

# Optometric practices and practitioners in KwaZulu-Natal, South Africa\*

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Received 1 December 2009; revised version accepted 10 June 2010

## Abstract

This paper presents findings of a survey of optometric practices and practitioners in the KwaZulu-Natal (KZN) province. Questions on demographics of practitioners, equipment, clinical practice and business profile were included in the questionnaire. Also, issues that have the potential to impact on optometric practices were contained in the questionnaire and these include medical aid, advertising, continuous professional development (CPD) and emigration. Of the 117 completed questionnaires, 55% were from females and 45% were from male practitioners. The respondents included 55% Indians, 27% Whites, 17% Blacks and 1% Coloureds. The majority of practices were located in urban areas (90%) and rural areas (10%), and were mostly independent (67%) and franchises (33%). Only a minority of the practices had major diagnostic equipment such as visual field analysers (33%) and corneal topographers (7%). A significant pro-

portion of the practitioners reported not routinely performing non-contact tonometry (45%) and slit lamp examination (41%) respectively. The majority (95%) rated patient's needs as a very important factor in their decision to prescribe an optical device. A significant proportion (38%) of the practices had annual patient bases of above 33 000, with 35% having an average of 51-100 new patients per month. A few (5%) practices reported gross monthly turnovers of above R400 000, and 27% reported turnovers of less than R60 000. Many (89%) derived 41% and above of their total revenue from spectacle lens sales and 11% derived 41% and above from contact lens sales. The majority (92%) of practices were contracted to over 60% of the medical aid schemes. Many (68%) reported that they were not negatively affected by medical aid fraud committed by their colleagues, however, a significant proportion (32%) reported the converse. More than half (54%) of the practitioners reported that they used the print media

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\*This paper is based on research by KP Mashige towards a Masters degree in the Discipline of Optometry of the University of KwaZulu-Natal with the supervision of Professor KS Naidoo



for advertising their services. Many practitioners considered financial rewards (66%), personal safety (58%), and acquisition of skills (49%) as very important factors in deciding to go overseas to practice. The data elicited in this study provides an indication of the realities of private optometric

practices and could be useful in determining policies as well as training and support guidelines for the profession. (*S Afr Optom* 2010 69(2) 77-85)

**Key words:** Optometric practice in South Africa, optometric practices, continuous professional development

## Introduction

The profession of Optometry is one of the health care professions in South Africa and it mainly involves individuals practicing on their own or in franchises<sup>1</sup>. Due to previous health policies, optometric services were hardly provided in the public health facilities, but recent changes have resulted in professionals now working in this sector mainly in government hospitals<sup>1</sup>. However, private practices remain the preferred option for employment or practice. As in other developing countries, South African optometric services are disproportionately distributed with a large number being in urban areas. According to Sacharowitz<sup>2</sup>, this is partly as a result of previous political health policies that did not include optometric posts at state or district hospitals. The educational training of optometrists started at the former Witwatersrand Technical College in 1931 as a part-time course<sup>1</sup>. Currently, optometrists are educated to degree level at one of the four institutions (conducting optometric courses), namely the University of Free State (UFS), the University of Johannesburg (formed by the merger of the Technikon Witwatersrand and Rand Afrikaans University programmes), the University of KwaZulu-Natal (formerly University of Durban Westville) and the University of Limpopo (formerly University of the North)<sup>1</sup>. Qualified optometrists may proceed to higher Master and Doctoral degrees at any of the above institutions. In 2006, four hundred and fourteen optometric practitioners were registered with the Health Professions Council of South Africa (HPCSA) in KZN province<sup>3</sup>. Of this number, 216 were Indians, five Coloureds, 82 were Whites, 40 were Blacks and 71 unknown<sup>3</sup>. Of these, 213 owned their own practices.

When the profession of optometry started in South Africa in 1924, its clinical practices and procedures were limited to refraction and the dispensing of a

very narrow range of frames and lenses<sup>4</sup>. Significant changes were introduced due to technological advances in specialised equipment that allowed for the assessment of low vision, contact lenses, paediatric vision and binocular vision therapy<sup>4</sup>. Furthermore, optometrists play an important role in providing eye care services which impact on the quality of peoples' lives. In order to ensure that effective diagnosis and management are put in place, the HPCSA has established clinical guidelines that stipulate what equipment a practitioner should have to conduct a comprehensive eye examination as well as routine minimum tests that should be conducted on the patients<sup>5</sup>. However, these guidelines are not legal requirements. The study therefore also sought to determine the extent to which there is adherence to those minimum equipment and clinical guidelines.

