



The 11th _____ Report of the National Eye Database 2017

Included reports on

Cataract Surgery Registry 2002, 2003, 2004, 2007, 2008, 2009,
2010, 2011, 2012, 2013, 2014, 2015, 2016 and 2017
Klinik Katarak KKM and Pusat Pembedahan Katarak
MAIWP - Hospital Selayang

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With contributions from

Lee Annie and Teng Kam Yoke

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Disclaimer

There is a potential that data published for previous years in current reports may differ from annual reports published earlier. This is because analysis is based on latest dataset in NED database which may have been updated by Source Data Producers.

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In particular we would like to thank the following:

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5. Last but not least, the Director-General of Health for the permission to publish this report.

Thank you.

NED Steering Committee Members

February 2019

About National Eye Database

Introduction

The National Eye Database (NED) is an eye health information system supported by MOH. It is a clinical database consisting of two active patient registries, Monthly Ophthalmology Service Census, Outreach Census and three surveillance registries (on Contact Lens Corneal Ulcer, Intraocular Lens and Endophthalmitis). The patient registries are Cataract Surgery Registry, Retinoblastoma Registry, Glaucoma Registry, Diabetic Eye Registry and Age Related Macular Degeneration Registry. In 2015, Glaucoma Registry, Diabetic Eye Registry and Age Related Macular Degeneration Registry are inactive due to planning and upgrading work. The Source Data Producers are eye care providers, mainly from the public sector. Information collected, both clinical and epidemiological, are very useful in assisting the MOH, Non-Governmental Organizations, private healthcare providers and industry in the planning, evaluation and continuous improvement of eye care services, leading to prevention and control of blindness in the nation.

Vision

Accessible eye health information.

General Objectives of the National Eye Databases

1. To establish and maintain a web based eye health information system on natural history of visual threatening eye diseases, which are of public health importance. The information is useful in the planning and evaluation of eye care service.
2. To determine the effectiveness of treatment, both clinical outcomes and cost, and to identify factors influencing outcomes. This serves the needs of outcome assessment.
3. To provide information necessary to evaluate ophthalmology services through census and key performance indicators, as well as on safety or harm of products and services used in the treatment of a disease. This contributes to continuous quality initiative.
4. To evaluate the accessibility and equity in health care provision. This information enhances accountability.
5. To provide a mean of prompt and wide dissemination of epidemiological and clinical information through web such as real time registries reports and notification of epidemic of contact lens-related corneal ulcer. This is essential for public health advocacy
6. To stimulate and facilitate research on eye diseases.

CATARACT SURGERY REGISTRY

The Cataract Surgery Registry (CSR) was initiated in 2002 and collects data pertaining to patients who have had cataract surgery. Data collected include demography, medical history, operative events, post-operative visual outcomes and probable causes for poor outcome. Since 2008, data on posterior capsular rupture, visual outcome and post-operative endophthalmitis were linked to online key performance indicator for monitoring centre performance while data on incidence of posterior capsular rupture and patients with poor visual outcome are linked to online cumulative sum (CUSUM) to monitor competency of individual surgeon. Annual reports are available at www.acrm.org.my/ned, under the section of publication.

Objectives

1. To determine the frequency, distribution and practice pattern of cataract surgery in Malaysia.
2. To determine the outcomes and factors influencing outcomes of cataract surgery.
3. To evaluate cataract surgery services based on rate of posterior capsular rupture, post-operative infection, post-operative visual outcome and induced astigmatism.
4. To stimulate and facilitate research on cataract and its management.

RETINOBLASTOMA REGISTRY

Retinoblastoma registry collects data on the pattern of clinical presentation, mode of treatment and outcome of patients with Retinoblastoma seen at ophthalmology clinics with paediatric ophthalmology service. The main SDP is Hospital Kuala Lumpur, Hospital Queen Elizabeth and Hospital Umum Sarawak.

Objectives

1. To determine the incidence and distribution of Retinoblastoma in different states in Malaysia.
2. To determine the ethnic-specific prevalence of Retinoblastoma in Malaysia.
3. To study characteristics of RB patients in terms of clinical presentation and stage of disease based on International Intraocular Retinoblastoma Classification.
4. To evaluate types of treatments and monitor treatment trends.
5. To evaluate treatment outcomes including complications related to treatment.

MONTHLY OPHTHALMOLOGY SERVICE CENSUS

Since 2002, Ophthalmology Service of MOH has been collecting annual census from all the hospitals with ophthalmology departments. Data include essential service census and key performance indicators for ophthalmology service. There are 13 sections in the census return, namely out-patients, inpatients, major eye operations, cataract service, diabetic service, glaucoma service, and optometry service, and subspecialty services which include vitreoretinal, corneal, paediatric ophthalmology, oculoplasty, medical retinal, and a public health ophthalmology, and data on training records and prevention of blindness activities. Data are entered monthly by staff at sites via on-line data entry. Heads of ophthalmology department can view their own and other hospitals' real-time reports.

Objectives

1. To evaluate service output in all ophthalmology departments.
2. To evaluate service output in all ophthalmology departments.
3. To study trends in service output and service patterns.
4. To get baseline and norm from services provided by MOH ophthalmology departments.
5. To determine norm and set standards for performance indicators for centres which differ in strength of physical and human resources.

OUTREACH PROGRAMME CENSUS

Ministry of Health (MOH) is the biggest provider of ophthalmology service in the country including the outreach activities. However, data for these activities conducted by all the Ophthalmology Departments are not readily available and most are not properly documented.

Due to the increasing number of cataract surgeries performed in MOH facilities, the existence of the mobile and the satellite cataract services and the expansion in the outreach activities, these data need to be compiled and organised both at the central and departmental level. These data can be analysed and be used for the improvement of Ophthalmology outreach services in the country. Data collected include details of activity, total number of individual screened by age and disease, total number of referral to Ophthalmologist and Optometrists, total number of cataract surgeries done and the updated number of eye trained paramedics.

Objectives

1. To compile data pertaining to outreach activities by all ophthalmology department in the country.
2. To update the number of Primary Eye Care and Ophthalmic Post Basic staff available in the country.
3. To study the patients' demography in the outreach activities
4. To study the eye disease workload in the outreach activities
5. To study the cataract surgery workload in the outreach activities

KEY PERFORMANCE INDICATOR

The Ministry of Health (MOH) launched the implementation of Key Performance Indicators (KPIs) in February 2008 with the aim to assess the overall performance of services provided by Clinical Departments in MOH. The MOH Ophthalmology Service has identified KPIs which measure clinical performance of core ophthalmology service such as out-patient service, cataract surgery and diabetic eye screening.

From 2008 to 2011, there were 7 KPIs being measured in MOH Ophthalmology Service. However, the Quality Unit of MOH revised these KPIs in January 2012 and has implemented 3 KPIs and 4 performance indicators (PIs). Rate of infectious endophthalmitis following cataract surgery and Percentage of patients with post-operative visual acuity of 6/12 or better within 3 months are both PIs and National Indicator Approach (NIA). Rate of Posterior Capsular Rupture during Cataract Surgery has been removed both from KPI and NIA lists.

MEASUREMENT		INDICATOR	STANDARD
PI 1		Percentage of patients with waiting time of \leq 90 minutes to see the doctor at specialist clinic	\geq 80% of the patients are seen within ninety (90) minutes
PI 2	KPI 1	Percentage of diabetic patients who were given an appointment for first consultation within 6 weeks	\geq 80% of the patients are given an appointment for First Consultation within 6 weeks
PI 3		Percentage of patients with waiting time of within 16 weeks for cataract surgery	\geq 80% of patients have appointment given for cataract surgery within 16 weeks
PI 4	KPI 2	NIA Rate of infectious endophthalmitis following cataract surgery (2 cases per 1000 operations)	< 0.2% (2 cases per 1000 operations)
PI 5	KPI 3	NIA Percentage of patients with post-operative visual acuity of 6/12 or better within 3 months following cataract surgery in patients without ocular co-morbidity (850 cases 1000 operations)	> 85% (900 cases per 1000 operations)
PI 6		Cancellation rate of patients listed for cataract surgery under local Anaesthesia	\leq 10% cancellation
PI 7		Number of mortality/morbidity audits/ meetings conducted in the Department (in 6 months)	At least 6 times in 6 months

Note:

PI=Performance Indicator

KPI=Key Performance Indicator

NIA=National Indicator Approach

ADVERSE INCIDENCE REPORTING – INTRAOCULAR LENS

Intraocular lens may have defect during the manufacturing process and during implantation into the patients' eyes. This ranges from the production of IOL, packaging, distribution, insertion to when the IOL is already implanted into the patients' eyes.

This defect may range from manufacturing defect such as no IOL in the box or fracture of haptics or optics. It may also be in the form of deposits on the IOL or opacification detected weeks to years after surgery. All these defects will contribute directly to the patients' visual outcome. Some defects may require explantation and results in distress to both the patients and the surgeons. The cost for explantation of an opacified IOL also has to be borne by the patient and eye care providers.

It is also important to identify any common defect for example fracture of haptics or optics as this will be used as feedback to the industries to improve their IOL quality or be used for platform for further training pertaining to the IOL if required. Data collected include patient's demography, action taken, outcome and details of IOL.

