye care services, such as routine eye examinations.<sup>5,6,7</sup> As a performance metric for the visual health system, the utilisation of eye care services is a reflection of the efficacy with which healthcare services are covered.<sup>8</sup> There is a significant gap in the quality of care (between the services required by patients and those supplied by healthcare facilities and workers).

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## Optometrists

Optometrists are primary healthcare providers responsible for eye examination to detect visual abnormalities and promote clear vision.<sup>9,10</sup> Studies by Ehrlich et al.<sup>11</sup> and Elliott et al.<sup>12</sup> corroborate this, showing that low optometrist-to-patient ratios in low-income nations were highly associated with more blindness and VI. Similar disparities are notable when looking at the private sector versus public sector and urban relative to rural areas.<sup>13,14,15</sup> In their study, Gilbert and Patel<sup>16</sup> highlight inadequacies in the number of eye care professionals (ECP), their disproportionate distribution across nations and the absence of much-needed eye care facilities in rural areas. In South Africa, optometry is skewed towards the private sector, with more than 90% of the over 3000 registered optometrists serving fewer than 16% of the population.<sup>13,17,18,19</sup> The scope of practice for optometrists has since expanded with the inclusion of diagnostic and some ocular therapeutic treatments recently.<sup>20,21</sup> Under section 22a of the *Medicines and Related Substances Act, 1965 (Act no. 101 of 1965)* ('the MSRA'), the Ministry of Health updated Schedules 1 to 4 to allow optometrists to prescribe and supply certain ocular medicines.<sup>22</sup>

## Ophthalmologists

Ophthalmologists are medical service providers specialising in medical and surgical treatment of eye conditions.<sup>23</sup> According to the most recent statistics, there are around 2.7 ophthalmologists per million of the population in sub-Saharan Africa (SSA); therefore, there is a pressing need to train even more of these medical professionals.<sup>24</sup> According to the Ophthalmological Society of South Africa (OSSA), there are approximately 230 members, while the Health Professionals Council of South Africa (HPCSA) claims that there are 593 ophthalmologists registered.<sup>17</sup> No reliable and consistent statistics are available on the overall number of ophthalmologists practising in South Africa or the locations of their practices.<sup>25</sup> From a recent study on funding health care benefits by medical schemes, approximately 511 ophthalmologists claim from medical schemes.<sup>26</sup> The latter provide further credence to the statistic indicating that the private sector employs 85% of active ophthalmologists (again, distribution is skewed to the private sector).

## Orthoptists

Orthoptists specialise in diagnosing and treating ocular strabismus, eye movement and binocular vision disorders.<sup>27</sup> The evidence from the Council for Medical Schemes (CMS) demonstrates that these medical service providers have a low base of claims, with fewer than 10 orthoptists currently practising in South Africa.<sup>28,29</sup>

## Background

### Funding models of eye care services by medical schemes

The funding of eye care services in the private sector continues to be a concern for several scheme beneficiaries.

This is because medical schemes typically only cover fundamental vision requirements, such as eye exams, lenses and a basic frame, which restricts the coverage available to members.<sup>26,30,31</sup>

## Administrators

Administration functions for medical schemes are typically outsourced to third-party administrators, managed care organisations (MCOs) and brokerage firms.<sup>32</sup> Three administrators, namely Discovery Health (Pty) Ltd (19 schemes), Medscheme Holdings (Pty) Ltd (14 schemes) and Metropolitan Health Corporate (Pty) Ltd (1 scheme), account for 80% of the market share in terms of average beneficiaries, while 15 self-administered schemes account for 10% of the market as depicted in Table 1.<sup>19</sup> Because of the highly concentrated market for administration services in medical schemes, wherein a single administrator contracts with multiple medical schemes that differ in terms of beneficiaries, number of benefit alternatives offered, size and tariffs, on the other hand, optometric services are funded through MCOs and networks.