Financial rewards such as optical benefits from medical aid schemes and from prescription of optical devices are major factors in private sector optometry. The prescription of devices is the primary role of all optometric professionals in their quest to address their patients' visual needs. Also, it is arguably the single most important income generator in private practice. It is in light of these, that practitioners were asked questions on factors that they felt could play a role in their decision to prescribe an optical device.

South Africa has approximately 124 medical aid schemes with an estimated 7.1 million beneficiaries, totaling around R58 billion in annual contributions<sup>6</sup>. Optometric services of over R2 billion represent a significant proportion of the total medical schemes claims<sup>7</sup>. Recently there has been some reduction in optical benefits by certain medical aids and evidence also points to an increase in medical aid fraud and unethical practice due to these financial and other pressures<sup>6</sup>. In addition, managed health care was introduced to the medical aid industry approximately



a decade ago as a model for affordable and quality health care for all. Since the initial expectations however, controversy still surrounds its format and applicability<sup>8</sup>. While managed health care presents practitioners with many challenges, such as competition from large established groups for access to patients as well as different methods and amounts of medical aid reimbursements for providing the same service<sup>9</sup>. These changing dynamics may impact significantly on optometric practices as freedom of choice for patients becomes restricted to pre-selected practitioners participating with the managed care programme<sup>7</sup>. In view of these issues, questions were asked in this study regarding medical aid fraud and practitioners' feelings on the effects of managed health care in their practices.

Advertising of optometric services is restricted by the HPCSA guidelines. However, these guidelines allow for advertising of certain services provided they are not unprofessional, untruthful, deceptive or misleading<sup>10</sup>. There are different views and perceptions amongst practitioners about advertising and the following comment amongst others are heard: the public will perceive practitioners more as merchants than health care providers<sup>11</sup>. It was therefore considered of interest to ask the practitioners questions relating to the mode of advertising in their practices.

There was a mixed reaction to the introduction of continuous professional development (CPD) for practitioners in many parts of the world<sup>12</sup>. In South Africa, practitioners are required to have a minimum of 30 CPD credits points per year, five of which need to be for ethics, human rights and medical law<sup>13</sup>. There is a wide range of CPD activities through which practitioners can earn points. These include conferences and reading articles in journals offered by various accredited institutions such as optometry departments as well as contact lens companies and the SAOA that have applied to be providers for activities that are accredited. A study in 1995 carried out by Fine<sup>14</sup> reported that 51% of final year optometry students indicated that CPD should be compulsory while 49% indicated to the contrary. However, in a recent study by Oduntan et al<sup>15</sup> 91.5% of final year optometry students indicated that CPD activities were an integral part of skills development. It was therefore considered of interest to evaluate the opinions of practitioners regarding CPD activities.

There is possibly a trend for some optometrists to move overseas to practice which may be influenced by certain factors and perceptions such as better financial remunerations and working conditions<sup>1</sup>. It was therefore, considered necessary to investigate factors that might influence optometrists' decision to move overseas as this may influence the future availability of optometrists in the province of KZN and in South Africa as a whole.

## Methodology

A questionnaire (see Appendix 1) was used to collect data for this study. The design of the questionnaire was based on a review of other related studies<sup>1, 14-16</sup>. The survey was preceded by a pilot study conducted among twenty practitioners in order to critically evaluate and finalise the questionnaire. All queries concerning the questionnaire during the pilot study were addressed and the questionnaire was adjusted accordingly before the more extensive study was carried out. Permission to conduct the study was obtained from the Research and Ethics Committee of the Faculty of Health Sciences, at the University of KwaZulu-Natal. Copies of the questionnaires containing relevant information were distributed to all 213 KZN optometric practitioners who owned their own private practices in 2006. The register maintained by the HPCSA was used to access the identifying details of these practitioners. Since the register is a public document, also accessible by the public through the HPCSA website, accessing and researching the data stored in that system did not constitute any breach of ethics or confidentiality. All practitioners signed informed consent documents to participate in this study prior to the commencement of the research. Respondents were ensured of confidentiality as responses were anonymous and participation was voluntary. A pre-paid and numbered envelope was included to encourage a better response rate. The returned questionnaires were separated from the envelopes to ensure anonymity of the participants. The responses were collated and analysed descriptively using the Statistical Package for Social Sciences (SPSS version 15.0) computer programme.