Objectives

1. To identify any common defect in IOL
2. To detect cases with IOL opacification
3. To study the patients' characteristics in developing IOL opacification
4. To study the patient's outcome following treatment if any

ADVERSE INCIDENCE REPORTING – ENDOPHTHALMITIS

This is a complication which can occur following any intraocular surgery. Although uncommon, once occurred, it may lead to the loss of vision and possible loss of the eye itself. It is a devastating complication both to the patient, the care provider and the health system as the treatment is costly and the outcome after treatment can be uncertain. Therefore prevention of disease and surveillance of an outbreak is important. Data in CSR shows a decreasing percentage of endophthalmitis occurrences following cataract surgery among patients in the Ministry of Health (MOH) over the years. This is possibly due to the use of prophylactic antibiotics and the general improvement in technique and care in cataract surgery. However, it is imperative to monitor this complication closely due to the increasing number of cataract surgeries performed in MOH facilities, the existence of the mobile and the satellite cataract services and also the expansion in the outreach activities throughout the countries. Monitoring is also essential to prevent outbreak. Data collected include demography, possible risk factors, mode of treatment and the outcome following treatment.

Objectives

1. To detect outbreak and therefore exercise the necessary measure to control disease spread
2. To identify its risk factors or any common risk factors among cases
3. To study the patients' characteristics in developing post-operative infectious endophthalmitis
4. To study the patient's outcome following treatment

e-CUSUM

Cataract surgery is the most common procedure done in ophthalmology departments. The procedure is consistent and outcome is measured objectively by visual acuity. Cataract surgery outcome depends on surgeons' skill. With advancement in technology and intraocular lens implantation, good visual outcome is almost certain among patients without pre-existing ocular co-morbidity. Hence, monitoring and evaluating surgeons' competency, especially trainees' performance, are essential in ensuring standard of care.

Cumulative Sum (CUSUM) software auto-mines data on occurrence of posterior capsular rupture and patients with post-operative vision worse than 6/12 from cataract surgery registry on surgery done by individual surgeon using unique surgeon ID. From 2008, by using individual unique username and password, surgeon can access his/her own CUSUM charts via eCUSUM web page. Consultant ophthalmologists can view their own as well as their trainees' charts. By doing so, monitoring on surgeons' competency in cataract surgery is made effectively and easily.

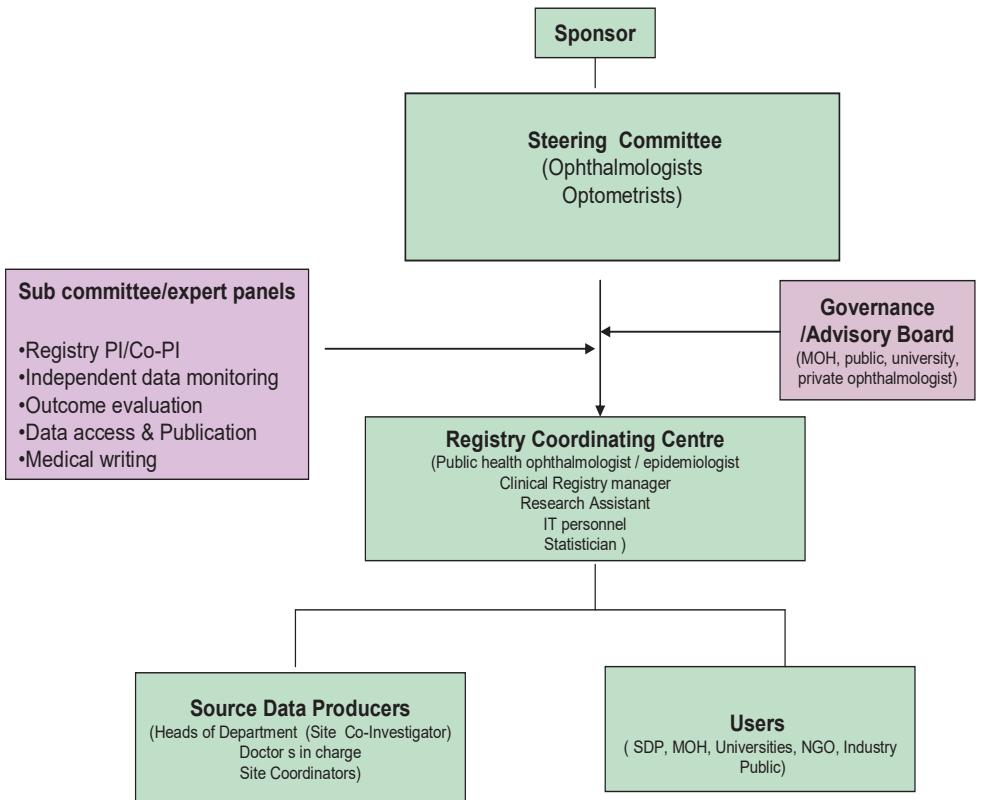
METHODS OF THE NATIONAL EYE DATABASE

The National Eye Database is designed as a cohort study. It is an online clinical database hosted at the Association of Clinical Registry Malaysia website at www.acrm.org.my/ned. Its protocol was approved by the Medical Research Ethical Committee of MOH on 2nd September 2008 (reference number NMRR 08-552-1707) and is accessible at the NED website.

Data collection and data entry are done at SDP sites. Data are collected either using case report forms (CRF) which are later entered into the web application, or are directly entered into the web application during the course of clinical work. Data management using data query are set in the web application to reduce inconsistency, out-of-range or missing values. Authorised staff at each SDP is given passwords to perform data entry. Individual SDP reports and aggregated reports based on cumulative data of all SDPs are available real-time at NED website. These reports are only accessible by heads of department, doctors and optometrists via authorised password. The web reports are descriptive analysis of data which have been entered. Annual statistical report will be produced based on data collected for a specific year. The statistical reports will be published yearly and distributed to users in MOH divisions and units, all the ophthalmology departments, universities, other relevant public agencies and non-governmental organisations.

The NED has high level of security for protection of its data. Data protection is ensured at all times through strict compliance with regulatory requirements such as authentications of users and web application owners, access control, encryption, audit trail, control of external communication links and access, as well as system backup and disaster recovery.

Governance



NED Steering Committee Members 2017

Advisor	Dr Nor Fariza Ngah Head of Service, Department of Ophthalmology, Hospital Shah Alam
Chairperson	Dr Mohamad Aziz Salowi Department of Ophthalmology, Hospital Selayang
Members	Dr Goh Pik Pin Clinical Research Centre, Ministry of Health Dr Elias Hussein Department of Ophthalmology, Hospital Kuala Lumpur Dr Zuraiddah Mustari Department of Ophthalmology, Hospital Sultanah Nur Zahirah Prof Dr Abdul Mutalib Othman Department of Ophthalmology, Universiti Sultan Zainal Abidin Dr Zaharidah Abd Kadir Department of Ophthalmology, Hospital Sultan Abdul Halim Dr Tengku Norina Tuan Jaafar Department of Ophthalmology, Hospital Raja Perempuan Zainab II Puan Noor Zahirah Hussein Department of Ophthalmology, Hospital Kuala Lumpur
Secretariat	Teng Kam Yoke Ophthalmic trained staff nurse, NED Clinical Registry Manager

NED State Managers 2017

State	State Manager	Hospital
Sarawak + Sabah + Labuan	Dr Lo Tze Wen	Hospital Umum Sarawak
Sarawak	Dr Nur Reza bt Mohd Noh	Hospital Sibu
Johor	Dr RM Nachammai A/P S Ramasamy	Hospital Sultanah Aminah
Melaka	Dr Goh Ching Teak	Hospital Melaka
Perak	Dr Wong Wai Kuan	Hospital Ipoh
Penang	Dr Lee Cheng Imm	Hospital Pulau Pinang
Kedah+Perlis	Dr Annie Lee	Hospital Sultanah Bahiyah
Kelantan	Dr Mariyani bt Mad Said	Hospital Raja Perempuan Zainab II
Terengganu	Dr Dzawati Amalin bt Basemin	Hospital Sultanah Nur Zahirah
Negeri Sembilan	Dr Juliana bt Mohd Thani	Hospital Tuanku Ja'afar
Selangor	Dr Ho Siew Lee	Hospital Serdang
Pahang, Wilayah Persekutuan KL and Putrajaya	Central Manager – Dr Aziz until further notice	Hospital Selayang

State Manager for Sabah, Perlis, Pahang, Wilayah Persekutuan KL, Putrajaya and Labuan will be appointed when the MO/s is/are available and criteria are fulfilled

NED Source Data Producers 2017

NORTHERN ZONE	
No.	SDP
1.	Hospital Kangar
2.	Hospital Alor Star
3.	Hospital Sungai Petani
4.	Hospital Kulim
5.	Hospital Pulau Pinang
6.	Hospital Bukit Mertajam
7.	Hospital Ipoh
8.	Hospital Taiping
9.	Hospital Teluk Intan
10.	Hospital Sri Manjung
	KK-KKM Kedah
	KK-KKM Pulau Pinang
EASTERN ZONE	
No.	SDP
11.	Hospital Kuantan
12.	Hospital Temerloh
13.	Hospital Kuala Terengganu
14.	Hospital Kemaman
15.	Hospital Kota Bharu
16.	Hospital Kuala Krai
	KK-KKM Kelantan
	KK-KKM Terengganu
	KK-KKM Pahang
CENTRAL ZONE	
No.	SDP
17.	Hospital Kuala Lumpur