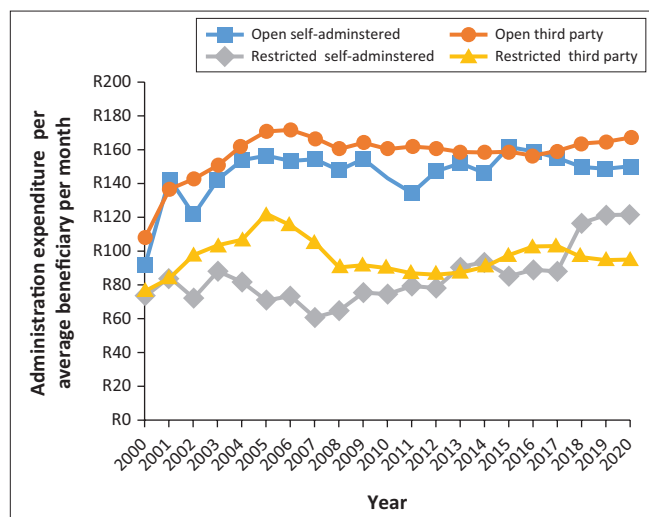
## Administration expenses

According to the CMS,<sup>19</sup> administration expenditure, which accounts for most of the non-health care expenses in medical schemes, increased by 4% from 2019 to 2020, reaching R14.35bn. Open schemes spend increase was 3%, to R9.62bn in 2019, whilst restricted scheme administration costs increased by 5%, from R4.49 bn in 2019 to R4.73bn in 2020. In 2020, 6.4% of gross contribution income (GCI) was spent on administration, down from 6.7% in 2019. A total of 14 schemes (five open and nine restricted schemes, accounting for 11% of average beneficiaries) incurred more than 10% of GCI in 2020.<sup>19</sup> Figure 1 demonstrates that trend analysis of open self-administered and restricted self-administered schemes providing administration services in-house, while open third-party and restricted third-party outsource administration functions over time. The data shows that

**TABLE 1:** Administrator market for medical schemes.

Administrators	Number of schemes administered	Market share – Ave. beneficiaries (%)
Discovery Health (Pty) Ltd	19	34.6
Medscheme Holdings (Pty) Ltd	14	30.2
Metropolitan Health Corporate (Pty) Ltd	1	15.5
Self-administered schemes	15	9.6
Momentum Health Solutions (Pty) Ltd	10	4.7
Professional Provident Society Healthcare Administrators (Pty) Ltd	2	1.4
Universal Healthcare Administrators (Pty) Ltd	7	1.4
Momentum Thebe Ya Bophelo (Pty) Ltd	6	1.0
3Sixty Health (Pty) Ltd	1	1.0
Agility Health (Pty) Ltd	1	0.4
Liberty Health Administration (Pty) Ltd	1	0.1

Source: Adapted from Council for Medical Schemes (CMS). Industry report [homepage on the Internet]. Pretoria: Council for Medical Schemes; 2021. Available from: <https://www.medicalschemes.co.za/industryreport2020/>.<sup>19</sup>



Source: Council for Medical Schemes (CMS). Industry report [homepage on the Internet]. Pretoria: Council for Medical Schemes; 2021. Available from: <https://www.medicalschemes.co.za/industryreport2020/>

**FIGURE 1:** Gross administration expenditure (GAE) (2000–2020) in 2020 prices.

restricted schemes paid a lower amount for administration than open schemes. However, in 2017, an observable trend occurred in which self-administered schemes paid higher for non-health benefits than restricted third party-administered schemes. However, third party-administered schemes incurred higher non-health care administration costs than self-administered open schemes. This pattern emerged in 2000 and persisted for the review period for open schemes administered by third parties, except for 2014 and 2015. Except for 2013 and 2014, and from 2018 to 2020, restricted schemes administered by third parties incurred higher administration costs than self-administered schemes.

## Networks

Medical schemes bargain with service providers for lower consultation and dispensing rates through a predetermined network of service providers.<sup>32,33</sup> The implementation of minimum adherence standards that service providers must meet to be considered for inclusion in a medical scheme's network is another way to guarantee that members will receive quality medical attention from licensed medical experts.<sup>33</sup> An agreement between a medical scheme and a third party can be reached through other models, such as the health maintenance organisations (HMOs), which call for referrals from primary care providers and do not cover out-of-network costs for services that are not related to an emergency.<sup>34</sup> Health maintenance organisations given by employers typically have less stringent rules for cost-sharing (such as deductibles, copayments and out-of-pocket [OOP] maximums).<sup>35,36</sup> Other models include preferred provider organisations (PPO), which are the most common in medical schemes.<sup>35,36</sup> Preferred provider organisation models are those in which a member pays a lower rate for the services of providers on the network. This is because only a few medical schemes offer an HMO model, and these schemes are primarily found in the mining industry and are mainly employer-based schemes such as Platinum Health Medical Scheme.<sup>37,38</sup>

## Optometry benefit management service providers and networks

When medical scheme members use out-of-network providers, they are often exposed to higher cost-sharing or OOP payments than when they utilise in-network providers.<sup>39</sup> Studies have shown that members with a tiered network incurred lower total adjusted medical spending per quarter, translating to a decrease in expenditures of approximately 5%.<sup>40</sup> KFML Holdings Pty (Ltd) owns one of the largest optometric networks, the Preferred Provider Negotiators (PPN), and chain service providers including Spec-Savers.<sup>41</sup> OptiClear provides optometry clearing and benefit management services to about 11 medical schemes, which account for 2.7 million lives.<sup>19,42</sup> Preferred Provider Negotiators is responsible for approximately 11 medical schemes, accounting for 1.9m lives.<sup>19,41</sup> Iso Leso Optic is responsible for about eight schemes and accounts for 577 000 lives (excluding Discovery Key Care membership).<sup>19,43</sup> The demographic profile of the 12 schemes is depicted in Figure 2<sup>19</sup> for the 2020 benefit cycle.