**Results**

Of the 213 questionnaires, 132 were returned (62% response rate) but 17 of these questionnaires were returned incomplete and were not included in the analysis. The analysis was therefore carried out on a sample of hundred and seventeen ( $N = 117$ ) completed questionnaires which constituted 55%, and was considered adequate for tolerable confidence intervals around the desired parameters.

*Demographic profile*

Fifty five percent of the respondents were females and 45% were males. They were 55% Indians, 27% Whites, 17% Blacks, and 1% Coloureds. Ninety percent of the practices were located in urban areas and 10% were in rural areas. Of those in urban areas, 50% were located in the city centre (CBD), 27% were in malls and 12% in townships. Of the total included in the analysis, 67% were in independent practices and 33% were in franchises. Sixty four percent of the practitioners obtained their primary qualifications from the University of KwaZulu-Natal, the majority being females and Indian. Sixty five percent of the practitioners had an undergraduate degree, 24% had studied further (postgraduate) while 10% had a diploma in optometry. Women were the dominant gender in these three main categories. Fifty three percent of the practitioners were certified in diagnostics and 10% had completed additional studies in therapeutics course work.

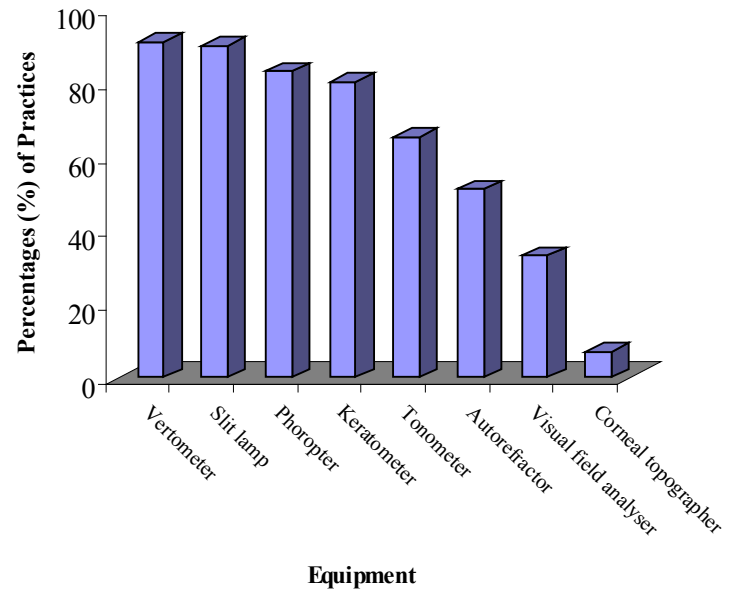
*Equipment*

To determine whether practitioners were adhering to the equipment guidelines as set out by the HPCSA, they were requested to indicate what items they had access to in their practices. The majority had trial frames and cases (100%), hydraulic chairs and stands (99%), retinoscopes and ophthalmoscopes (99%) and projectors (96%). Some results are shown in Figure 1 below.

*Clinical practice*

The most routinely performed procedures were case history, visual acuity and ophthalmoscopy (100%) and the least was non-contact tonometry (45%). Some responses are shown in Table 1 below.

Ninety five percent of the respondents felt that patients' needs would be a very important factor in their decision to prescribe an optical device, while 54% and 76% reported that financial rewards and influence from the patients are of little importance.



**Figure 1:** The percentages in descending order of practices possessing each of the listed equipment. Only 33% and 7% respectively possessed visual field analysers and corneal topographers. Tonometer is non-contact methods in this figure.

**Table 1:** Procedures that should be routinely performed, the number and percentage of practitioners who reported performing them.

Procedure	No. (%)
Pupillary testing	114 (97)
Externals	110 (94)
Near refraction	110 (94)
Retinoscopy	101 (86)
Slit lamp examination	69 (59)
Non-contact tonometry	64 (55)

*Business profile*

The majority of practices with the highest patient numbers (>33 000) were in a franchise and located in the urban areas while those with the lowest patient bases (1-9999) were based in rural areas. Thirty five percent of the practices reported that they consulted an average of between 51-100 new patients a month and 24% saw fewer than 50 new patients a month, while 2% consulted with more than 250 new patients



monthly. Thirty two (27%) practices reported gross monthly turnovers of R120 000 and less (Of these, 26% were in independent practices, 10% were from rural areas while 17% were from urban areas), 21% reported R121 000-R200 000, 11% reported R201 000-R400 000 and 5% reported turnovers of above R400 000. All the practices that reported turnovers of above R500 000 were in a franchise and located in the urban areas. Many (89%) practices reported that 41% and above of their total revenue was derived from spectacle sales while 11% derived 41% or more from contact lens sales. Of the total percentage of spectacle sales, 21% were from white (clear) lenses, 33% were from glass photochromic, 46% plastic photochromic sales. Of the total percentage of contact lens sales, 69% were from single vision contact lenses and 23% were from multifocal contact lenses. Eighty seven percent reported that refraction and dispensing were important skills in running a successful practice while 67%, 74% and 78% felt that paediatric vision, binocular vision and low vision respectively were of little importance.