18.	Hospital Putrajaya
19.	Hospital Selayang
20.	Hospital Klang
21.	Hospital Serdang
22.	Hospital Sungai Buloh
23.	Hospital Ampang
24.	Hospital Shah Alam
25.	Hospital Seremban
26.	Hospital Kuala Pilah
27.	Pusat Perubatan UKM
	Pusat Pembedahan Katarak MAWIP-Hospital Selayang
	KK-KKM Negeri Sembilan
SOUTHERN ZONE	
No.	SDP
28.	Hospital Melaka
29.	Hospital Johor Bahru
30.	Hospital Muar
31.	Hospital Batu Pahat
32.	Hospital Segamat
33.	Hospital Kluang
34.	Hospital Sultan Ismail
	KK-KKM Johor
SARAWAK	
No.	SDP
35.	Hospital Umum Sarawak
36.	Hospital Sibu
37.	Hospital Bintulu
38.	Hospital Miri
39.	Hospital Sarikei
	KK-KKM Sarawak

SABAH	
No.	SDP
40.	Hospital Queen Elizabeth
41.	Hospital Sandakan
42.	Hospital Tawau
43.	Hospital Keningau
44.	Hospital Wanita dan Kanak-kanak Likas
	KK-KKM Sabah

Foreword

By the year 2017, NED has accumulated a large pool of data from eleven years of online data entry alone. This journey has indeed epitomized the benefits of online data management; effortless production of graphs and tables, explicit display of data trending, real-time raw data download and many more. The flexible and dynamic web allows essential modification of the web-function to suit current service/research agenda based on core concepts that dataset must be complete, accurate and widely available. One of the initiatives implemented to sustain these concepts is to arrange the web functional icons in such a manner that data cleaning can be done systematically by the NED MOs or the State Managers. For example, under one of the icons, user can filter eyes with no fundal view due to dense cataract identified during pre-operative assessment. These eyes are tagged to remind user to edit data accordingly after surgery when fundus is clear after cataract removal. This will render calculation on ocular co-morbidity more accurate. There is also icon under which pending tasks (on submission of operative and outcome forms) are listed. This list reminds the users to submit all forms thus ensuring completeness of data entry for each surgery.

NED has web-functions which are otherwise not available in any conventional manual database. For example, Data Query function captures surgeries with abnormal biometric outcomes and presents them in a task lists for audit. These are the surgeries with refractive surprises which must not pass unnoticed. The ability to download raw data for example, not only help in ensuring completeness and accuracy of data entry but also real-time utilization of data in term of service monitoring/evaluation and research. IT technology has indeed facilitated and improved overall data management process from data entry, cleaning to data utility.

However, these IT innovations will be useless if the users in particular the surgeons are not engaged. One of the strategies deployed to address this issue is to embed CUSUM function in the main frame of the NED website under one of the icons. The surgeons can generate their CUSUM charts and obtain their excel cataract logbooks via NED, not via a separate website like before. But in order to do this, they are required to have NED login and passwords. By having access to wider NED website, we hope, besides using data to monitor and evaluate their own performances, the surgeons would also be able to use other data that we have been collecting over the years and see the impact they have on their own careers, service improvement and research.

A handwritten signature in blue ink, appearing to read "Mohamad Aziz Salowi". The signature is fluid and cursive, with some orange and yellow washes around it.

Mohamad Aziz Salowi
NED Chairperson 2017

Abbreviation

ADED	Advanced Diabetic Eye Disease	NPDR	Non Proliferative Diabetic Retinopathy
AMD	Age related Macular Degeneration	NPL	No Perception Of Light
CF	Counting Finger	OT	Operating Theatre
CSCO	Clinically Significant Macular Odema	PCO	Posterior Capsule Opacification
CMO	Cystoid Macular Oedema	PCR	Posterior Capsule Rapture
CSR	Cataract Surgery Registry	PDR	Proliferative Diabetic Retinopathy
DER	Diabetic Eye Registry	Phaco	Phacoemulsification
DM	Diabetes Mellitus	PI	Principal Investigator
DR	Diabetic Retinopathy	PL	Perception Of Light
ECCE	Extracapsular Cataract Extraction	RB	Retinoblastoma
FU	Follow Up	RCC	Registry Coordinating Centre
HM	Hand Movement	SD	Standard Division
HPT	Hypertension	SDP	Source Data Producers
ICCE	Intracapsular Cataract Extraction	VA	Visual Acuity
IOL	Intraocular Lens	VR	Vitreoretinal Surgery
MOH	Ministry Of Health		
MOE	Ministry of Education		
NED	National Eye Database		

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Executive Summary

The Ministry of Health provided cataract services in three different concepts, which can be divided into hospital-based (available at all MOH Hospitals with Ophthalmology Services), satellite cataract center (available at PPKM-HS) and outreach mobile services (KK-KKM Mobile).

In term of patient profile, all three types of services received similar elderly age group patients. More than 70% of them have some form of systemic co-morbidities, with Hypertension and Diabetes Mellitus being the most frequent illnesses seen. The only differences between the three services are the presenting visual acuity and ocular morbidities. About 41% of patients who went to PPKM-HS presented with mild to moderate visual impairment, as compared to the other two, in which about 47-49% patients presented with blinding vision worse than 3/60. PPKM-HS also has less proportion of patients with ocular comorbidities (13.1%) as compared to mobile outreach services (20.4%) and hospital based (37.1%). This is explanatory as PPKM-HS only received low risk patients with full daycare services.

As for surgical practices, cataract services are mainly done as daycare surgery even at hospitals with dedicated eye wards (72.6%) and at mobile outreach services (88.7%). More than 90% of the cataract surgeries were done using phacoemulsification technique. Topical anesthesia was the anesthesia of choice (77.4-89.9%) for surgeons across all services, followed by intracameral anesthesia (20.1-55.7%), and subtenon injection (2.2-16.6%). More complicated cases at hospital based explained the higher selection of subtenon injection (16.6%). PPKM-HS being the center of excellence for cataract surgery, has the lowest rate of intraoperative complication (2.6%) and PCR (1.2%). Overall complication rate was between 2.6% to 6.2%, and overall PCR rate was between 1.2% to 3.1%.

The average rate of post operative endophthalmitis was within the KPI limit ($\leq 0.2\%$). Hospital-based had 18 patients with post operative endophthalmitis (0.04%), and 2 patients from the mobile outreach services (0.07%).

Proportion of patients without ocular co-morbidity achieving unaided BCVA of 6/12 or better was not really satisfactory, especially in the mobile outreach services (47.1%). Within the same group, 82.3% of KK-KKM patients who underwent phacoemulsification techniques achieved BCVA of 6/12 or better, as compared to 89% in PPKM-HS, and 87.5% in hospital-based group. PPKM-HS had the highest proportion (93.5%) of eyes achieving the target refraction ($\pm 1.0D$), as compared to 87.2% for hospital based and 85.9% for mobile outreach services.

In summary, PPKM-HS had maintained the standards of being the center of excellence for cataract services in Malaysia. There was not much difference in term of surgical practice and outcome between hospital-based and mobile outreach services. The overall cataract services in Malaysia are of good quality with low post operative endophthalmitis rate.

Report Summary

CATARACT SURGERY REGISTRY

Stock and Flow

1. The number of SDP increased from 32 SDPs in 2007 to 54 SDPs in 2017 (44 hospitals and 10 KK-KKM).
2. The total number of cataract surgery registered to CSR increased from 12798 in 2002 to 54242 in 2017.
3. The CSR ascertainment decreased to 93.1% from 93.9% the previous year.

Characteristics of Patients

1. The median age of patients at the time of cataract surgery was 67 in 2017. This age was younger than data published by the Swedish cataract surgery register (74 years old).
2. Up to 1/5 of patients presented within the age group of 65-69 years old (22.1% in 2017).
3. The proportion of patients with systemic co-morbidity increased from 56.9 in 2002 to 79.7% in 2017.
4. There was an increase in the proportion of patients presented for cataract surgery who had Hypertension (from 35.4% in 2002 to 65.7% in 2017) and Diabetes Mellitus (from 28.9% in 2002 to 46.5% in 2017).
5. Senile cataract was the commonest cause of primary cataract (97.0% in 2017).
6. Trauma was the commonest cause for secondary cataract (50.6% in 2017).
7. The proportion of patients who returned for cataract surgery in the fellow eye remained the same from 2002 to 2017, i.e. only one third (36.5% in 2017).
8. Majority of the eyes had no prior ocular surgery (96.8% in 2017). The commonest prior ocular surgery was vitreoretinal surgery and pterygium excision (1.2% in 2017).
9. One third of the eyes had ocular co-morbidity (34.8% in 2017). The commonest ocular co-morbidity was diabetic retinopathy in any forms (11.8% in 2017).
10. About 1/3 of the eyes had presenting Pin Hole vision of <<6/18 - 6/60 (30.0% in 2017).
11. Refraction was not done in more than 2/3 of the eyes (61.4% in 2017). Most of them had unaided VA<3/60 (44.4% in 2017).
12. Bimodal pattern of pre-operative vision was consistently observed over the years with one peak at the range between 6/18 to 6/36 and another peak at CF-HM.
13. In term of the choice of IOL power, majority of surgeons chose target refraction as emmetropia or slightly myopic. The mean target refractive power in 2017 was -0.5D (SD 0.3)

Cataract Surgery Practice Patterns

1. Selangor (7 main SDPs), Perak (4 main SDPS) and Sarawak (6 main SDPS), performed higher number of cataract surgeries compared to other state (>5000)
2. More than 2/3 of the cataract surgery was performed by specialists (87.8% in 2017).
3. The percentage of Phaco surgery done by medical officers was maintained at 3-4% (4.6% in 2017)
4. The median duration taken to do a cataract surgery was 23 min for phaco and 53 min for ECCE in 2017.
5. Though there was an increasing trend for day care surgery, from 39.3% in 2002 to 75.4% in 2017, the percentage varied among SDPs.
6. Phaco was the preferred method of cataract surgery and the proportion increased from 39.7% in 2002 to 91.3% in 2017. Percentage of ECCE decreased from 54.0% in 2002 to 6.7% in 2017.
7. The preferred IOL material was acrylic and foldable type.
8. Among combined surgery, VR surgery was the highest. It did not show any specific trend. (1.6% in 2017)
9. Majority of cases were done under local anaesthesia (93.0% in 2017). The preferred type of local anesthesia was topical (78.6% in 2017).
10. The use of topical anesthesia (50 years and above + excluding combined surgery) was 79.2% in 2017.
11. The use of intracameral anesthesia (50 years and above + excluding combined surgery) was 32.8% in 2017
12. The use of subtenon anesthesia (50 years and above + excluding combined surgery) was 15.3% in 2017
13. Majority of the patient operated had IOL implantation (98.5% in 2017). Among these patients who had IOL, 96.8% had posterior chamber IOL.

