



OSSA

The Ophthalmological Society of South Africa

Turner House
38 Jonsson Lane
Durban
4000

Tel : +27 12 347 0048
operationsmanager@ossa.co.za
website : www.ossa.co.za

1 October 2018

Competition Commission
Health Market Inquiry

Dear Mr Oellerman

OSSA RESPONSE TO HEALTH MARKET INQUIRY PROVISIONAL REPORT, AS PUBLISHED ON 5 JULY 2018

OSSA, as a society, is the umbrella body that represents the majority of ophthalmologists practicing in South Africa. The society has an established history of inclusive representation to its member base. OSSA, which was first established in 1930, is led by an Executive Committee composed of 12 elected volunteer members. The constitution of the society guides the composition of the board, which is geographically represented and has elected members from private practice, public service and academia. The length of term of the president, honorary secretary and honorary treasurer are stipulated in the constitution.

OSSA VISION

Attainable, best quality visual health for all.

OBJECTIVES OF OSSA

The main objects of The Ophthalmological Society of South Africa ("OSSA") are to:

1. Represent the interests of Ophthalmology in general and of its Members in particular in the South African health sector and to participate at all relevant forums, which may include, but is not limited to representation at health sector industry bodies; interaction with government departments; statutory bodies; inquiries and the like.
2. Participate in health sector stakeholder- and industry collaborations.
3. Respond to health sector- and general environmental changes affecting the interests of its members and/or the public it serves.
4. Promote Ophthalmology as a specialist field of medicine in the health sector and broader business community and to interact with other health sector stakeholders as may be required from time to time.
5. Make representations to legislative- and statutory authorities where legislative and regulatory frameworks are proposed or are affecting its members and/or patients and bring legislative and regulatory issues affecting its members and the public to the attention of appropriate authorities, or take such steps as may be necessary in that regard.
6. Without limiting the generality of its objects, take any steps required to protect the interests of ophthalmology, the rights of the public to adequate eye care and the interests of its members.
7. The above objects will be exercised with due consideration to the boundaries placed on professional associations by competition law.

Dr Matt Young **President** | Dr Linda Visser **Vice-President** | Dr Petrus Gous **Honorary Secretary**
Dr Andrew Ivey **Honorary Treasurer** | Dr Johann Serfontein **OSSA National Operations Manager** |



OSSA EXCO GOALS

1. Partnering with academic ophthalmology development and support public academic sector.
2. Influence HPCSA and Government in re-defining standards and requirements.
3. Advocacy for best quality education and eye care on policy level.
4. Oversee ethical matters of the profession.
5. Guide and resolve practice matters.
6. Improve service delivery across board.

OSSA would like to use this opportunity to respond to some of the statements made by the Health Market Inquiry in the report. As the custodian of Eyecare in South Africa, OSSA deems it of vital importance that misconceptions regarding Cataract Surgery and Cataract Surgery Rates contained in the Interim HMI report, should not be contained in the final Health Market Inquiry Report when published.

EXECUTIVE SUMMARY

Even if one uses the CSR data from the HMI which was age standardized, South Africa is 11.8% lower than OECD average Cataract Surgical Rate in 2010; 12.4% lower in 2011; 14.1% lower in 2012; 14.2% lower in 2013 and 17.4% lower in 2014. Upon further analysis of the data underlying Figure 8.2 of the Health Market Inquiry report, as it pertains to Cataract Surgery, questions can be raised as to the methodology of arriving at this conclusion. Waiting times for cataract surgery in the OECD countries are much higher than South Africa, indicating an under-supply of services in the OECD countries, and not effectively proving that South African patients are being over-serviced or subjected to supplier driven over-utilisation.

The prevalence of cataract is increasing with age in developing countries, and often occurs earlier in life, while the incidence is higher. The South African Private Sector is able to address this rising prevalence by increasing surgical rates and not by imposing waiting times.

Data from Australia show that cataract prevalence doubles with each decade of age after 40 years, so that everyone in their nineties is affected.

Research Published in 2001¹ estimated that the world's population will increase by about one third by 2021. This growth will occur predominantly in developing areas. During the same period, the number of people over 65 years of age will more than double. This greying of the population will occur in both developing and developed countries. If nothing else alters, these demographic changes will lead to doubling the amount of cataracts, visual morbidity, and need for cataract surgery. This epidemic has hit South Africa, as predicted.

Cataract surgery now accounts for more than half the ophthalmic procedures in some areas, and in several countries it is the most common elective surgery.

Based on research, the figures supplied by HMI specifically shows that Cataract Surgical Rate (CSR) Increases in the South African environment correlates with the absolute pensioner number increases in the CMS reports, but is even below this increase, pointing to an under servicing in the cataract environment.

Research by NICE shows that there is no evidence that delaying surgery on the basis of visual acuity will reduce costs. In fact, the Quality Life Adjusted Years (QALY) lost by delaying surgery until a particular threshold is met, makes this a more expensive option in health economic terms.

¹ Cataract blindness – challenges for the 21st century. Garry Brian & Hugh Taylor. *Bulletin of the World Health Organization*, 2001, 79 (3)



OSSA has designed a Cataract Registry for quality monitoring of clinical outcomes in Cataract Surgery, which is available to use by funder administrators, but there is reluctance amongst administrators to pay a R150 fee per pre-authorisation for use of the registry.