*Medical aid*

Thirty two percent of the practices had 71-80% of their patients on medical aid. Fifty five percent of the practices were contracted to more than 80% of the medical aid schemes while only 3% were contracted to less than 50% of medical aid schemes. Sixty nine percent received their payments within 31-60 days of submitting the claim and 24% received their reimbursements within 30 days, while 8% received theirs after 61 days. The majority (83%) of the practices' medical aid claims were submitted electronically while 17% used manual claims. Sixty eight percent reported that they were not negatively impacted by medical aid fraud committed by colleagues in the profession while 32% indicated that they were. The most common types of fraud listed by those who reported being negatively affected were claiming for non-members or unregistered dependants (15%), giving financial kick-backs to patients for claiming (6%), selling sunglasses on medical aid (5%), changing codes and prices (3%) and giving patients groceries on medical aid claims (3%). When asked about the effect of managed health care in their practice, 30% reported that it had a positive effect, 24% reported

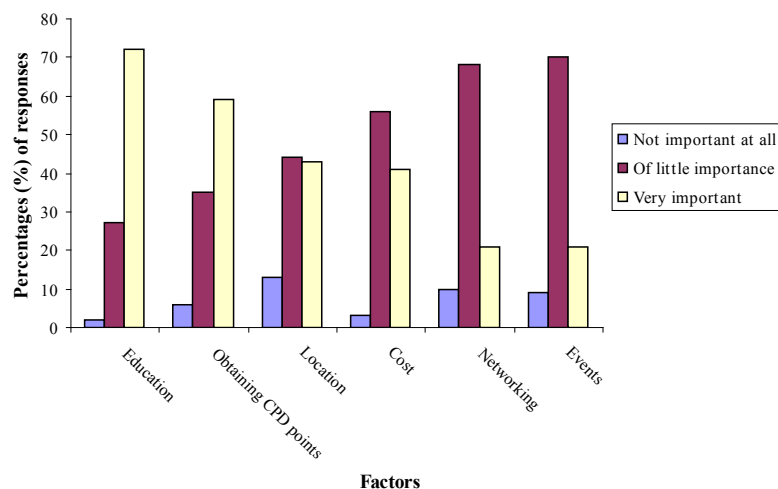
that it had a negative effect and 46% reported that it had little or no effect.

*Advertising*

Fifty four percent of the practitioners reported using print media for advertisements, 33% and 35% reported using electronic media and package deals respectively.

*Continuous professional development (CPD)*

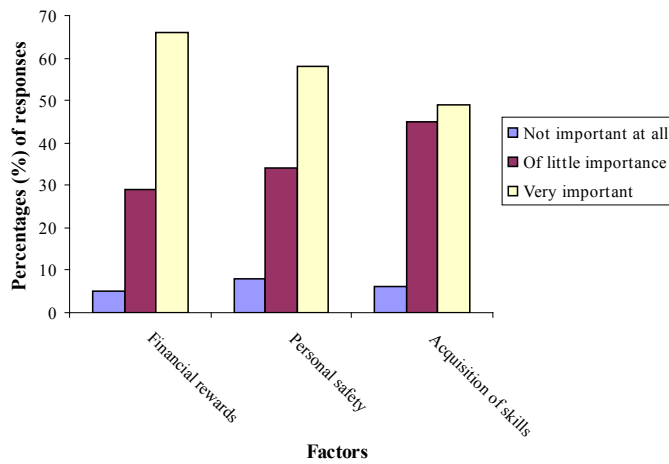
When asked which method of CPD delivery they preferred, 64% reported conferences, 27% the internet while 6% and 3% preferred mail and journal clubs respectively. Fifty eight percent of the practitioners rated the level of education received from CPD as good, 19% as excellent while 4% rated it as poor. Fifty nine percent of the practitioners felt that obtaining CPD points was very important, while 43% rated the location of CPD activities as very important in attending CPD activities (see Figure 2).