Intra-operative Complications

1. The percentage of intra-operative complication increased to 4.9% from 4.6% the previous year.

2. Intra-operative complication in phaco increased to 3.0% from 2.8% the previous year.
3. PCR increased to 2.4% in 2017.
4. In 2017, the percentage of intra-operative complication was higher in cataract surgeries performed by MO (9.3%) followed by Gazetting Specialists (7.7%), as compared to Specialist (4.4%). For phaco surgeries, MO (5.5%), Gazetting Specialists (5.2%), and Specialist (2.7%)

Cataract Surgery Outcome

1. In average, more than 85.0% of patient registered to CSR had cataract surgery outcome data.
2. The percentage of patients with post-operative endophthalmitis increased to 0.04% (20 patients) from 0.03% (16 patients) the previous year.
3. The percentage of patients with unplanned return to OT did not show any specific trend. It was 0.31% in 2017
4. There was no specific trend in the causes of unplanned return to OT.
5. In eyes without ocular co-morbidity, the percentage of eyes with unaided vision of 6/12 and better decreased to 54.9% in 2017 from 58.2% in 2016
6. The percentage of eye without ocular co-morbidity achieving refracted vision 6/12 and better in phaco decreased to 87.3% in 2017 from 92.9% in 2016
7. Patients who had phaco had better post-op visual outcome when compared to other type of surgeries. 87.3% of phaco patients had refracted vision of 6/12 or better in 2017 as compared to ECCE (71.9%), lens aspiration (81.0%) and ICCE (51.2%).
8. Post-op visual outcome improved over the years. Refracted visual outcome of 6/12 or better among phaco patient improved from 87.0% in 2002 to 87.3% in 2017 and among ECCE patients from 78.0% in 2002 to 71.9% in 2017.
9. In all type of surgeries, visual outcome became less favourable when there were intra-operative complications.
10. The main contributing factor for eyes with post-operative refracted VA worse than 6/12 was pre-existing ocular co-morbidity
11. When patients with preexisting ocular co-morbidity were excluded from analysis, high astigmatism followed by preexisting ocular co-morbidity (not detected preoperatively) were the major causes of poor visual outcome.
12. In 2017, with the mean target refraction (all eyes) of -0.4D, the mean actual refraction was -0.5D for phaco eyes, and -0.8D for ECCE eyes. Thus, eyes which had undergone ECCE had more myopic shift than eyes which had phaco.
13. In 2017, there was disparity between the targeted and the actual refraction in phaco, 80.4% of eyes had a different in target and actual refraction of between $\pm 1.0\text{D}$.

KLINIK KATARAK – KKM

Stock and Flow

1. The total number of cataract surgery registered to CSR increased from 140 in 2013 to 2993 in 2017.

Characteristics of Patients

2. The median age of patients at the time of cataract surgery was 67.6 in 2017. This age was older than in hospitals-based surgery (65.9 years old).
3. Up to 1/5 of patients presented within the age group of 65-69 years old (22.2% in 2017).
4. In 2017, the proportion of patients with systemic co-morbidity was 73.9% (Hypertension was 61.8% and Diabetes Mellitus was 39.9%)
5. Senile cataract was the commonest cause of primary cataract (98.9 % in 2017).
6. Trauma was the cause for secondary cataract (47.1% in 2017).
7. The proportion of patients who returned for cataract surgery in the fellow eye was only 1/4 (30.8% in 2017) which appeared to be increasing
8. Majority of the eyes had no prior ocular surgery (98.4% in 2017).
9. Less than one third of the eyes had ocular co-morbidity (20.4% in 2017). The commonest ocular co-morbidity was Diabetic Retinopathy in any forms (7.1% in 2017).
10. More than half of the eyes presented with Pin Hole vision of <3/60 (38.1% in 2017).

11. Refraction was not done in most of the eyes (70.0% in 2017). Most of them had unaided VA<3/60 (53.2% in 2017).
12. Bimodal pattern of pre-operative vision was observed over the years with one peak at the range between 6/18 to 6/36 and another peak at CF-HM.
13. In term of the choice of IOL power, majority of surgeons chose target refraction as emmetropia or slightly myopic. The mean target refractive power in 2017 was -0.4D (SD 0.3)

Cataract Surgery Practice Patterns

1. The number of cataract surgery performed by SDPs varied depending on location, period of service and availability of the bus and equipments
2. The median duration taken to do a cataract surgery was 22 min for phaco and 43 min for ECCE in 2017.
3. The percentage of surgeries performed under daycare setting decrease to 87.5% in 2017 from 88.9% the previous year
4. Phaco was the preferred method of cataract surgery, however the proportion decreased to 93.2% in 2017 from 95.2% the previous year. Percentage of ECCE increased to 6.1% in 2017 from 2.5% the previous year.
5. The preferred IOL material was acrylic and non-foldable type.
6. The use of topical anesthesia increased from 64.7% in 2013 to 89.9% in 2017, Subtenon reduced from 37.4% in 2013 to 10.1% in 2017 and intracameral lincreased to 20.1% in 2017.
7. Majority of the patient operated had IOL implantation (98.5% in 2017). Among these patients who had IOL, 95.9% had posterior chamber IOL.

Intra-operative Complications

1. The percentage of intra-operative complication increased to 6.2% in 2017 from 3.9% the previous year.
2. PCR increased from to 3.1% in 2017 from 2.0% the previous year.

Cataract Surgery Outcome

1. In average, more than 80.0% of patient registered to CSR had cataract surgery outcome data (83.4% in 2017)
2. The percentage of patients with post-operative endophthalmitis was 0.1% (2 patients).
3. In eyes without ocular co-morbidity, only ½ of eyes had post-op unaided visual acuity 6/12 or better (47.0% in 2017). With refraction, more than 80.0% achieved post-op vision 6/12 or better (81.3% in 2017).
4. The percentage of eye without ocular co-morbidity achieving refracted vision 6/12 and better in phaco decreased to 82.3% in 2017 from 91.5% in 2016
5. Patients who had phaco had better post-op visual outcome when compared to other type of surgeries. 82.3% of phaco patients had refracted vision of 6/12 or better in 2017 as compared to ECCE (62.2%).
6. The main contributing factor for eyes with post-operative refracted VA worse than 6/12 was high astigmatism followed by pre-existing ocular co-morbidity.
7. When patients with preexisting ocular co-morbidity were excluded from analysis, astigmatism was the major causes of poor visual outcome.
8. In 2017, with the mean target refraction (all eyes) of -0.4D, the mean actual refraction was -0.5D for phaco eyes, and -0.8D for ECCE eyes. Thus, eyes which had undergone ECCE had more myopic shift than eyes which had phaco.
9. In 2017, there was disparity between the targeted and the actual refraction in phaco. 86.0% of eyes had a different in target and actual refraction of between ±1.0D.

PUSAT PEMBEDAHAN KATARAK MAIWP-HOSPITAL SELAYANG

Stock and Flow

1. The total number of cataract surgery registered to CSR increased from 1824 in 2015 to 3507 in 2017.

Characteristics of Patients

2. The mean age of patients at the time of cataract surgery was 65.8 in 2017. This age was younger than in hospital setup (65.9 years old).
3. Up to 1/5 of patients presented within the age group of 65-69 years old (24.4% in 2017).

4. In 2017, the proportion of patients with systemic co-morbidity was 79.9% (Hypertension was 63.6% and Diabetes Mellitus was 45.2%)
5. Senile cataract was the commonest cause of primary cataract (78.5% in 2017).
6. The proportion of patients who returned for cataract surgery in the fellow eye was one third (39.6% in 2017).
7. Majority of the eyes had no prior ocular surgery (98.3% in 2017).
8. Less than one third of the eyes had ocular co-morbidity (13.1% in 2017). The commonest ocular co-morbidity was Diabetic Retinopathy in any forms (6.1% in 2017)
9. One third of the eyes had presenting Pin Hole vision of <6/18 - 6/60 (35.5% in 2017).
10. Refraction was not done in most of the eyes (51.3% in 2017). Most of them had unaided VA<6/18 - 6/60 (41.1% in 2017).
11. Bimodal pattern of pre-operative vision was observed over the years with one peak at the range between 6/18 to 6/36 and another peak at CF-HM.
12. In term of the choice of IOL power, majority of surgeons chose target refraction as emmetropia or slightly myopic. The mean target refractive power in 2017 was -0.3D (SD 0.2)

Cataract Surgery Practice Patterns

1. The median duration taken to do a cataract surgery was 20 min for phaco and 51.5 min for ECCE in 2017.
2. Phaco was the preferred method of cataract surgery and the proportion increased from 95.1% in 2013 to 97.5% in 2017. Percentage of ECCE increased to 1.5% in 2017 from 0.3% the previous year.
3. The preferred IOL material was acrylic and non-foldable type.
4. The use of topical anaesthesia decreased to 85.0% in 2017 from 92.0% the previous year. Intracameral anaesthesia showed an increasing trend, from 19.1% in 2013 to 55.7% in 2017. Subtenon anaesthesia reduced from 11.0% in 2013 to 2.2% in 2017
5. Majority of the patient operated had IOL implantation (99.3% in 2017). Among these patients who had IOL, 99.0% had posterior chamber IOL.