The weighted average age was younger for OptiClear at 32 years; PPN's demographic profile was 33 years, while Iso Leso Optic's age profile was 34 years. All optometric networks, PPN, Iso Leso Optics and OptiClear, are currently not accredited by the CMS for managed care services, potentially reducing the level of protection afforded to medical scheme members as issues pertaining to market behaviour are concerned.<sup>17</sup> In 2022, the CMS published a framework to accredit optometry benefit management organisations.<sup>44</sup>

## Orthoptists

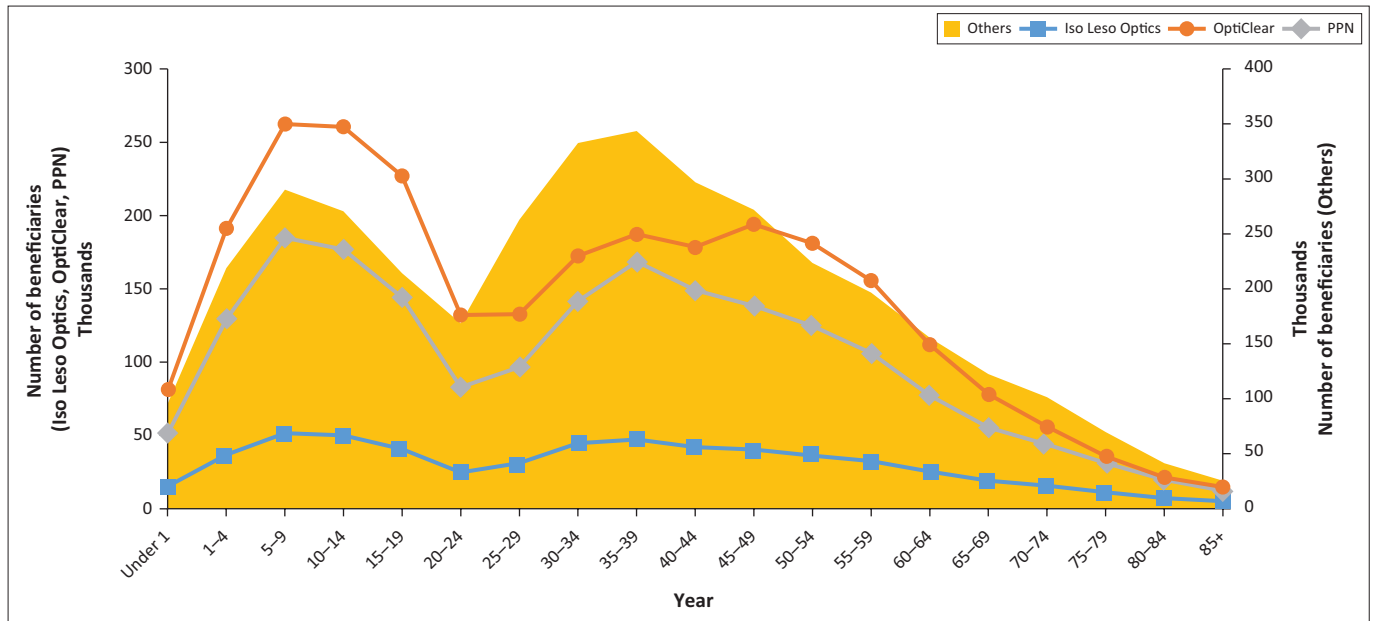
In South Africa, there are essentially no orthoptist networks because of the fact that there are just nine individuals registered with the HPCSA.<sup>28,29</sup> There is also evidence that most of them have emigrated, and of the nine registered orthoptists (five orthoptists in Gauteng, three in the Western Cape and one in KwaZulu-Natal as of 2020), only a few are claiming from medical schemes.<sup>26,28,29</sup> In comparison, approximately 100 orthoptists are registered to practise and are employed in the UK.<sup>45</sup> Another aspect contributing to this situation is that there are currently no training facilities in South Africa for the discipline.<sup>28,29</sup>

## Out-of-benefits upgrades

Medical schemes provide optical benefits, mainly for basic lenses and frames.<sup>30</sup> These are funded to a specific limit and are also a function of the benefit option.<sup>46</sup> Should members opt for a frame higher than the medical scheme covered, the member becomes liable for the difference in the form of a copayment.