**Figure 2:** Practitioners' rating of the listed factors that may influence CPD attendance. Education was rated as very important by the majority of respondents (72%) while networking and events (such as social activities) were rated to be of little importance by many of the practitioners. Education refers to the quality and standard of the CPD activity provided.

*Factors that practitioners felt would influence their decision to go abroad*

Fifty eight percent of the practitioners rated personal safety conditions as a very important factor in deciding whether or not to go and practice abroad (see Figure 3).



**Figure 3:** Practitioners’ rating of the listed factors that could influence their decision to go abroad. Many, (66%) rated financial rewards as a very important consideration.

**Discussion**

The optometric workforce forms an essential component of eye care service delivery in KZN. There is however, a paucity of published data on the profile of optometric practices and practitioners. The proportionate gender distribution (55% females and 45% males) is good for the profession of optometry. However, the racial disparity (55% Indians, 27% Whites, 17% Blacks and 1% Coloureds) should be viewed in the light that the study was done only the province of KZN. The limited number of practices in the rural areas in this study agrees with the reports of previous studies<sup>17, 18</sup>. This could indicate the perceptions of the optometric practitioners that people in the rural areas cannot afford private optometric services. The high response rate among individual practitioners reflects that this is the preferred mode of practice in the province. As expected most practitioners (62%) in this study qualified from UDW as it is the only institution in the province of KZN that offers the optometry programme.

Although many practices reported having the basic equipment to conduct a comprehensive eye examination, only 7% of the practices had a corneal topographer, which is important for the fitting of keratoconic and irregular corneas. About 80% had a keratometer however, 10% did not have biomicroscopes. This instrument is required for the basic evaluation and assessment of contact lens fitting and the assessment of

the patients’ ocular health. It is recommended that the HPCSA intensify their awareness campaigns on the need for minimum equipment required to conduct a comprehensive eye examination.

The significant number of practitioners who reported that they did not routinely perform non-contact tonometry cited reasons such as lack of equipment (10%) and that the technique was done only on patients presenting with specific signs and symptoms (35%). This is contrary to the patient management standards and violates the recommended clinical guidelines of the HPCSA. Also, only 94% reported that they did external examinations and near refractions. A small proportion of 3% did not perform pupillary testing citing that these tests were either time consuming, done only on adults or only on children. These need attention as these procedures are part of routine eye examination and should be performed on all patients regardless of age or the perceived risk of the patient. Those practitioners who reported not performing retinoscopy (14%) in their practices indicated that they own auto-refractors (10%), had poor skills in performing the techniques (2%) or used old prescriptions as starting points for refractions (2%). The majority (95%) of participants rated prescribing an optical device because of the patient’s needs as a very important factor. This is a positive sign in maintaining the integrity of the profession and serving the patients better.

The reported high number of patients seen by practices in urban areas is reflective of practices based in urban settings<sup>15</sup>. The fact that all practices from the rural areas had patient bases of less than 10 000 and a reported gross monthly earnings of less than R60 000 may be due to the fact that rural practices are usually “part-time” or satellite practices. Of the 89% practices that derived 41% and above of their income from spectacle sales, 33% were from glass photochromic lenses and 46% from plastic photochromic lenses. This indicates that both glass photochromic and plastic photochromic lenses are still popular choices amongst patients. Few practices derived 41% and above of their income from the sales of contact lenses, majority of which were from single vision soft contact lenses. This could indicate that patients still preferred spectacle lenses as a form of refractive correction compared to contact lenses. Other possible reasons could be financial cost, practitioner preference or even that



not all practices have adequate equipment to fit contact lenses. The low utilisation of multifocal contact lenses in this study is consistent with reports from previous studies<sup>19, 20</sup>. This could be due to excessive or lengthy time that the fitting of multifocal lenses require resulting in lack of enthusiasm amongst the practitioners and the older generation who normally required them. The majority (87%) of practitioners in this study identified skills in refraction and dispensing as important factors in running a successful optometry practice. This suggests that many considered the correction of refractive errors and provision of glasses and contact lenses to remain the core function and strength of optometric practice.

The high number of patients reported to be on medical aid schemes indicates that patients are able to utilize their optical benefits for eye care. The majority (68%) of practices received their medical aid reimbursements within 31-60 days of submitting their claims. This could be attributed to the inefficient running of medical aid schemes even though most of the practices have facilities for electronic claims which cut down on paperwork. This view is supported by the report that 83% of the practices' medical aid claims are done electronically. A significant proportion (32%) reported that they were negatively impacted by fraud committed by their colleagues. It is recommended that awareness campaigns by the HPCSA and medical aid schemes to curb fraud in the industry should be reinforced. The reported effects of managed health care on their practices could be due to the fact that it has been implicated in lowering profit margins and the limited influence may contribute to better profitability of the practices.