Intra-operative Complications

1. The percentage of intra-operative complication increased to 2.6% in 2017 from 1.8% in 2017
2. PCR increased to 1.2% in 2017 from 1.0% the previous year.

Cataract Surgery Outcome

1. In 2017, 90.1% cataract surgery had outcome data.
2. The percentage of patients with post-operative endophthalmitis was 0%.
3. In eyes without ocular co-morbidity, only ½ of eyes had post-op unaided visual acuity 6/12 or better (64.5% in 2017)
4. The percentage of eye without ocular co-morbidity achieving refracted vision 6/12 and better in phaco decreased to 89.0% in 2017 from 97.7% the previous year.
5. The main contributing factor for eyes with post-operative refracted VA worse than 6/12 was pre-existing ocular co-morbidity followed by high astigmatism.
6. When patients with preexisting ocular co-morbidity were excluded from analysis, high astigmatism was the major causes of poor visual outcome.

Summary of Comparison Between Hospital and KK-KKM (2017)

		Hospitals	PPKM-HS	KK-KKM Mobile, Transit and Carnival
Concept of Service		Hospital based service	Outreach Low risk patients Fully day care Fully certified surgeons	Outreach Multilevel risk of patients Fully certified surgeons
Patient Profile	Age	Mean 65.9	Mean 65.3	Mean 67.5
	Main age group	65-69 (22.2%)	65-69 (26.1%)	65.69 (23.3%)
	Systemic Co-morbidity	64.7% (Hypertension 62.2%) (Diabetis Mellitus 46.1%)	65.7% (Hypertension 63.4%) (Diabetis Mellitus 46.8%)	62.0% (Hypertension 57.5%) (Diabetis Mellitus 36.2%)
	Second Eye Surgery	36.1%	37.2%	28.3%
	Ocular Co-morbidity	38.3% The commonest was diabetic retinopathy in any forms (12.3%)	15.3% The commonest was diabetic retinopathy in any forms (6.0%)	19.3% The commonest was diabetic retinopathy in any forms (6.5%)
	Presenting VA	<3/60 (48.6%)	<6/18 - 6/60 (41.4%)	<3/60 (47.4%)
Surgical Practices	Day Care	68.5%	100%	88.9%
	Method of Cataract Extraction	Phaco 88.8% ECCE 7.4%	Phaco 98.0% ECCE 0.3%	Phaco 95.2% ECCE 2.5%
	Main anaesthesia	Topical (71.5%) Subtenon (20.4%) Intracameral (23.5%)	Topical (92.0%) Subtenon (3.0%) Intracameral (36.3%)	Topical (88.6%) Subtenon (11.8%) Intracameral (6.9%)
Intraoperative Complication	Overall percentage of intra-operative complication	4.8%	1.8%	3.9%
	PCR	2.4%	1.0%	2.0%
Outcome	Surgeries with outcome data	89.5%	76.4%	81.8%
	Post-operative Endophthalmitis	0.04% (16 patients).	0%	0%
	Percentage of <u>unaided</u> VA 6/12 or better in eye without ocular co-morbidity	57.5%	69.9%	56.3%
	Percentage of surgery using phaco achieving BCVA 6/12 or better in eyes without ocular co-morbidity	92.5%	97.7%	91.5%
	Percentage of eyes achieving difference of target and actual refraction within ±1.0D	95.8%	93.7%	83.4%

CHAPTER 1: CATARACT SURGERY REGISTRY

1.1. Stock and Flow

1.1.1. Stock and Flow

Table 1.1.1-1: Stock and Flow, CSR 2007-2017

Year	No of SDP		Total no of cataract surgery registered to CSR	Cataract surgery with visual outcome records	
	Hospital	KK-KKM (carnival, mobile, static and transit)		n	%
2007	32	0	18426	15786	85.7
2008	36	0	21496	19063	88.7
2009	36	0	24438	20590	84.3
2010	36	0	28506	24521	86.0
2011	36	0	30611	27219	88.0
2012	36	0	32473	28589	88.0
2013	40	7	37150	33063	89.0
2014	42	19	40532	36251	89.4
2015	42	26	44534	39066	87.7
2016	44	25	50625	44672	88.2
2017	44	35	54242	48020	88.5

*2017: Hosp = 44; KK-KKM carnival = 10, static = 1, mobile = 13, transit = 11.

Table 1.1.1-2: Ascertainment for MOH Hospitals including KK-KKM locations, CSR 2007-2017

Year	Total number of cataract surgery performed at MOH Hospitals (Source: MOH census returns)	Total number of cataract surgery performed at MOH hospitals and registered to CSR	Ascertainment (%)
2007	22051	18426	83.6%
2008	25393	21496	84.6%
2009	26274	24438	93.0%
2010	29873	28506	95.4%
2011	32099	30611	95.4%

2012	34363	32473	94.5%
2013	39389	37150	94.3%
2014	41927	40532	96.7%
2015	46202	44534	96.4%
2016	53897	50625	93.9%
2017	58273	54242	93.1%

Note:

It is assumed that all KK-KKM (mobile, static and transit) census as 100%.