## Objectives

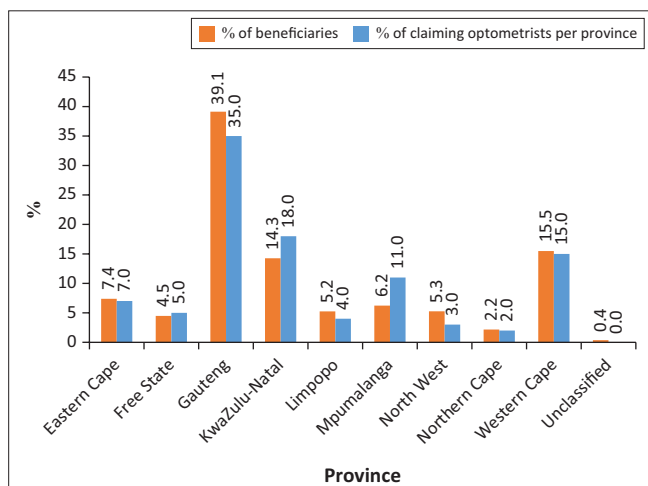
The primary aim of this study was to explore funding models of eye care services by medical schemes in South Africa.



**FIGURE 2:** Distribution of optic service providers membership in 2020, generated by the researcher from Preferred Provider Negotiators (PPN),<sup>41</sup> OptiClear,<sup>42</sup> Iso Leso Optics,<sup>4</sup> CompCom<sup>17</sup> and the Council for Medical Schemes (CMS).

**TABLE 2:** Description of variables of interest.

Variable of interest	Description
Scheme characteristics and the nine provinces	<p><b>Medical schemes:</b> Medical schemes are non-profit organisations with a board of trustees; medical schemes must be registered with the Council for Medical Schemes.</p> <p><b>Scheme type:</b> According to the <i>Medical Schemes Act of 1998</i>, open schemes accept anybody who can afford to pay the premium, while closed or restricted schemes are restricted to an employer.<sup>47,48</sup></p> <p><b>Scheme size:</b> A large scheme has &gt; 30 000 beneficiaries; a medium scheme has &lt; 30 000 beneficiaries and &gt; 6000; a small scheme has &lt; 6000 members.<sup>19</sup></p> <p><b>Geographic distribution of beneficiaries in the nine provinces in South Africa:</b> Gauteng, Western Cape, KwaZulu-Natal, Eastern Cape, Northern Cape, Limpopo, Free State, North West, Mpumalanga.</p>
Benefits paid or expenditure	<b>Expenditure reported in South African currency:</b> USD1.00 = ZAR17.00.
Out-of-pocket (OOP)	Out-of-pocket is the maximum amount that covers the deductible, coinsurance and copayments. <sup>49</sup> The proxy measure is the difference between what was charged by the medical service provider's claims and what was paid by the medical scheme. <sup>26</sup>



**FIGURE 3:** Beneficiaries seeking eye care services and beneficiaries by province (%).

## Methods

The study involved a retrospective review of claims data from medical schemes related to eye care benefits paid. The review period was 2020, and aggregated scheme-level data from the CMS annual reports for the review period were used. The categorical data were summarised using counts and proportions, and the chi-square test was utilised to compare differences. Means, standard deviations (s.d.), ranges (minimum and maximum) and percentages were used to represent continuous variables. A two-sided value of  $p$ -value < 0.05 was regarded as statistically significant for unadjusted comparisons. The analysis was conducted in Stata and Statistical Analysis System (SAS) 9.4. Table 2 depicts the description of variables of interest.

## Ethical considerations

This study did not include any patient-specific primary data; hence, no ethical approval was required. To preserve anonymity, information that is not in the public domain was kept confidential.

## Results

### Scheme characteristics

The studied schemes accounted for 439 290 beneficiaries who had at least one visit to ophthalmologists. Nearly three times as many beneficiaries had at least one visit to optometrists, at 1 186 239 beneficiaries. In 2019, these accounted for 5% and 13% of all beneficiaries. The average number of visits for ophthalmologists' services was two and one for optometrists and orthoptists, respectively. Eye care services accounted for approximately 3% of all benefits paid over the review period.