1. HEALTH MARKET INQUIRY CATARACT ANALYSIS

OSSA has done an independent analysis of the Cataract Surgical Data supplied by the Health Market Inquiry in Table 92 of the Expenditure Analysis report on Providers, as contained in the HMI report Annexures.

Table 92: Cataract Surgery Admission Rates by Age Band, All Schemes 2010-2014

Cataract Admissions per 1 000 Lives	2010	2011	2012	2013	2014
Under 50	0.47	0.51	0.49	0.48	0.46
50 - 54 Years	5.03	5.09	5.35	5.46	5.47
55 - 59 Years	11.27	11.72	11.71	11.65	11.82
60 - 64 Years	22.38	23.32	23.79	23.84	24.49
65 - 69 Years	40.21	41.51	42.57	43.92	44.84
70 - 74 Years	62.28	63.19	63.38	65.90	66.55
75 - 79 Years	69.95	74.20	71.67	77.63	74.97
80+ Years	52.48	50.82	45.86	55.67	50.48
All Ages	5.24	5.49	5.98	6.50	6.63
All Ages (standardised)	6.24	6.42	6.37	6.68	6.63

OSSA commission Insight Actuaries to analyse the data underlying Figure 8.2 in the HMI report. Insight reported the following:

For purposes of the above graph, the individual cataract surgery rates for each of the countries have not been adjusted to the average age profile of the combined OECD countries, as has been done with the South African rate. The average cataract surgery rate for the OECD countries determined by the HMI was *8.33 per 1 000 lives*. It is unclear how this was weighted and what factors were considered in calculating the average.

After adjusting the cataract surgery rates of the individual OECD countries for age profile, to the average age profile of the combined OECD countries, the recalculated average cataract surgery rate for the OECD countries is *8.62 per 1 000 lives*, compared to *12.53 per 1 000 lives* in South Africa. This would imply that the cataract surgery rate in South Africa is 1.45 times higher than the average cataract surgery rate in OECD countries. This is somewhat lower than the 1.5 higher rate, as determined by the HMI.

Several issues were raised by Insight regarding the analysis process, which should be noted by the HMI. These are divided into issues with Risk Adjustment, Cataract Admission Definitions, and other considerations.

Risk Adjustment

The HMI has adjusted the South African cataract surgery rate for the different age profile but has not considered a similar adjustment to the individual OECD countries that are used in the comparison. This could affect the weightings and the average cataract surgery rate.

The HMI has also not considered other risk factors which could affect the probability of a person requiring a cataract surgery and the prevalence of these risks in South Africa compared to the OECD countries.

Cataract Admission Definition

It has not been ascertained whether the OECD countries considered cataract admissions when the surgery was done during an admission for another procedure.



According to the definition of a cataract admission a patient admitted once for a cataract procedure in both eyes is counted once, while a patient admitted separately for each surgery is counted twice. In South Africa it is common practice that patients requiring cataract surgery in both eyes will have these procedures done separately, with a resting period between admissions. It is not clear whether the OECD countries have similar practices.

Other considerations

The OECD countries' populations and cataract admission statistics are for the full population while the South African population under consideration is the subset of lives who are members of a medical scheme.

Medical scheme membership in South Africa is voluntary which gives rise to a certain degree of anti-selection. The medical scheme membership in 2014 represented approximately 16% of the country's population.

The Insight report is attached as an Annexure to this submission.

Another unconsidered aspect of Cataract Surgeries amongst OECD countries, is waiting times. Table 1 shows the waiting times as available for 4 of the 18 countries used for comparative purposes in Table 8.2, as well as other countries in the OECD for which waiting times are available for the period in question. The average waiting for the four countries in the comparative sample ranges between 81.47 days in 2010 to 99.7 days in 2013. The average waiting time across these countries is 93.38 days. Although not included in the OECD data, the mean waiting period in the United Kingdom's National Health System has a wide range, and is thought to be up to 15.5 months in some regions.² In Ireland, the mean waiting period is currently thought to be up to 28 months.³ Although the waiting times for Cataract surgery in the South African private sector is not available, it is widely accepted that there are no significant barriers to surgery in the SA private sector as far as waiting times are concerned and most patients can be accommodated on surgical lists for required surgery within 14 days of seeing an Ophthalmologist.

The presence of waiting times in the OECD countries indicates that Cataract Surgical Rates are much lower than the actual Cataract Incidence and there is under-utilisation reflected in the Cataract Surgical rates for these countries, possibly due to capacity issues and design of the health systems in these countries. This comparison therefore only points to under-supply of services in OECD countries and does not necessarily support the premise of over-utilisation in South Africa, but rather the availability of capacity to adapt to rising incidence of cataracts by increasing surgical rates accordingly.