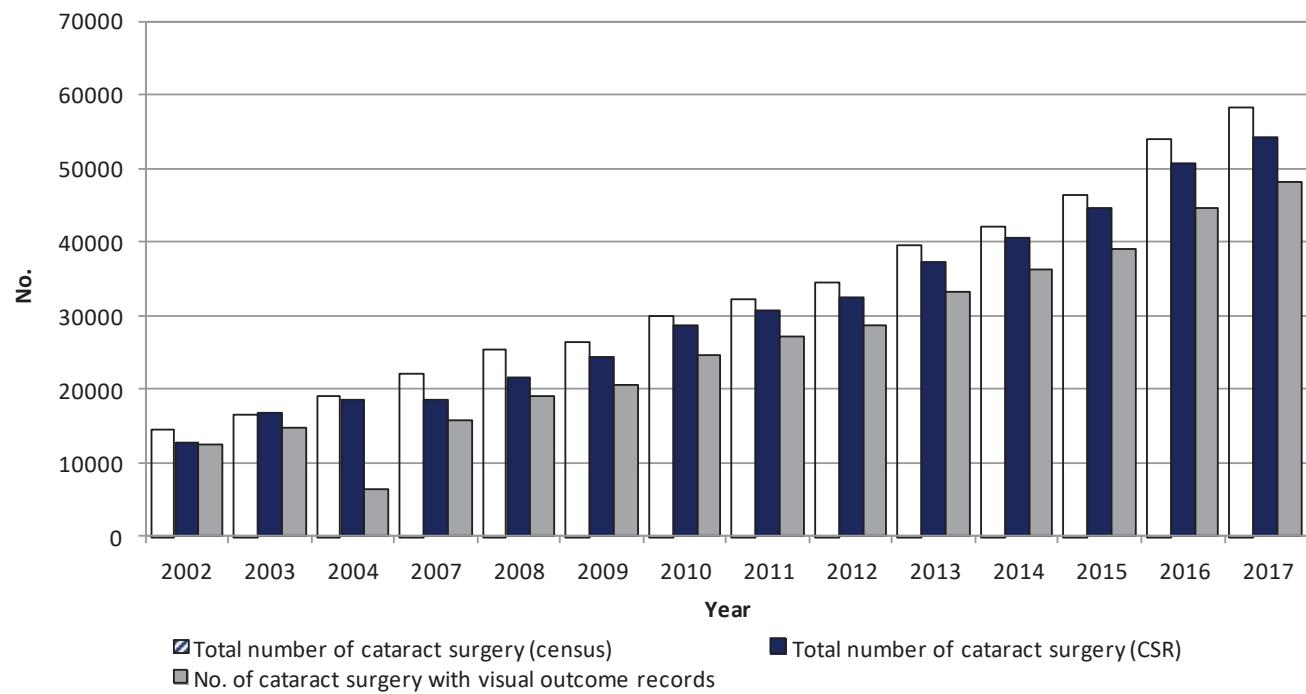


Figure 1.1.1-1: Stock and Flow, CSR 2002–2017

Table 1.1.1-3 Ascertainment by SDP, CSR 2017

Ascertainment									
	Total no. of cataract surgery (based on census) (a)	Total no. of cataract surgery registered to CSR (based on operative record) (b)	Total no. of outcome form submitted (c)	Total no. of outcome form with unaided vision (d)	Total no. of outcome form with refracted vision (e)	% Ascertainment for CSR (b/a*100)	% Ascertainment for Outcome form submitted (c/b*100)	% Ascertainment for Outcome with unaided vision (d/c*100)	% Ascertainment for Outcome with refracted vision (e/c*100)
Kangar	743	743	743	743	731	100.0	100.0	100.0	98.4
Likas	33	33	33	33	32	100.0	100.0	100.0	97.0
Ampang	1128	1128	1127	1127	1127	100.0	99.9	100.0	100.0
Teluk Intan	1206	1206	1204	1204	1175	100.0	99.8	100.0	97.6
Taiping	1765	1765	1754	1754	1682	100.0	99.4	100.0	95.9
Putrajaya	498	498	495	495	473	100.0	99.4	100.0	95.6
Kulim	609	609	604	604	562	100.0	99.2	100.0	93.0
Sri Manjung	868	868	861	861	785	100.0	99.2	100.0	91.2
Shah Alam	668	668	651	651	605	100.0	97.5	100.0	92.9
Ipoh	3466	3466	3381	3379	2999	100.0	97.5	99.9	88.7
Kluang	227	227	221	221	186	100.0	97.4	100.0	84.2
Miri	1184	1184	1147	1145	1061	100.0	96.9	99.8	92.5
Melaka	2394	2394	2264	2264	2122	100.0	94.6	100.0	93.7
Sibu	800	800	750	750	692	100.0	93.8	100.0	92.3
Sultan Ismail	814	814	738	738	737	100.0	90.7	100.0	99.9
Kemaman	161	161	145	142	142	100.0	90.1	97.9	97.9
Temerloh*	1110	1110	996	995	973	100.0	89.7	99.9	97.7
<i>(including KK-KKM Hj Ahmad Shah)</i>									
Bintulu	261	261	230	230	230	100.0	88.1	100.0	100.0
Umum Sarawak	1822	1822	1448	1448	1446	100.0	79.5	100.0	99.9
Klang	2321	2321	1811	1811	1687	100.0	78.0	100.0	93.2
Pusat Perubatan UKM	1182	1182	53	53	51	100.0	4.5	100.0	96.2
Sultanah Aminah JB	923	921	865	862	803	99.8	93.9	99.7	92.8
Sandakan	514	513	415	415	394	99.8	80.9	100.0	94.9
Sungai Buloh	733	731	703	703	660	99.7	96.2	100.0	93.9
Sarikei*	458	456	422	422	367	99.6	92.5	100.0	87.0
<i>(including KK-KKM Sarikei)</i>									
Muar	1046	1039	1011	1011	946	99.3	97.3	100.0	93.6
Kota Bharu	1408	1396	1377	1377	1275	99.1	98.6	100.0	92.6

Pulau Pinang*	1679	1651	1629	1629	1583	98.3	98.7	100.0	97.2
<i>(including KK-KKM Pulau Pinang)</i>									
Alor Setar*	2701	2634	2601	2598	2155	97.5	98.7	99.9	82.9
<i>(including KK-KKM Alor Setar)</i>									
Bukit Mertajam	1464	1426	1365	1365	1246	97.4	95.7	100.0	91.3
Kuantan	1442	1401	1225	1225	1175	97.2	87.4	100.0	95.9
Seremban	2004	1942	1798	1798	1656	96.9	92.6	100.0	92.1
Queen Elizabeth KK*	1935	1838	1158	1158	1131	95.0	63.0	100.0	97.7
<i>(including KK-KKM Queen Elizabeth)</i>									
Batu Pahat	694	649	537	537	536	93.5	82.7	100.0	99.8
Sungei Petani*	1667	1521	1469	1468	1226	91.2	96.6	99.9	83.5
<i>(including KK-KKM Sungai Petani)</i>									
Keningau*	411	367	342	342	330	89.3	93.2	100.0	96.5
<i>(including KK-KKM Keningau)</i>									
Kuala Pilah	730	646	418	418	385	88.5	64.7	100.0	92.1
Tawau*	408	357	350	350	295	87.5	98.0	100.0	84.3
<i>(including KK-KKM Tawau)</i>									
Kuala Krai	402	347	319	319	316	86.3	91.9	100.0	99.1
Kuala Terengganu*	1887	1613	1596	1595	1410	85.5	98.9	99.9	88.3
<i>(including KK-KKM Sultanah Nurzahirah)</i>									
Segamat*	516	431	395	395	393	83.5	91.6	100.0	99.5
<i>(including KK-KKM Segamat)</i>									
Selayang	1739	1137	1117	1117	965	65.4	98.2	100.0	86.4
Serdang	1644	882	842	840	756	53.6	95.5	99.8	89.8
Kuala Lumpur	2988	1464	587	583	586	49.0	40.1	99.3	99.8

Total no. of cataract surgery (census)

Total no. of cataract surgery (CSR)

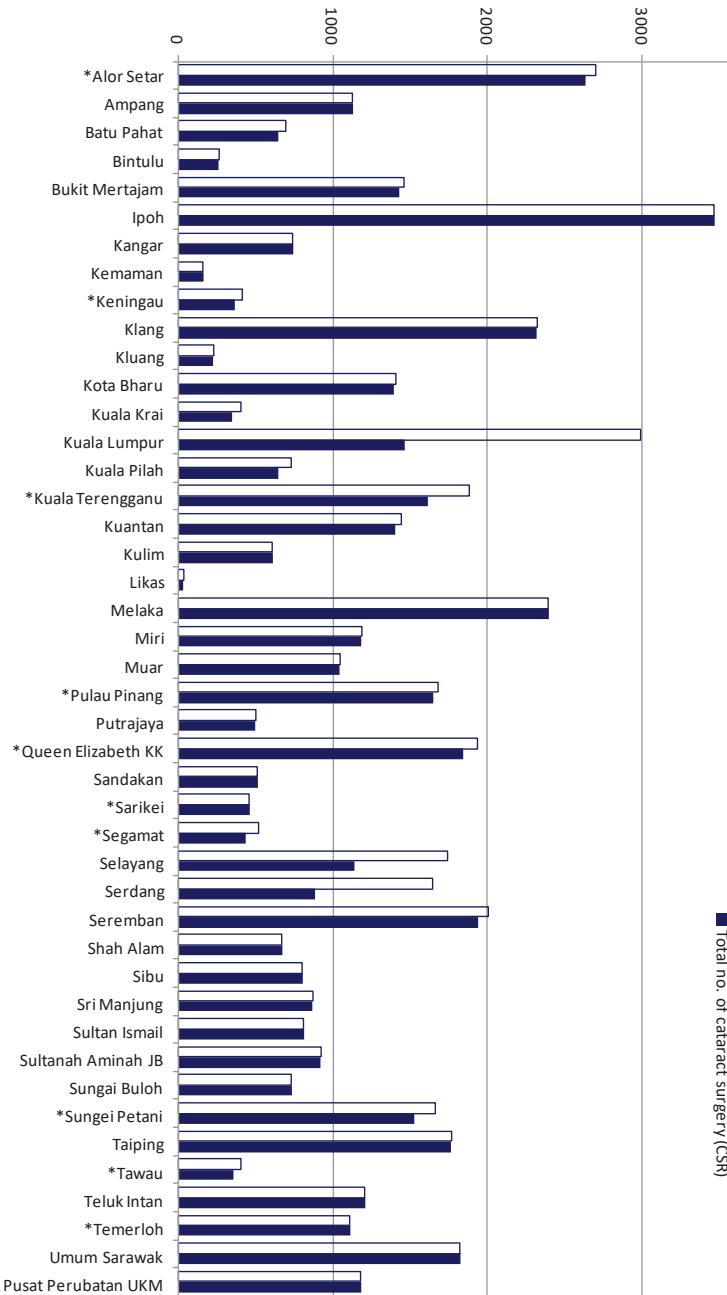


Figure 1.1.1-2: Ascertainment by SDP, CSR 2017

1.2. Characteristics of Patient

1.2.1. Demography

Table 1.2.1-1: Age and Gender Distribution, CSR 2007-2017

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Total number of cataract surgery	18426	21496	24438	28506	30611	32473	37150	40532	44534	50624	54242	
Age												
Mean (years)	64.3	64.6	64.7	65	65	65	65.7	65.9	65.7	65.9	66.0	
Median (years)	66	66	66	66	66	66	67	67	67	67	67	
Minimum (month)	1	1	1.2	1.8	2.6	0.8	0.8	3.3	1.7	2.3	2	
Maximum (years)	97	102	99	99	104	99	105	101	97	110	99	
% Distribution												
Age group, years	n	%										
0-4	54	0.3	49	0.2	56	0.2	60	0.2	49	0.2	64	0.2
5-9	54	0.3	59	0.3	66	0.3	70	0.3	74	0.2	81	0.3
10-14	51	0.3	42	0.2	43	0.2	47	0.2	57	0.2	61	0.2
15-19	49	0.3	49	0.2	52	0.2	70	0.3	72	0.2	64	0.2
20-24	71	0.4	84	0.4	77	0.3	73	0.3	103	0.3	75	0.2
25-29	77	0.4	67	0.3	104	0.4	90	0.3	90	0.3	96	0.3
30-34	80	0.4	100	0.5	106	0.4	137	0.5	125	0.4	146	0.5
35-39	180	1.0	162	0.8	180	0.7	198	0.7	224	0.7	196	0.6
40-44	314	1.7	377	1.8	377	1.5	457	1.6	408	1.3	474	1.5
45-49	727	4.0	777	3.6	881	3.6	966	3.4	984	3.2	988	3.0
50-54	1409	7.7	1630	7.6	1816	7.4	2077	7.3	2186	7.1	2089	6.4
55-59	2128	11.6	2540	11.8	2868	11.7	3379	11.9	3646	11.9	3758	11.6
60-64	2895	15.7	3497	16.3	4088	16.7	4846	17.0	5341	17.5	5689	17.5
65-69	3675	19.9	4169	19.4	4656	19.1	5069	17.8	5609	18.3	6372	19.6
70-74	3425	18.6	4138	19.3	4878	20.0	5651	19.8	5870	19.2	6102	18.8
75-79	2059	11.2	2456	11.4	2789	11.4	3446	12.1	3816	12.5	4135	12.7
≥80	1128	6.1	1279	6.0	1401	5.7	1868	6.6	1957	6.4	2083	6.4
Missing	50	0.3	21	0.1	0	0	2	0.0	0	0	0	0.0
Gender												