## Distribution of optometrists relative to the proportion of beneficiaries per province

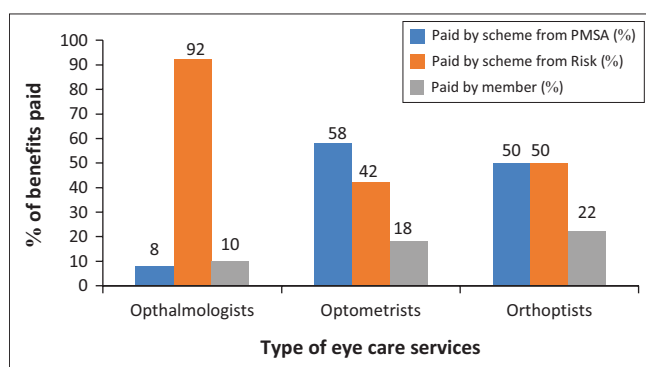
Figure 3 displays the proportion of claiming optometrists and beneficiaries per province in 2019. The analysis found 3064 claiming optometrists based on their unique practice numbers; Gauteng province had 35% of optometrists; KwaZulu-Natal had 18%; the Western Cape had 15%; and Mpumalanga accounted for 11% of claiming optometrists. The Mpumalanga and KwaZulu-Natal provinces had more optometrists available relative to the population covered than other provinces.

## Personal Medical Savings Account funding of optometry benefits and members' proportion trend

The chart in Figure 4 illustrates the percentage of benefits funded by the Personal Medical Savings Account (PMSA) and the percentage of benefits paid by members. Compared with orthoptists, optometry's benefits were primarily funded from the savings pool, with the remaining half being funded from risk. Only 8% of the ophthalmology services came from the savings; most funding came from the risk pool. Out-of-pocket payment for orthoptists was the highest, at 22%, followed by optometrists with 18% and 10% for ophthalmologists. Ophthalmologists were mainly funded from a risk pool and accounted for 90% compared with 42% and 50% funded from risk for optometrists and orthoptists, respectively.

## Scheme type

Table 3 demonstrates that ophthalmologists' services were mainly funded from the risk benefit while funding for optometrists differed by scheme type. The disparity in funding models was more prevalent in optometry services



PMSA, Personal Medical Savings Account.

**FIGURE 4:** Eye care benefits paid from Personal Medical Savings Account, risk and paid by member – out-of-pocket.

expenditure, where 84% and 28% of the expenditure incurred was from the PMSA. Similarly, funding for orthoptists was skewed more towards PMSA than the risk benefit, where covered 59% versus 14% of the orthoptist expenditure incurred was from PMSA. Out-of-pocket levels were much higher in open schemes than in closed schemes.

## Scheme size

Table 4 shows the eye care benefits paid stratified by scheme size and eye care service discipline. Large schemes financed optometry benefits from the PMSA, which accounted for 61% of all benefits paid, compared with 38% and 31% of medium and small schemes, respectively. While larger and smaller schemes fund orthoptists through savings, medium-sized schemes do so through risk. While benefits paid from savings for ophthalmology services were less than 90%, they varied by scheme size, with large schemes paying nearly twice as much as small and medium schemes, which paid 5%. Large-scheme members were subjected to slightly higher OOP expenses for optometry services (18% vs 14% and 13%, respectively, for medium and small schemes). It was clear that services such as orthoptists attracted larger levels of OOP in each of the three different size strata of the network, followed by optometrists. Large schemes mainly funded optometrist benefits from PMSA, while smaller and medium schemes mainly funded this from risk.

## Benefits paid per utilising beneficiary by scheme type

The average expenditure per visit was higher in closed schemes than in open schemes for optometrists and orthoptists, R2807.00 (s.d. = R956.00) versus R2086.00 (s.d. = R616.00) and R496.00 (s.d. = R283.00) versus R402.00 (s.d. = R223.00), respectively. This trend was reversed on the average expenditure per visit for ophthalmology, where this was higher in open schemes than restricted schemes, R4968.00 (s.d. = R1383.00) versus R4231.00 (s.d. = R1292.00), respectively. This demonstrates that benefits are far more abundant in closed schemes for optometrists and orthoptists

**TABLE 3:** Eye care benefits paid by scheme and out-of-pocket (%) paid by the member by scheme type.

Discipline	Paid by the scheme: Risk or PMSA		Paid by the member: OOP (%)	
	Open	Restricted	Open	Restricted
Ophthalmologists	90/10	97/3	11	7
Optometrists	16/84	72/28	22	11
Orthoptists	41/59	86/14	26	11

PMSA, Personal Medical Savings Account; OOP, out-of-pocket.