²<https://www.telegraph.co.uk/news/2016/09/21/patients-wait-up-to-15-months-for-cataract-ops-in-devastating-lo/>

³ <https://www.thetimes.co.uk/article/patients-wait-five-years-for-cataract-surgery-vs9x035zl>



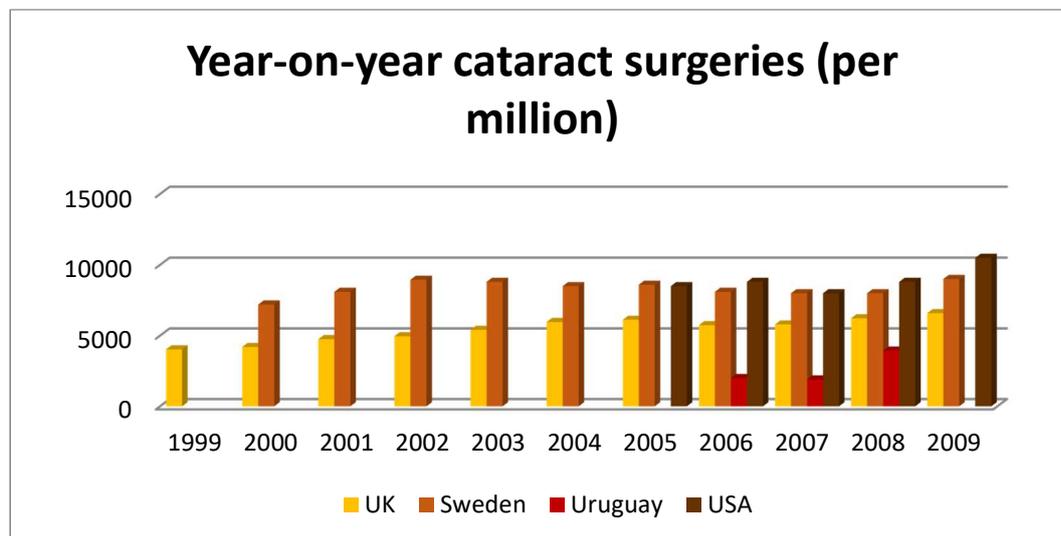
Table 1 OECD Data on Cataract Surgery Waiting Times

Dataset: Health Care Utilisation			2010	2011	2012	2013	2014	Average	
Cataract surgery	Measure	Country							
	Waiting times of patients on the list: Mean (days)	Ireland	105.6	144.1	145.6	150	148	138.66	
		New Zealand	75.4	64.9	62	57.8	46.3	61.28	
		Portugal	84.9	99.9	102.4	102.3	92.3	96.36	
		Spain	60	71	86	88.7	80.5	77.24	
		Average		81.475	94.975	99	99.7	91.775	93.38
		Chile	..	..	85	91	108	94.66
		Estonia	705	800	950	1168	1318	988.2	
		Hungary	..	..	..	186.6	177.7	182.15
		Poland	..	..	371	404	423	399.33
		Slovenia	..	63.3	107.8	122.7	108	100.45	
		Sweden	..	..	..	..	..	..
		Average		185.39583	191.16786	223.2	247.08	259.3575	221.24

Data extracted on 28 Sep 2018 10:39 UTC (GMT) from OECD.Stat

The 2014 CSR in the HMI Report is 6.63/1000. This is well below that of Sweden and the US in 2009 and in line with the UK in 2009, as illustrated in Figure 1, below. The Cataract Surgical Rate per 1000 members only increased by 2% in 2014 and decreased by 0.7% with age adjustment. This, while the pensioner numbers in all schemes increased by 3.3% between 2013 and 2014. The scheme membership in that same time increased by 0.4% and the average age increased by 0.6%. The increase in CSR is therefore actually below the increase in the number of scheme pensioners. Absolute Pensioner numbers were determined by using the Scheme member numbers and the pensioner Ratio.

Figure 1 Cataract Surgical Rates, International Trends



The research by Taylor⁴ shows that Cataract surgical rates can be linked to the population over 65. Using the average scheme age as a determinant of Cataract Surgery need is not correct, as an influx of younger members would reduce the scheme age, but would not reduce the number of cataract surgeries amongst the older scheme population. It is also important to note, that between 2010 and

⁴ Cataract blindness – challenges for the 21st century. Garry Brian & Hugh Taylor. *Bulletin of the World Health Organization*, 2001, 79 (3)



2014, the scheme population increased on average by 1.5% per year, but the absolute number of pensioners increased by 4.5% on average annually. The age adjusted Cataract Surgical Rate is below the average absolute pensioner number increase during the period and slightly above the scheme member increase. (Table 2, below). Cataracts are a direct consequence of an increase in older scheme members and is actually increasing less than pensioner numbers in the period under observation by the HMI.

Table 2 – CMS Membership, pensioner figures and HMI Cataract Rates

	2010	2011	Increase (2011)	2012	Increase (2012)	2013	Increase (2013)	2014	Increase (2014)	Average Increase
Scheme Members	8315718	8526409	2.53%	8679473	1.8%	8776279	1.1%	8814458	0.4%	1.5%
Average Age	31.5	31.6	0.32%	32	1.3%	31.9	-0.3%	32.1	0.6%	0.5%
Pensioner Ratio	6.50%	6.60%	-	7.10%	-	7.10%	-	7.30%	-	
Absolute Number of Pensioners	540522	562743	4.11%	616243	9.5%	623116	1.1%	643455	3.3%	4.5%
Cataracts All Ages (HMI Table 92)	5.24/1000	5.49/1000	4.7%	5.98/1000	8.9%	6.50/1000	8.6%	6.63/1000	2.0%	6.05%
Cataracts All Ages (Standardised)	6.24/1000	6.42/1000	2.9%	6.37/1000	-0.7%	6.68/1000	4.8%	6.63/1000	-0.7%	1.89%

OSSA would like to bring the following research to the attention of the Health Market Inquiry, as an indication of international trends of increased Cataract Prevalence and how this is mirrored in the South African environment. South African private sector patients are not faced with supply side constraints and subsequent waiting times, which is the norm in OECD countries. This is especially prevalent in National Public Health systems, which are included in the OECD data. The South African Private Healthcare sector is therefore in a better position to address the rising incidence in Cataracts, by providing the necessary surgical services when required by patients, without having to impose waiting times.