Many practitioners (54%) advertised through the print media; this may be due to the high cost of advertising such as radio and television. In a recent study conducted amongst final year optometry students across the four academic teaching institutions, 54% felt that advertising through television, radio, and newspapers was unethical<sup>1</sup>.

The majority of practitioners (64%) preferred conferences as the most ideal method of CPD delivery. A similar pattern was observed with previous findings<sup>1</sup> and may be due to the fact that practitioners can obtain 15-20 CPD points at one time within a few days in these conferences. The majority (58%) rated the level of education received from CPD as good and 19% as

excellent. This is a positive response and it is recommended that CPD providers continue with this. This is consistent with the report that 72% of practitioners felt that the quality and standard of education received was a very important factor in deciding whether or not to attend a CPD activity. CPD points are allocated at different rates for different activities and a minimum of 30 annual CPD points requirement has been set by the HPCSA<sup>13</sup>. It is therefore not surprising that many (59%) practitioners reported obtaining credit points as a very important factor since they need to accrue their compulsory CPD points. A significant proportion (43%) felt that the location of the CPD activity was a very important factor in their decision to attend (Figure 2). This could be due to the cost implications to the practitioners who may need to leave their practices and incur travel and associated expenses such as paying locum optometrists. This view is consistent with the report that cost is a very important factor in attending CPD programmes. Networking and events did not have considerable influences on practitioners' decisions to attend the programmes, with 68% and 70% of practitioners reporting these issues as of little importance in their decision to participate in CPD activity. This could be due to the fact that many CPD programmes offered in KZN are usually in formal lectures format and rarely offer an opportunity to have other events (such as social activities) and thus do not create enough interaction and an opportunity to network.

Although as expected financial remuneration was a major consideration for going overseas, it is also noteworthy that crime levels in the country was a major issue for optometrists going abroad as 58% felt that personal safety was a very important factor (Figure 3). About half (49%) reported that further acquisition of hands-on skills was a very important consideration in going overseas.

### Acknowledgements

The authors thank the optometrists who participated in the survey and gratefully acknowledge Professor OA Oduntan and Ms. Carrin Martin for commenting on the manuscript.



References

1. Oduntan AO, Louw A, Moodley VR, Richter M, Von Poser P. Perceptions, expectations, apprehensions and realities of graduating South African optometry students (PEAR study, 2006) *S Afr Optom* 2007 **66** 94-108.
2. Sacharowitz HS. Visual impairment in South Africa: Achievements and challenges. *S Afr Optom* 2005 **64** 139-149.
3. Health Professions Council of South Africa (HPCSA). [Online] Available from <http://www.hpcsa.co.za/hpcsa/default.aspx?id=81>. (Accessed on: February 2008).
4. Rosen H. 80 Years: Many happy returns SAOA. *Optiforum* January 2004, pp1.
5. Health Professions Council of South Africa (HPCSA). Clinical Guidelines: Contact lens fitting, 2007.
6. Council for Medical Schemes. *The Chairman's Annual Report 2007- 2008*.
7. Mohlala P. Practice news: Medical schemes. *Optiforum* January 2009, pp9.
8. Van Rensburg HCJ. National health care systems: structure, types and dynamics. *Health and health care in South Africa* 2004. Van Schaik publishers, Pretoria, pp 1-50.
9. Solomon MD, Lee PP, Mangione CM, Kapur K, Adams JL, Wickstrom SL, Escarce JJ. *Am J Management Care* 2002 **8** 1057-67.
10. Health Professions Council of South Africa Act No.56 of 1974. Gov. Gazette. August, 2006 24-28.
11. Skinner T. Can Optometry still afford to be optimistic in SA? *Optiforum* April 2005, pp 1.
12. Vingrys A. Continuing professional education. *Clin Exp Optom* 1995 **78** 138-143.
13. Health Professions Council of South Africa (HPCSA). Continuing professional development guidelines for the Health professions. August, 2006 1-6.
14. Fine LE. Perceptions, expectations and realities of the graduating class of 1995 at Rand Afrikaans University. *S Afr Optom* 1997 **56** 6-14.
15. Silverman WS, Woodruff C, Hardigan PC. The future of Optometric practice? The results of a survey of optometrists and optometry students. *Optometry* 2004 **75** 615-623.
16. Oduntan AO. The Optometry Programme at Turfloop as perceived by the graduating class. *S Afr Optom* 1999 **58** 80-87.
17. Kragha IK. Optometry and optometric practice in Nigeria. *Am J Optom Physiol Opt* 1985 **62** 487-491.
18. Oduntan AO. Optometric practice in Saudi Arabia. *Clin Exp Optom* 1992 **77** 110-113.
19. Morgan PB, Efron N. A decade of contact lens prescribing trends in the United Kingdom (1996-2005). *Cont Lens Ant Eye* 2006 **29** 59-68.
20. Woods CA, Jones DA, Jones LW, Morgan PB. A seven year survey of the contact lens prescribing habits of Canadian optometrists. *Optom Vis Sci* 2007 **84** 505-510.