Male	8820	47.9	10295	47.9	11829	48.4	13631	47.8	14696	48	15506	47.8	17604	47.4	19109	47.2	21486	48.3	24070	47.6	25917	47.8
Female	9606	52.1	11168	52	12609	51.6	14871	52.2	15915	52	16966	52.3	19546	52.6	21423	52.8	23048	51.7	26555	52.5	28325	52.2
Missing	0	0	33	0.2	0	0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0

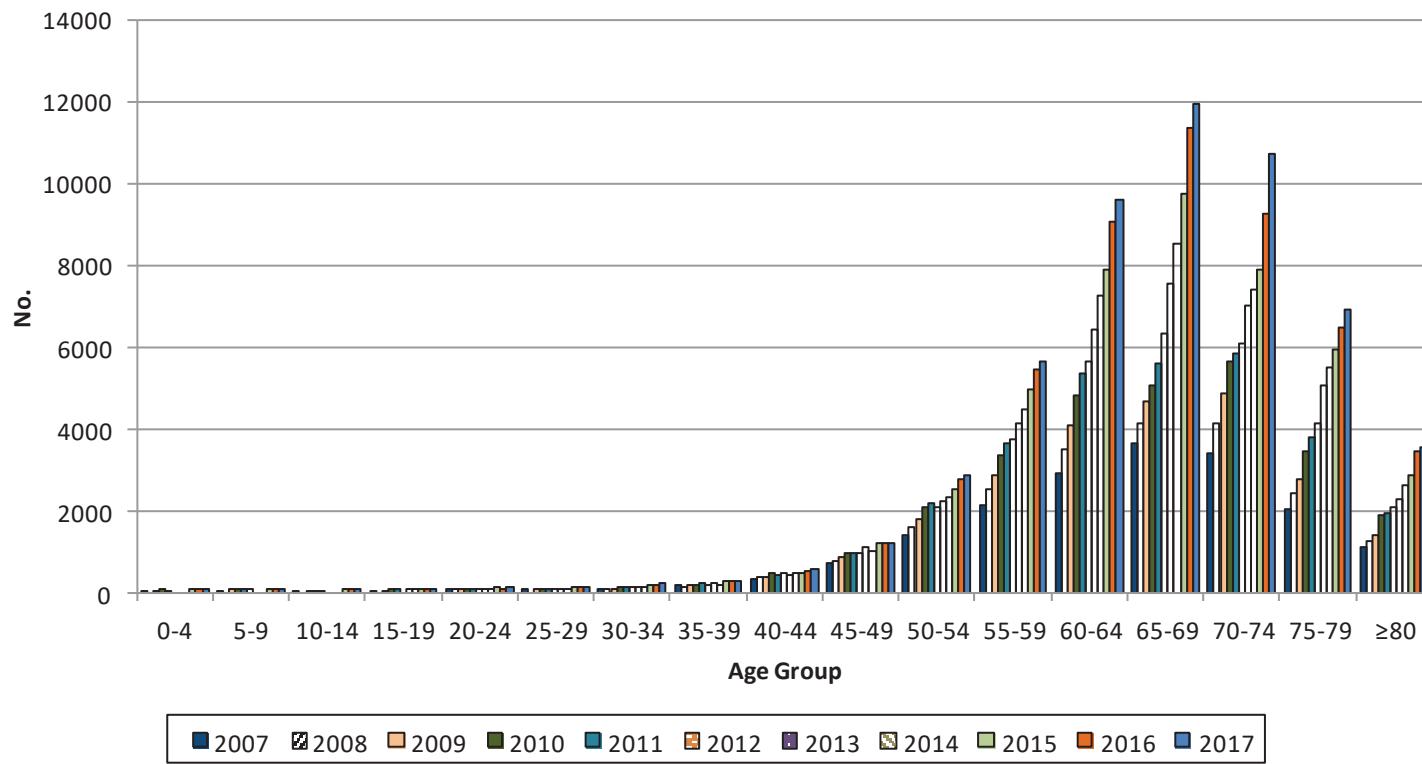


Figure 1.2.1-1: Age Distribution, CSR 2007-2017

1.2.2. Systemic Co-morbidity

Table 1.2.2-1: Distribution of Systemic Co-morbidity, CSR 2007-2017

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
No of patients (N)	18426	21496	24438	28506	30611	32473	37150	40532	44534	50625	54242	
Percentage of patients with any systemic co-morbidity	67.5	68.7	71	70.6	72	72.4	74.8	75.6	76.2	78.7	79.7	
Percentage of patients with specific systemic co-morbidity												
1. Hypertension	n 8630	% 46.8	n 10932	% 50.9	n 13050	% 53.4	n 15630	% 54.8	n 17238	% 56.3	n 18655	% 57.45
2. Diabetes Mellitus	n 6869	% 37.3	n 8188	% 38.1	n 9556	% 39.1	n 11598	% 40.7	n 12778	% 41.7	n 13635	% 41.99
7. Others	n 1399	% 7.6	n 1974	% 9.2	n 2460	% 10.1	n 2891	% 10.1	n 3538	% 11.6	n 3916	% 12.06
3. Ischaemic Heart Disease	n 1668	% 9.1	n 2037	% 9.5	n 2294	% 9.4	n 2441	% 8.6	n 2515	% 8.2	n 2565	% 7.9
4. Renal Failure	n 461	% 2.5	n 624	% 2.9	n 679	% 2.8	n 804	% 2.8	n 814	% 2.7	n 822	% 2.53
5. COAD/Asthma	n 798	% 4.3	n 955	% 4.4	n 1039	% 4.3	n 1024	% 3.6	n 1088	% 3.6	n 1104	% 3.4
6. Cerebrovascular accident	n 0	% 0	n 29	% 0.1	n 305	% 1.2	n 302	% 1.1	n 380	% 1.2	n 352	% 1.08
	n 444	% 1.2	n 571	% 1.4	n 618	% 1.4	n 800	% 1.6	n 944	% 1.7	n 35633	% 65.7

Number or percentage may be more than total or 100% as patients might have more than one systemic co-morbidity

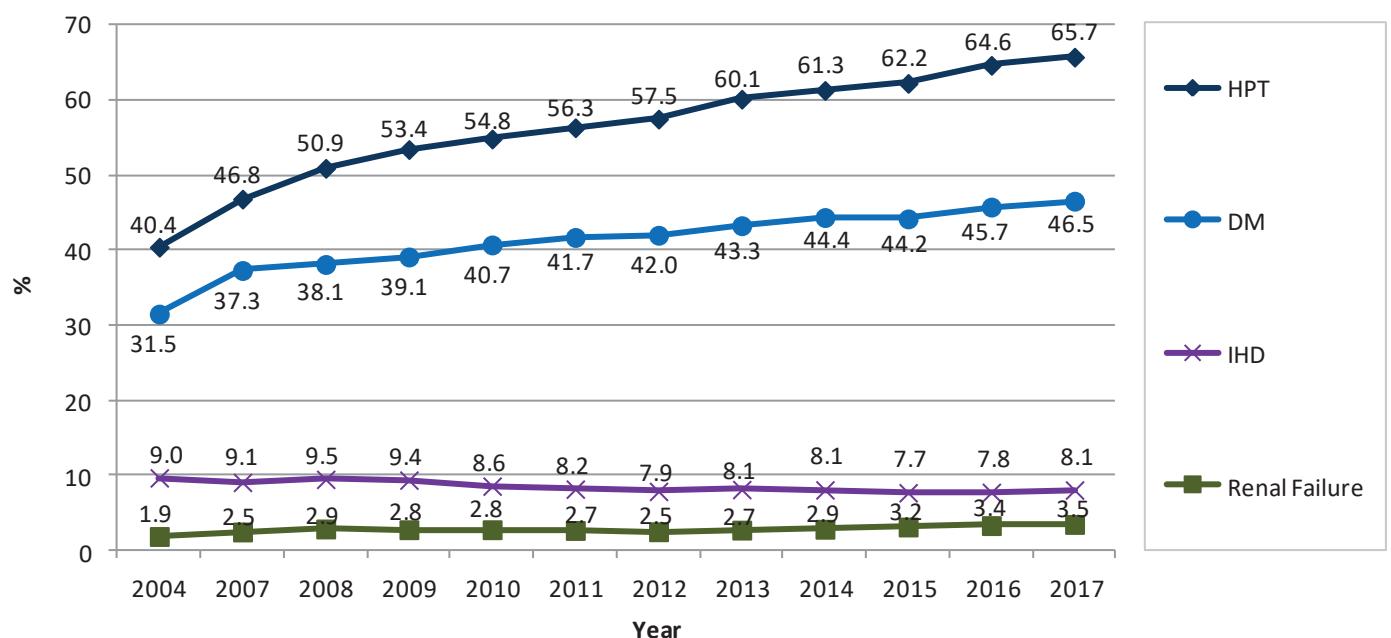


Figure 1.2.2-1: Percentage of Patients with Specific Ocular Co-morbidity, CSR 2004-2017