2. WHY IS THE PREVALENCE OF VISUALLY SIGNIFICANT LENS OPACIFICATION INCREASING? INTERNATIONAL TRENDS

Witborn & Rein (2014) published a report, “The Future of Vision: Forecasting the Prevalence and Costs of Vision Problems”, in which they built on the knowledge gained through the preceding two reports on the prevalence and costs of vision problems and forecast how their impacts may change and grow in the coming years in the United States. They estimate that in the year 2014, 25.7 million Americans had cataracts (8.1% of the 318.6 million US population), 8.1 million lived with diabetic retinopathy (2.5% of the US population), 2.9 million have glaucoma (1% of the US population) and 2.2 million suffer from advanced stages of age related macular degeneration (AMD) (0.7% of US population). They project that the total number of cases of these four diseases will increase by 50% by 2032. By 2050, the number of Americans with advanced-stage AMD will double to 4.4 million, glaucoma prevalence will increase 93% to 5.5 million, cataract will grow by 78% to 45.6 million, and the prevalence of diabetic retinopathy will increase by 63% to 13.2 million.⁵

⁵ Wittborn, J & Rein, D. **THE FUTURE OF VISION - Forecasting the Prevalence And Costs of Vision Problems.** 2014.. University of Chicago. Presentation Presented to *Prevent Blindness*.



These projections starkly illustrate the potential impacts of looming changes to the landscape of visual health driven largely through demographic shifts that will occur in the coming decades in the US. The most critical aspect is the aging of the baby-boomer generation. By the year 2032, the rapid growth of the population from ages 65 to the mid 80's will cause dramatic increases in the prevalence and costs of vision problems. In the following decades, the confluence of the aging baby-boomers' numbers and increased longevity will drive spectacular growth in the elderly population, which will lead to the age group of persons 90 and older exhibiting by far the highest rates of growth in the prevalence of vision problems and costs of any age group. By 2032, the US population will increase to 363 million people, while the projected cataract numbers will increase to 38.4 Million, or 10.6% of the population¹.

In a further study⁶, Rochester Epidemiology Project (REP) databases were used to identify all incident cataract surgeries in Olmsted County, Minnesota, between January 1, 2005, and December 31, 2011. Age-specific and sex-specific incidence rates were calculated and adjusted to the 2010 United States white population. Data were merged with previous REP data (1980 to 2004) to assess temporal trends in cataract surgery. Change in the incidence over time was assessed by fitting generalized linear models assuming a Poisson error structure. The probability of second-eye cataract surgery was calculated using the Kaplan-Meier method. Included were 8012 cataract surgeries from 2005 through 2011. During this time, incident cataract surgery significantly increased ($P < .001$), peaking in 2011 with a rate of 1100 per 100 000 (95% confidence interval, 1050–1160). The probability of second-eye surgery 3, 12, and 24 months after first-eye surgery was 60%, 76%, and 86%, respectively, a significant increase compared with the same intervals in the previous 7 years (1998 to 2004) ($P < .001$). When merged with 1980 to 2004 REP data, incident cataract surgery steadily increased over the past 3 decades ($P < .001$).

Research by Brian & Taylor (published in 2001)⁷ already predicted the problem of increasing cataract prevalence. They stated that increasing age is associated with an increasing prevalence of cataract. Data from Australia show that this prevalence doubles with each decade of age after 40 years, so that everyone in their nineties is affected. Similar data come from population-based studies in other economically developed parts of the world.

The prevalence of cataract also increases with age in developing countries, and often occurs earlier in life, while the incidence is higher. For example, in an Indian study, visually significant cataract occurred 14 years earlier than in a comparable study in the United States. The age-adjusted prevalence of cataract in India was three times that of the US, with 82% of Indians of 75 to 83 years old having visually significant cataract or aphakia, compared to 46% (senile lens changes associated with a visual acuity of 6/9 and worse, or a history of cataract extraction) of those aged 75 to 85 years in the US. Over the next 20 years, it is estimated that the world's population will increase by about one third. This growth will occur predominantly in developing areas. During the same period, the number of people over 65 years of age will more than double. This greying of the population will occur in both developing and developed countries. If nothing else alters, these demographic changes will lead to doubling the amount of cataracts, visual morbidity, and need for cataract surgery. The current 20 million people with severely reduced vision of 3/60 or worse as a result of cataract will have swelled to 40 million by the year 2020. The challenge we face is to prevent this from occurring by delaying the development of cataract and by providing ready access to cataract surgery for all those who need it³. Delaying or postponing surgery will therefore simply increase the future burden thereof, at inflationary increased costs.