Appendix 1

Dear Participant,

This survey is being conducted to investigate optometric practices and practitioners' profile in KwaZulu-Natal province. Please write the corresponding number that best describes your response on the right side of the table.

1. Please indicate your gender (information required for research purposes only): Male [1] Female [2]	
2. Please indicate your race (information required for research purposes only): Black [1] Coloured [2] Indian [3] White [4] Other (specify) [5]	
3. Please indicate where your practice is located: Rural area [1] City centre (CBD) [2] Mall [3] Township [4]	
4. Please indicate the mode of practice: Independent [1] Franchise [2]	
5. Which University/Technikon did you graduate from with your first optometry qualification? 5.1 University of Durban Westville (now University of KwaZulu-Natal) [1] 5.2 University of Johannesburg (formed by the merger of Technikon Witwatersrand and RAU) [2] 5.3 University of KwaZulu-Natal (former University of Durban Westville) [3] 5.4 University of Limpopo (former University of the North) [4] 5.5 University of North (now University of Limpopo) [5] 5.6 University of Free State [6] 5.7 RAU (now University of Johannesburg) [7] 5.8 Technikon Witwatersrand (now University of Johannesburg) [8] 5.9 Others (please specify) [9]	
6. Please indicate the highest level of education received: Diploma [1] Undergraduate degree [2] Post-graduate degree [3] Others (please specify) [4]	
7. Are you certified in Diagnostics? [Yes] No [2] 7.1 Did you complete studies in Therapeutics? Yes [1] No [2]	
8. Please indicate which of the following equipments you have in your practice. Please use the following key to answer: Yes = [1] or No = [2] 8.1 Hydraulic chair and stand 8.2 Phoropter 8.3 Slit lamp biomicroscope 8.4 Keratometer 8.5 Projector 8.6 Trial case and frame 8.7 Retinoscope 8.8 Ophthalmoscope 8.9 Vertometer 8.10 Visual field analyser 8.11 Corneal topographer 8.12 Auto-refractor 8.13 Non-contact tonometer	