**TABLE 4:** Eye care benefits paid by the scheme and out-of-pocket (%) paid by the member.

Scheme size	% of benefits paid by the scheme: Risk or PMSA			Paid by the member: OOP (%)		
	Ophthalmologists	Optometrists	Orthoptists	Ophthalmologists	Optometrists	Orthoptists
Large	92/8	39/61	47/53	10	18	24
Medium	95/5	62/38	85/15	10	14	15
Small	95/5	69/31	56/44	8	13	21

PMSA, Personal Medical Savings Account; OOP, out-of-pocket.

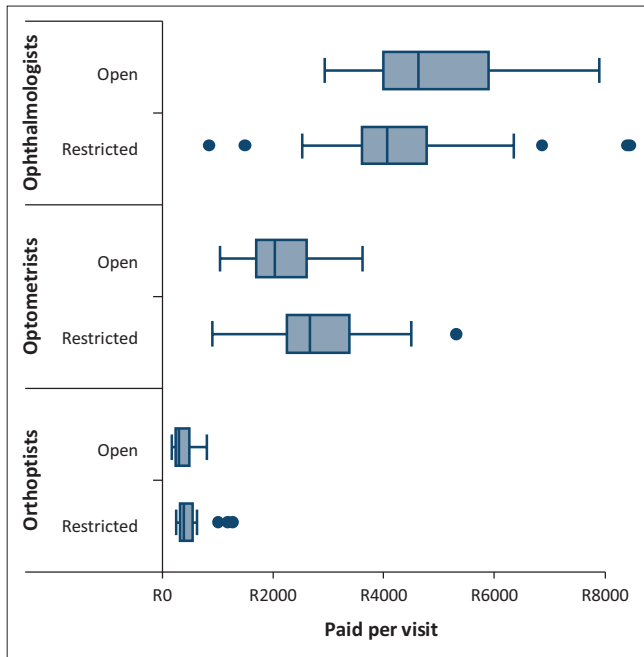
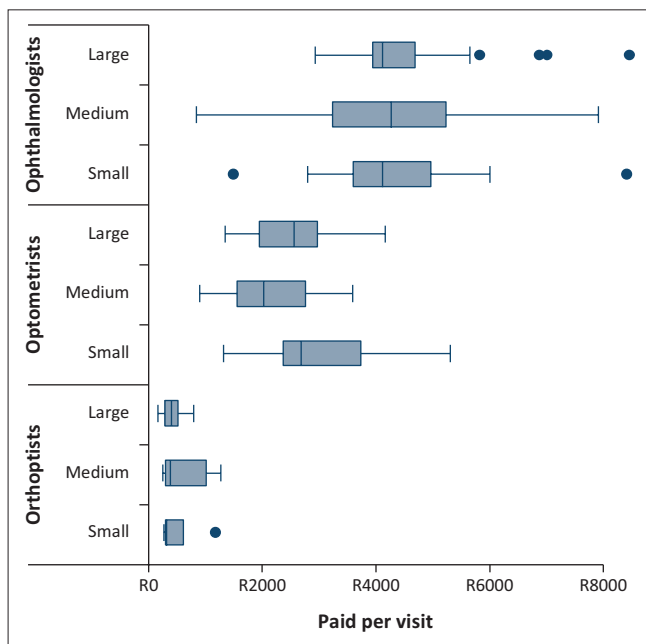


FIGURE 5: Whisker box plots for eye care benefits paid by discipline and scheme type.



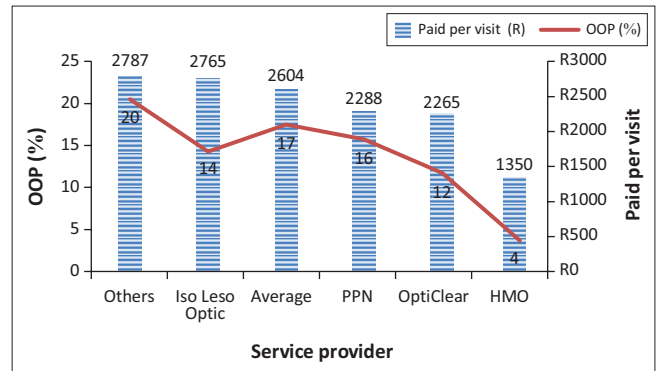
R, South African rand.

FIGURE 6: Whisker box plots for eye care benefits paid by discipline and scheme size.

than at the consolidated level. Across all three services, various outliers are prominent in restricted schemes. Figure 5 depicts a supplementary whisker box plot for eye care services by discipline and sector.