⁶ Gollogly, H.E, Hodge, D.O, St. Sauver, J.L & Erie, J.C. **Increasing incidence of cataract surgery: Population-based study.** *Journal of Cataract and Refractive Surgery* 2013 September ; 39(9): 1383–1389

⁷ Cataract blindness – challenges for the 21st century. Garry Brian & Hugh Taylor. *Bulletin of the World Health Organization*, 2001, 79 (3)



The threshold for cataract surgery in many industrialized countries is now 6/9 or less. This has resulted in a substantial increase in numbers receiving surgery in these countries over the last 20 years. Three- to fourfold increases in a decade were reported from the United States, Sweden, the United Kingdom and Australia. Cataract surgery now accounts for more than half the ophthalmic procedures in some areas, and in several countries it is the most common elective surgery. In recent years, corneal refractive procedures have caused increased public scrutiny of vision and its correction³.

There are a number of other factors leading to increases in Cataract Surgical Rates. These include Increases in population above 65⁵; Technology changes such as Newly-developed technologies, Improvement of existing technologies and Surgical technique improvement and/or adjustment^{8,9,10}; Decrease in threshold value necessary for surgery⁶; Increased public awareness of and demand for cataract surgery⁶; Decrease in the rate of surgical complications¹¹; Increase in visual outcome post-op and improvement in visual acuity⁷ and finally also, the Cataract Surgical Backlog in South Africa.

In England and Wales there is an estimated cataract backlog of 2.4 million people with visual impairment (<6/12) due to cataract. Figures from 2001 shows approximately 160 000 cataract operations were performed each year, with an annual increase of about 7%³.

Looking at international data, Figure 1, below, shows the Cataract Surgery Rates for various countries from data compiled by the WHO. It shows that the United States had a Cataract surgery rate of above 10 per 1000 population in 2009 already. Sweden had approximately 8.5/1000 population and the UK was sitting at 6.1/1000 population in the same year. There is generally an upward trend in the increased prevalence of visually significant lens opacification, despite any interventional attempts by the countries involved, through either funding or government interventions.

International research shows seven factors adding to an increased Cataract Surgical rate worldwide, which are also applicable to the South African environment. These include:

- a. Increase in population over 65¹²
- b. Technology^{6,8,13}
 - i. Newly-developed technologies
 - ii. Improvement of existing technologies
 - iii. Surgical technique improvement and/or adjustment
- c. Decrease in threshold value necessary for surgery⁸
- d. Increased public awareness of, and demand for, cataract surgery⁵
- e. Decrease in the rate of surgical complications⁹
- f. Increase in visual outcome post-op and improvement in visual acuity⁶

Based on this research, the figures supplied by CMS specifically shows that CSR increases in the Medical Scheme population over 65 mirrors the age profile number increases, reflecting the international experience. The reality is that Ophthalmology has worked hard to improve access to appropriate eye care using best technology, to all patients, including the lower benefit plans. This will obviously result in a temporary increase in surgical rate, which correlates with improved standards of quality care. Patients do have these expectations and the Act requires doctors to do so. The Cataract

⁸ Kanthan GL, Wang JJ, Rochtchina E, Tan AG, Lee A, Chia E-M et al. **Ten-Year incidence of age-related cataract and cataract surgery in an older Australian population. The Blue Mountain eye study.** *Ophthalmology* 2008; 115:808-814.

⁹ Donaldson KE, Braga-Mele R, Cabot F, Davidson R, Dhaliwal DK, Hamilton R. et al. **Femtosecond laser-assisted cataract surgery.** *J Cataract Refract Surg* 2013; 39:1753-1763.

¹⁰ Dua HS, Said DG, Otri AM. **Are we doing too many cataract operations? Cataract surgery: a global perspective.** *Br J Ophthalmol* 2009; 93:1-2

¹¹ Lundström M, Goh P-P, Henry Y, Salowi MA, Barry P, Manning S, et al. **The changing pattern of cataract surgery indications. A 5-year study of 2 cataract surgery databases.** *Am Acad Ophthalmol.* 2015; 122:31-38.

¹² Brian G, Taylor H. Cataract blindness – challenges for the 21st century. *Bull World Health Org* 2001; 79:249-256.

¹³ Donaldson KE, Braga-Mele R, Cabot F, Davidson R, Dhaliwal DK, Hamilton R. et al. **Femtosecond laser-assisted cataract surgery.** *J Cataract Refract Surg* 2013; 39:1753-1763.



Surgical Rate Increases in the South African environment correlates with the Pensioner rate increases in the CMS reports, but is even below this increase, pointing to an under servicing in the cataract environment.

Further to this, a recent guideline released by the National Institute for Health and Care Excellence (NICE) in the UK on cataract surgery, clearly shows that there is no evidence that delaying surgery on the basis of visual acuity will reduce costs. In fact, the Quality Life Adjusted Years (QALY) lost by delaying surgery until a particular threshold is met, makes this a more expensive option in health economic terms¹⁴.

3. HMI AND QUALITY MONITORING

The HMI states that there is currently no standard mechanism for measuring the performance of providers. In line with requirements for greater transparency and more objective benchmarking, a standard system should be developed to monitor the quality and outcomes of healthcare services.

The OSSA/OMG Cataract Registry

OSSA has gone to great trouble and costs to develop a Cataract Registry, for monitoring of Outcomes in Cataract surgery. The Cataract Registry, launched in July 2015, was designed as a healthcare process and outcomes measurement tool that also functions as a pre-authorization system in order to support doctors to actively capture the additional clinical indicators needed to measure patient health outcomes.