<p>9. Please indicate which of the following procedures are performed routinely on all patients presenting for a general eye examination in your practice. Please use the following keys to answer: Yes = [1] or No = [2]. For those tests that you answer No = [2], please provide a reason/s for not performing the procedure routinely.</p> <p>9.1 Case history 9.2 Visual acuity 9.3 Externals 9.4 Pupillary reflexes 9.5 Retinoscopy 9.6 Subjective refraction 9.7 Near refraction 9.8 Ophthalmoscopy 9.9 Slit lamp biomicroscopy 9.10 Non-contact tonometry</p>		<p>20. Please rate the importance of the following skills in running a successful optometry practice. Please use the following keys to answer. Not important at all [1] Of little importance [2] Very important [3]</p> <p>20.1 Refraction and dispensing 20.2 Paediatric vision 20.3 Binocular vision 20.4 Low vision</p>	
<p>10. Please rate the influence of the following factors in your decision to prescribe an optical device. Please use the following keys to answer. Not important at all [1] Of little importance [2] Very important [3]</p> <p>10.1 Patients' needs 10.2 Financial benefits 10.3 Influence from patients</p>		<p>21. Please indicate the percentage of medical aid patients in your practice: &lt;20% [1] 21 – 30% [2] 31 – 40% [3] 41 – 50% [4] 51 – 60% [5] 61 – 70% [6] 71 – 80% [7] 81 – 90% [8] &gt;90% [9]</p>	
<p>11. Please indicate your practice's current patient numbers/base: 0 – 9 999 [1] 10 000 – 19 999 [2] 20 000 – 29 999 [3] Above 30 000 [4]</p>		<p>22. Please indicate the average percentage of medical aids your practice is contracted to: &lt;50% [1] 51 – 60% [2] 61 – 70% [3] 71 – 80% [4] &gt;81% [5] Not contracted to medical aids [6]</p>	
<p>12. Please indicate the average number of your new consultations per month: &lt; 50 [1] 51 – 100 [2] 101 – 150 [3] 151 – 200 [4] 201 – 250 [5] &gt;250 [6]</p>		<p>23. Please indicate the general average waiting time for medical aid reimbursements: &lt;30 days [1] 31 – 60 days [2] 61 – 90 days [3] &gt;90 days [4]</p>	
<p>13. Please indicate your practice's gross monthly turnover: &lt;60 000 [1] R61 000 – R120 000 [2] R121 000 – R200 000 [3] R201 000 – R400 000 [4] &gt;R400 000 [5]</p>		<p>24. Please indicate the method of medical aid claims in your practice: Manual claims [1] Electronic claims [2] Others (please specify) [3]</p>	
<p>14. Please indicate the average revenue percentage derived from contact lens sales: 0 – 10 [1] 11- 20 [2] 21 – 30 [3] 31- 40 [4] 41 – 50 [5] 51 – 60 [6] 61 – 70 [7] 71 – 80 [8] &gt;80 [9]</p>		<p>25. Has medical aid fraud committed by your colleagues impacted on your practice? Yes [1] No [2]. 25.1 If the answer to 25 above is Yes, please indicate how.....</p>	
<p>15. Please indicate what percentage of spectacle lens prescription sales is derived from clear (white) lens prescriptions: 0 – 10 [1] 11- 20 [2] 21 – 30 [3] 31- 40 [4] 41 – 50 [5] 51 – 60 [6] 61 – 70 [7] 71 – 80 [8] &gt;80 [9]</p>		<p>26. Please indicate the effects of managed health care (in optometry) on your practice: Positive [1] Negative [2] Little effect [3] No effect [4]</p>	
<p>16. Please indicate what percentage of spectacle lens prescriptions sales is derived from glass photochromic prescriptions: 0 – 10 [1] 11- 20 [2] 21 – 30 [3] 31- 40 [4] 41 – 50 [5] 51 – 60 [6] 61 – 70 [7] 71 – 80 [8] &gt;80 [9]</p>		<p>27. Please indicate the medium of advertising that you employ in your practice. Print media [1] Electronic media [2] Package deals offer [3]</p>	
<p>17. Please indicate what percentage of spectacle lens prescriptions sales is derived from plastic photochromic prescriptions: 0 – 10 [1] 11- 20 [2] 21 – 30 [3] 31- 40 [4] 41 – 50 [5] 51 – 60 [6] 61 – 70 [7] 71 – 80 [8] &gt;80 [9]</p>		<p>28. Please indicate your preferred mode of CPD delivery method: Conferences [1] Internet [2] Mail [3] Journal club [4]</p>	
<p>18. Please indicate what percentage of contact lens prescriptions sales are derived from single vision contact lenses: 0 – 10 [1] 11- 20 [2] 21 – 30 [3] 31- 40 [4] 41 – 50 [5] 51 – 60 [6] 61 – 70 [7] 71 – 80 [8] &gt;80 [9]</p>		<p>29. Please rate the overall education offered through CPD programmes: Excellent [1] Good [2] Fair [3] Poor [4]</p>	
<p>19. Please indicate what percentage of contact lens prescription sales are derived from bifocal/multifocal contact lenses: 0 – 10 [1] 11- 20 [2] 21 – 30 [3] 31- 40 [4] 41 – 50 [5] 51 – 60 [6] 61 – 70 [7] 71 – 80 [8] &gt;80 [9]</p>		<p>30. Please rate the influence of the following factors in your decision to participate in a CPD activity. Please use the following keys to answer: Not important at all [1] Of little importance [2] Very important [3]</p> <p>30.1 Education 30.2 Obtaining CPD points 30.3 Location 30.4 Cost 30.5 Networking 30.6 Events</p>	
		<p>31. Please rate the importance of the following factors in your decision when considering working abroad. Please use the following keys to answer: Not important [1] Of little importance [2] Very important [3]</p> <p>31.1 Financial rewards 31.2 Personal safety 31.3 Acquisition of skills</p>	
		<p>Thank you for taking time to complete this questionnaire!</p>	