### Expenditure per visit by scheme size

Figure 6 shows the average expenditure per visit for ophthalmology services which increased with size; spending on large, medium and small schemes was R4601.00 (s.d. = R1258.00), R4356.00 (s.d. = R1638.00) and



PPN, Preferred Provider Negotiators; HMO, health maintenance organisations; OOP, out-of-pocket.

FIGURE 7: Optometrists' benefits paid by service providers in year 2020.

R4322.00 (s.d. = R1235.00), respectively. Expenditure on optometrists was higher for small schemes, R3004.00 (s.d. = R1020.00), just over R500.00 more than that of large schemes, R2524.00 (s.d. = R753.00), and under R500.00 higher than medium schemes, R2147.00 (s.d. = R806.00).

### Optic benefit management service expenditure by the service provider

OptiClear-contracted schemes paid an average of R2265.00 for benefits compared to R2288.00 for PPN per visit, whereas Iso Leso Optic-contracted schemes paid R2765.00. Because of differences in benefit eligibility and demographics amongst service providers and schemes, the given amounts should be interpreted with caution. A scheme can contract out only a fraction of its benefit possibilities to a single service provider. It is thus difficult to compare optic benefits management services as data on these types of arrangements is not in the public domain. Figure 7 illustrates that schemes that used the HMO model had lower average expenditures for optometrist benefits, which were significantly lower than the average expenditure of R2604.00.

### Benefits paid per visit for eye care services by administrator and discipline

Self-administered schemes paid ophthalmologists somewhat more on average than third party-administered schemes, as depicted in Figure 8. For optometry services, however, schemes administered by Discovery Health (Pty) Ltd and Medscheme Holdings (Pty) Ltd paid, on average, more than self-administered and third party-administered schemes.

### Discussion

Like other developing countries, a disproportionate amount of South Africa's optometrists are in urban areas, and private practices remain the most prevalent employment option.<sup>50,51</sup> The study found nearly 3000 claiming optometrists based on the unique practice numbers and just over 500 claiming ophthalmologists in the private sector; furthermore, this

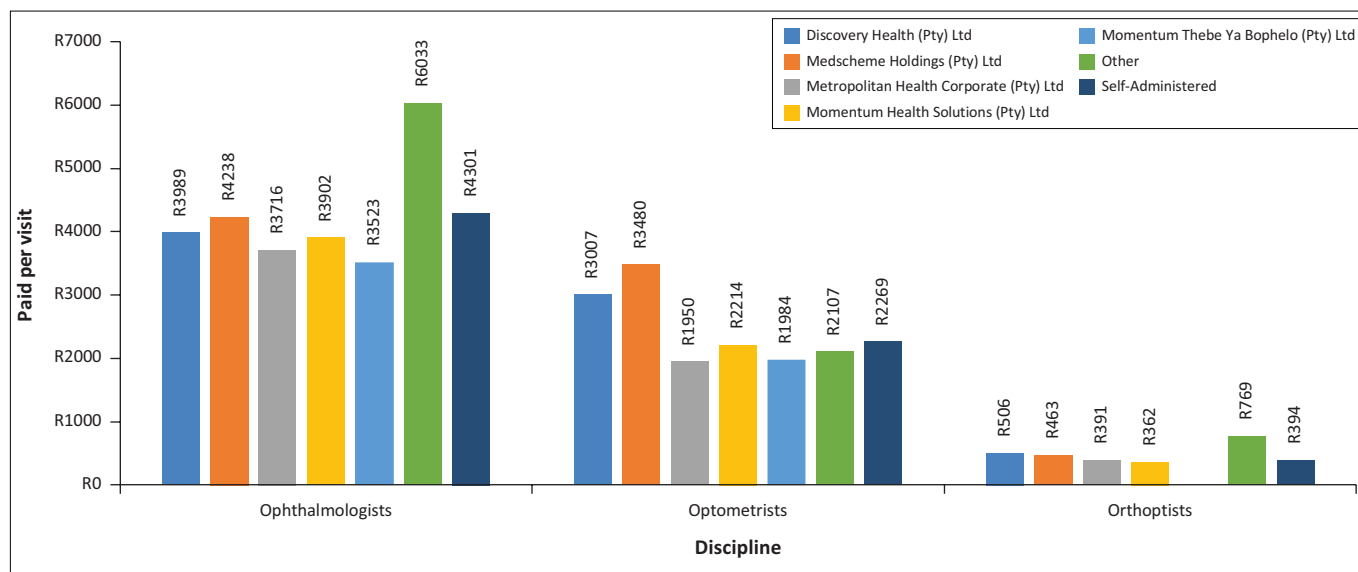


FIGURE 8: Benefit paid per visit by administrators per discipline.