In its initial launch, the system was implemented within the Cataract global fee arrangement of two small-to-medium sized schemes. It is now being scaled up and the intention is to roll the Cataract Registry out to more schemes and for more procedures and with other types of reimbursement methodology. Its future use is not limited to Cataract Surgery but we are looking at expansion into an Eye Registry for various other Ophthalmology services.

Benefits of the Cataract Registry

Advantages of the system includes the following:

- Better patient health outcomes due to quality measurement
 - Patient health outcomes are monitored from both a clinical and subjective patient point of view using internationally recognized tools.
 - Enabling doctors can track their own patient quality health outcomes - data protection and confidentiality rules are built into the system and Ophthalmologists can only see their own patient's clinical outcome measures.
- Availability of patient health outcome reports which can be incorporated into Provider Profiles
- Significant reduction of administration and administration costs from both the scheme and doctor perspective
 - Less administration involved in electronic pre-authorizations e.g. reduction in phone calls
 - Administration can further be reduced by building special motivations into the registry
- Makes implementation of contracts and preferred provider agreements easier

¹⁴Cataracts in Adults: management. NICE guideline, August 2017. <https://www.nice.org.uk/guidance/ng77/resources/cataracts-in-adultsmanagement-pdf-1837639266757>



- The system has a built in network management capability to assist doctors in signing onto preferred provider agreements electronically
- The system enables easy management of alternative reimbursement contracts e.g. all global fee rules are built into the system.
- The system also makes global fee management easier for other parties e.g. pre-authorization notifications are sent to hospitals notifying them to submit global fee claims to the Ophthalmologist directly for payment.
- Reduced fraud risk with improved service
 - Member validation is built into the system through daily membership file imports, reducing efforts in determining member eligibility
- Enables the testing of new technology with schemes through better managed pilot studies.
- The system is easy to use and available online 24/7.

Despite these obvious advantages, OSSA has had many challenges in getting uptake for the use of the Cataract Registry amongst Medical Scheme administrators. One has to assume that administration fees would be paid by administrators of schemes on behalf of the schemes they administer. A reluctance exists amongst administrators to make these payments, despite the R150 cost equating to around 0.07% of the costs of a cataract surgery. It is therefore concerning that administrators are indicating that they are interested in implementing outcomes measurement and quality monitoring, but are not willing to pay a R150 fee in order for this process to happen. Until the funding industry starts applying financial value to clinical outcomes, these measures are unlikely to be implementable.

In 2010, the OECD published “Health Systems Priorities when money is tight” in response to the observation that healthcare spending continues to grow faster than the economy in many OECD countries. The OECD report identified pay-for-performance as one of the approaches countries are turning to get better value for money. Not enough though was known whether pay-for performance system do in fact increase value for money or that they are associated with improved quality or healthcare outcomes. In 2014, the European Observatory on Health Systems and policy analysed the experience of 10 OECD countries and published a volume, *Paying for Performance in Health Care*. The findings of the volume in many ways mirrored the findings of a few rigorous systematic reviews of pay-for-performance programmes and the opinion of many leading commentators. It found that pay-for-performance does not lead to “breakthrough” quality improvements, and the performance measures and the other key building blocks of pay-for-performance remain highly inadequate. But the findings of the study also suggest that pay-for-performance has a broader role to play as an instrument for improving health system governance and strategic health purchasing. Several of the programmes that showed the modest results also claim the most powerful impact on the relationship between purchasers and providers, in some cases opening the door to discussion of provider payment reform, quality measurement and accountability for outcomes¹⁵.

CONCLUSION

Increases in Cataract Surgical Rates in South Africa reflects the international situation, where increases in Cataract Incidence are prevalent. Increases in Cataract Surgical Rates internationally are explained by a number of factors, which are also applicable in South Africa, with the benefit that the South Africa private sector has the capacity to address these rising rates of cataract incidence with increasing surgical rates and not by resorting to waiting times. Finally, there is evidence that delaying Cataract Surgery actually adds to the overall Health Economic costs of the disease and that postponement of

¹⁵ European Observatory on Health Systems and policy, 2014



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surgery therefore serves no purpose, increasing rates are therefore preferable to render services at lower costs.

Issued by:

Dr Matt Young
OSSA President



Cataract Surgery Rate Peer Review

**Review of the Cataract Surgery Rate
included in the HMI Provisional Findings and Recommendations
Report dated 5 July 2018**

Version 1

28 September 2018

Table of Contents

- 1 Introduction3
- 2 Data3
- 3 Data Limitations4
- 4 Definition of a Cataract Surgery4
- 5 Review of HMI report.....5
- 6 Shortcomings in the HMI analysis7
 - 6.1 Risk Adjustment7
 - 6.2 Cataract Admission Definition7
 - 6.3 Other considerations7
- 7 Conclusions and Recommendations8



1 Introduction

This report is addressed to the Ophthalmological Society of South Africa (OSSA). OSSA has requested that Insight Actuaries and Consultants (Pty) Ltd (Insight) reviews the information contained in the Competition Commission Health Market Inquiry (HMI) Provisional Findings and Recommendations Report dated 5 July 2018, related to cataract surgery rates in South Africa.

2 Data

The following data was received from the HMI data room.

- Cataract surgery admission rate from 1 January 2010 to 31 December 2014
- Medical scheme membership data from 1 January 2010 to 31 December 2014

A data request was sent by the HMI to 87 medical schemes in South Africa and responses were received from 78 medical schemes. The appendix to the HMI report, entitled Expenditure Analysis Report 1: Data Quality and Descriptive Statistics, contains details on the quality assurance of the data provided.

The following publicly available information was sourced from the OECD website:

- Cataract Surgery Rates from 1 January 2010 to 31 December 2014
- Population by age group for the OECD countries during 2012

To align the findings of this report to the analysis included in the HMI report, we have only considered the data for the following 18 out of the 34 OECD countries. Any reference in this report to the OECD countries is a reference to the 18 countries used in the analysis:

- Australia
- Austria
- Belgium
- Canada
- Denmark
- Finland
- France
- Germany
- Hungary
- Ireland
- Israel
- Italy
- Luxembourg
- New Zealand
- Portugal
- Spain



-
- Sweden
 - United Kingdom

3 Data Limitations

The medical scheme membership used by HMI has been compared to the total medical scheme membership based on the CMS annual report for each of the corresponding years. It has been noted that although HMI had only used a subset of the medical scheme membership, the membership for 2012, 2013 and 2014 is higher than the total medical scheme membership as stated in the CMS annual report.

4 Definition of a Cataract Surgery

The OECD Surgical Procedures document defines the method of counting surgical procedures, extracted below:

"The method to count procedures should be based on a count of the number of patients who have received a given procedure or on a count of only one code per procedure category for each patient, in order to avoid double-counting procedures for which more than one code may be used in certain national classification systems. (For example, if a percutaneous coronary intervention with a coronary stenting is recorded as two separate codes, it should be reported as only one patient/procedure. Another example: if a cataract surgery is performed on the two eyes, only one patient/procedure should be counted. However, if a patient gets the same procedure at two different moments in a given year, then this procedure should be counted twice."

NMG has confirmed that the same approach was followed in counting admissions for cataract surgery in South Africa.



5 Review of HMI report

The table below is an extract of the Appendix to the HMI report, entitled Expenditure Analysis Report 5: Practitioner Analysis.

Table 92: Cataract Surgery Admission Rates by Age Band, All Schemes 2010-2014

	Cataract Admissions per 1 000 Lives				
	2010	2011	2012	2013	2014
Under 50	0.47	0.51	0.49	0.48	0.46
50 - 54 Years	5.03	5.09	5.35	5.46	5.47
55 - 59 Years	11.27	11.72	11.71	11.65	11.82
60 - 64 Years	22.38	23.32	23.79	23.84	24.49
65 - 69 Years	40.21	41.51	42.57	43.92	44.84
70 - 74 Years	62.28	63.19	63.38	65.90	66.55
75 - 79 Years	69.95	74.20	71.67	77.63	74.97
80+ Years	52.48	50.82	45.86	55.67	50.48
All Ages	5.24	5.49	5.98	6.50	6.63
All Ages (standardised)	6.24	6.42	6.37	6.68	6.63

The cataract surgery rate per 1 000 lives are shown in the table above for each year from 2010 to 2014. This rate has been further adjusted to account for the changes in age profile through the years, such that the cataract surgery rate in each year is comparable to 2014, the base year. This is referred to as the standardised rate in the table above.

The five-year average cataract surgery rate in South Africa, adjusted to the medical scheme population age profile in 2014 was *6.48 per 1 000 lives*.

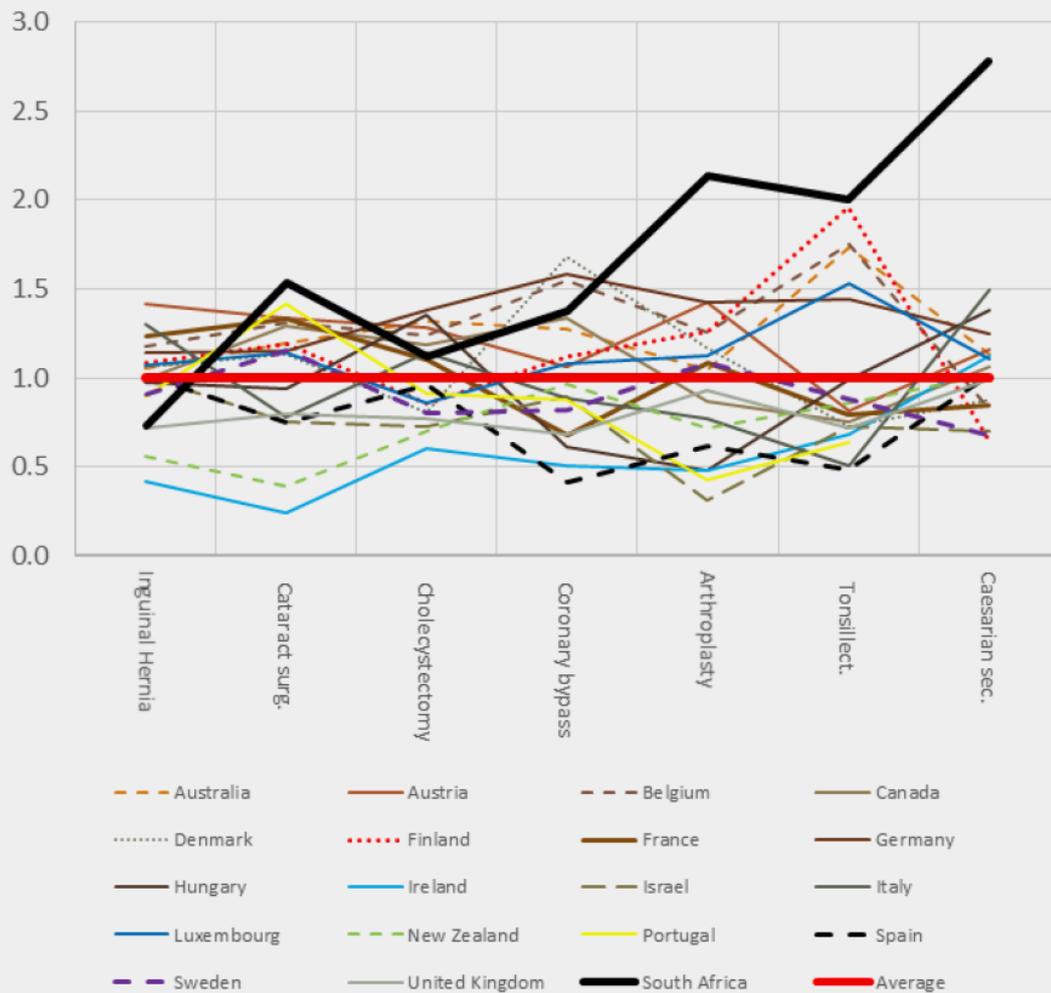
The graph below is an extract of the HMI report. According to the graph, the cataract surgery rate in South Africa is 1.5 times the average cataract surgery rate of the OECD countries.