differed by the province when adjusting for claiming and distribution of beneficiaries. This finding suggests a possible oversupply of eye service providers in the private sector.<sup>52</sup> The Optometry profession is skewed towards the private sector, which accounts for more than 90% of the over 3000 registered optometrists of optometrists who serve less than 16% of the population. Similarly, with ophthalmology, a study by Majola<sup>20</sup> confirmed that more than 593 ophthalmologists registered, while Willie found 511 claiming ophthalmologists from medical schemes.<sup>26</sup> The analysis showed that the geographic distribution of claiming optometrists was relative to the distribution of members other than Mpumalanga and KwaZulu-Natal provinces. Provinces such as the Gauteng and North West had an undersupply of optometrists relative to the covered population. In terms of eye care, the role of optometrists and other eye care providers is critical in establishing the National Health Insurance (NHI) is significantly larger than the unbalanced distribution of services towards the private sector.<sup>10</sup> According to the study, copayments for optometry services are significantly higher than those for ophthalmologists and orthoptists, and the funding models for these services differed; optometry services seem to be largely funded from savings, while ophthalmology benefits were mainly funded from the risk pool.

In addition, the study found that the operating model influenced the expenditure and that the spending varied depending on the administrator for eye care services. The study found that self-administered schemes had lower expenditures for optometry benefits when adjusted for utilising beneficiaries. However, this was not the case when it came to ophthalmology services, which indicates that the sourcing models utilised by medical schemes for eye care benefits have a mixed effect on the benefits provided by those schemes. Non-health care spending varies per administrator based on member profile, the number of benefit options and scheme type.<sup>19,26,29,53</sup> The effect of network arrangements on funding eye care services was also investigated in this study.

Previous research has shown that networks are associated with lower overall costs for health care.<sup>54,55</sup> This research provides the effect of PPOs and HMO models for optometry benefits. Several studies presented examples of increased or higher payments to providers within PPOs compared with outside PPOs; however, the scenarios presented were for general practitioners.<sup>56,57</sup>

In conclusion, the research shows that schemes that utilised capitated network models incurred significantly lower average expenditure compared with other network arrangements. These findings of the study are consistent with the literature in that tiered networks were found to be associated with \$43.36 lower total adjusted medical cost per member each quarter (\$830.07 against \$873.43), a 5% decrease compared with users in similar plans without a tiered network.<sup>40</sup> Other studies have established that network health insurance plans offer cheaper premiums and lower total costs to insurers; however, this has not been shown for eye care services.<sup>58,59</sup>

## Conclusion and recommendations

The research recommends a review of eye care services on funding models at benefit option level (benefits paid from a risk vs. savings), operating for administration functions and managed care sourcing models based on cost savings and the overall quality of eye care services. Medical schemes should create more awareness campaigns on the benefits covered for eye care, exclusions and applicable benefit limits. Additional campaigns should focus on educating members about the effects of networks as cost-saving mechanisms that do not compromise service quality and quality of care.

## Limitations

This quantitative retrospective research used secondary data from the regulator's yearly statutory return of benefits paid for eye care services; as such, the data analysed do

not differentiate between benefits paid for examination of eyes and costs associated with spectacles, frames or contact lenses. Much more granular data could provide better insights on individualised service expenditure. The investigation mainly focused on aggregated data reported at the scheme level; information regarding benefit options could provide better insights regarding benefit richness at the option level. In addition, different benefit options are negotiated on various network types, and the pricing mechanism also varies at these different levels. In addition, each benefit option offers a unique day-to-day coverage governed by its unique set of guidelines and standards. The primary data received from medical service providers and members should provide deeper insights into the various determinants of optical benefit expenditures. The research did not consider the medical service providers contracting arrangement on health outcomes; hence, future studies should consider the effect of eye care services contracting on health outcomes. Lastly, the regulator should consider publishing all accredited optic benefit management service providers with their respective contracted schemes reported at benefit option level; these should be made publicly available for the benefit of members of medical schemes.

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## Competing interests

The author declares that he has no financial or personal relationships that may have inappropriately influenced him in writing this article.

## Author's contributions

The author was responsible for data analysis and drafted the article. The author proofread the final manuscript.

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## Data availability

Much of the data utilised in this study are in the public domain and have been reported by the regulator; however, an additional summary of the author's data is accessible upon reasonable request from the corresponding author (M.M.W.).

## Disclaimer

The views and opinions stated in this article are those of the author and do not necessarily reflect the official policy or stance of any agency with which the author is affiliated.

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