The cataract surgery rates for each of the OECD countries have not been adjusted for differences in age profiles. The South African rate has been adjusted for the age profile, based on the average age profile of the combined OECD countries.

The cataract surgery rate adjusted for the age profile of the OECD countries is *12.53 per 1 000 lives*. The increase in the cataract surgery rate after this adjustment is due to the fact that the proportion of lives over age 50 is 42% lower in the South African medical scheme population compared to the average proportion of lives over age 50 in the OECD countries.



FIGURE 8.2: RELATIVE AGE-ADJUSTED ADMISSION RATES (INDEXED TO 1) FOR SEVEN COMMON DISCRETIONARY ADMISSIONS IN SOUTH AFRICA AND A SELECTION OF DOCUMENTED OECD COUNTRIES



For purposes of the above graph, the individual cataract surgery rates for each of the countries have not been adjusted to the average age profile of the combined OECD countries, as has been done with the South African rate. The average cataract surgery rate for the OECD countries determined by the HMI was *8.33 per 1 000 lives*. It is unclear how this was weighted and what factors were considered in calculating the average.

After adjusting the cataract surgery rates of the individual OECD countries for age profile, to the average age profile of the combined OECD countries, the recalculated average cataract surgery rate for the OECD countries is *8.62 per 1 000 lives*, compared to *12.53 per 1 000 lives* in South Africa. This would imply that the cataract surgery rate in South Africa is 1.45 times higher than the average cataract surgery rate in OECD countries. This is somewhat lower than the 1.5 higher rate, as determined by the HMI.



6 Shortcomings in the HMI analysis

6.1 Risk Adjustment

The HMI has adjusted the South African cataract surgery rate for the different age profile but has not considered a similar adjustment to the individual OECD countries that are used in the comparison. This could affect the weightings and the average cataract surgery rate.

The HMI has also not considered other risk factors which could affect the probability of a person requiring a cataract surgery and the prevalence of these risks in South Africa compared to the OECD countries.

6.2 Cataract Admission Definition

It has not been ascertained whether the OECD countries considered cataract admissions when the surgery was done during an admission for another procedure.

According to the definition of a cataract admission a patient admitted once for a cataract procedure in both eyes is counted once, while a patient admitted separately for each surgery is counted twice. In South Africa it is common practice that patients requiring cataract surgery in both eyes will have these procedures done separately, with a resting period between admissions. It is not clear whether the OECD countries have similar practices.

6.3 Other considerations

The OECD countries' populations and cataract admission statistics are for the full population while the South African population under consideration is the subset of lives who are members of a medical scheme.

Medical scheme membership in South Africa is voluntary which gives rise to a certain degree of anti-selection. The medical scheme membership in 2014 represented approximately 16% of the country's population.



7 Conclusions and Recommendations

Based on our calculations, the cataract surgery rate in South Africa is 1.45 times higher than the average cataract surgery rate in the OECD countries., however this rate could potentially change based on additional adjustments that should be considered, as detailed in Section 6 above.

The HMI has considered the age profile of South Africa when comparing the cataract surgery rate to the OECD countries, however they have not considered the age profile of the individual OECD countries, and adjusted those rates, and hence the average, accordingly.

After the adjustment, the cataract surgery rate in South Africa remains higher than the cataract surgery rate in all the OECD countries considered. It is not clear whether the high cataract surgery rate is due to an over-servicing as eluded by HMI or due to other risk factors, not considered in this analysis.

We recommend that OSSA requests the HMI to adjust the cataract surgery rate in each of the OECD countries considered for other major risk factors that affect whether members require cataract surgery and to consider the rate at which South Africa and the OECD countries perform the cataract surgery for both eyes during a single admission.