1.2.3. Cause of Cataract

Table 1.2.3-1: Causes of Cataract, CSR 2007-2017

Year	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017	
No of patients (N)	18426		21496		24438		28506		30611		32473		37150		40532		44534		50625		54242	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Primary cataract	17410	94.4	20329	94.6	23117	94.6	26981	94.7	29050	94.9	30813	94.9	35116	94.5	38908	96.0	42949	96.4	48719	96.2	51143	94.3
Secondary cataract	557	3	530	2.5	587	2.4	660	2.3	764	2.5	608	1.9	547	1.5	568	1.4	750	1.7	818	1.6	852	1.6
Missing value	460	2.5	637	3	734	3	865	3	797	2.6	1052	3.2	1487	4.0	1056	2.6	835	1.9	1088	2.1	2247	4.1
Primary Cataract (N)	17410		20329		23117		26981		29050		30813		35116		38168		42237		47967		51143	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Senile/age related	17075	98.1	19995	98.4	22782	98.6	26671	98.9	28736	98.9	30299	98.3	34841	99.2	37904	99.3	41822	99.0	47541	99.1	49601	97.0
Development	169	1	156	0.8	166	0.7	236	0.9	249	0.9	419	1.36	233	0.7	215	0.6	302	0.7	331	0.7	357	0.7
Congenital	129	0.7	124	0.6	124	0.5	44	0.2	34	0.1	57	0.18	11	0.0	13	0.0	55	0.1	48	0.1	74	0.1
Others	37	0.2	54	0.3	45	0.2	30	0.1	31	0.1	38	0.12	31	0.1	36	0.1	58	0.1	47	0.1	38	0.1
Secondary Cataract (N)	557		530		587		660		764		608		547		541		717		798		852	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Trauma	355	63.7	330	62.3	330	56.2	346	52.4	383	50.1	313	51.48	322	58.9	343	63.4	423	59.0	460	57.6	431	50.6
Surgery induced	82	14.7	39	7.4	107	18.2	93	14.1	101	13.2	122	20.07	88	16.1	78	14.4	110	15.3	144	18.0	158	18.5
Others	65	11.7	85	16	71	12.1	157	23.8	220	28.8	127	20.89	89	16.3	49	9.1	88	12.3	99	12.4	150	17.6
Drug induced	55	9.9	76	14.3	79	13.5	64	9.7	60	7.9	46	7.57	48	8.8	71	13.1	96	13.4	95	11.9	92	10.8

1.2.4. First or Second Eye Surgery

Table 1.2.4-1: First of Second/Fellow eye Surgery, CSR 2007-2017

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
No of patients (N)	18426	21496	24438	28506	30611	32473	37150	40532	44534	50625	54242
	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %
First eye surgery	12810 69.5	14610 68.0	16446 67.3	18919 66.4	20466 66.9	21539 66.3	23986 64.6	26080 64.3	28807 64.7	32404 64.0	34385 63.4
Fellow eye surgery	5559 30.2	6849 31.9	7938 32.5	9441 33.1	10088 33.0	10896 33.6	13045 35.1	14267 35.2	15665 35.2	18151 35.9	19816 36.5
Missing	57 0.3	37 0.2	54 0.2	146 0.5	57 0.2	38 0.1	119 0.3	185 0.5	62 0.1	70 0.1	41 0.1
Patients who had second surgery in the same year	759 4.1	1135 5.3	2702 11.1	2129 7.5	2246 7.3	2545 7.8	3214 8.7	3336 8.2	3721 8.4	4663 9.2	5399 10.0
Period of time between first and fellow eye surgery (months)											
N	4860	5953	7353	9378	10009	10784	12922	14170	15562	18046	19215
Mean	23.4	22	24.4	36.1	39.2	40.9	42.3	47.5	46.6	45.4	41.5
SD	24.3	22.8	31.5	43.6	49.3	52.4	58.4	59.6	62.4	63.3	63.7
Median	13.3	13.1	12.1	15.1	15.4	14.7	14.3	15.0	14.5	13.4	12.0
Patients who had cataract surgery before	5559	6849	7938	9441	10088	10896	13045	14267	15665	18151	19816
	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %
Eyes with intra-operative complications during surgery in the first eye	313 5.6	298 4.4	346 4.4	324 3.4	302 3.0	281 2.6	341 2.6	386 2.7	396 2.5	464 2.6	576 2.9

1.2.5. Past Ocular Surgery of the Operated Eye

Table 1.2.5-1: Past Ocular Surgery of the Operated Eye, CSR 2007-2017

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
No. of patients	18426	21496	24438	28506	30611	32473	37150	40532	44534	50625	54242
No. of eyes with past ocular surgery record (N)	17379	20674	23109	26711	28349	30687	34625	37935	42425	48563	51831
	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %
Patients with no past ocular surgery	16545 95.2	20010 96.8	22387 96.9	25870 96.9	27400 96.7	29770 97.0	33721 97.4	36938 97.4	41080 96.8	47024 96.8	50163 96.8
Vitreoretinal surgery	261 1.4	161 0.8	267 1.2	352 1.3	325 1.1	326 1.1	350 1.0	329 0.9	581 1.4	606 1.2	627 1.2
Pterygium excision	869 0.5	140 0.7	164 0.7	212 0.8	207 0.7	208 0.7	268 0.8	386 1.0	401 0.9	514 1.1	633 1.2
Filtering surgery	1043 0.4	57 0.3	69 0.3	65 0.2	80 0.3	75 0.2	66 0.2	60 0.2	99 0.2	122 0.3	90 0.2
Penetrating keratoplasty	1738 0.1	14 0.1	18 0.1	21 0.1	11 0	11 0.0	18 0.1	8 0.0	21 0.0	25 0.1	20 0.0
Others	417 2.4	304 1.5	216 0.9	203 0.8	332 1.2	305 1.0	220 0.6	236 0.6	263 0.6	289 0.6	311 0.6

Number or percentage may be more than total or 100% as patients might have more than one past ocular surgery

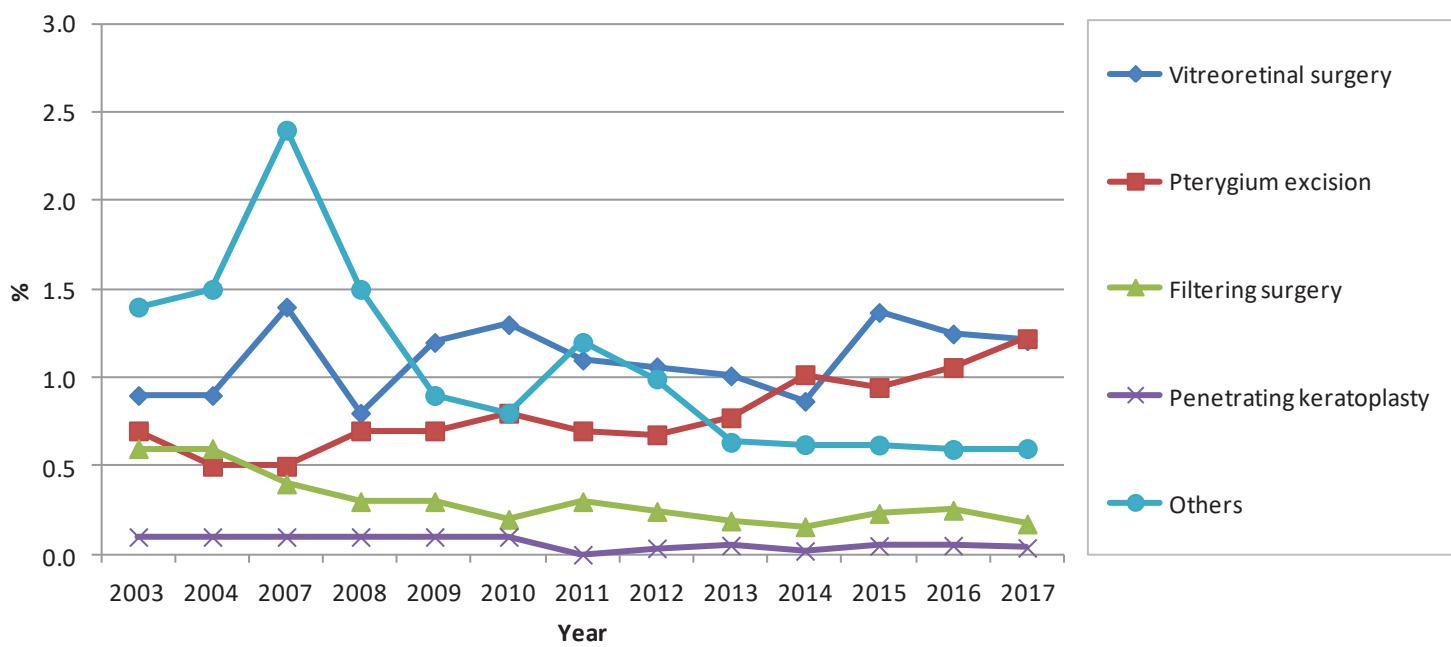


Figure 1.2.5-1: Percentage Distribution of Past Ocular Surgery of the Operated Eye, CSR 2002-2017

1.2.6. Pre-existing Ocular Co-morbidity

Table 1.2.6-1: Distribution of Pre-existing Ocular Co-Morbidity, CSR 2007-2017

Year	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
No of patients (N)	18426		21496		24438		28506		30611		32473		37150		40532		44534		50625		54242	
Patients with any ocular co-morbidity	5973	32.4	7269	33.8	9442	38.6	11977	42	12756	41.7	13024	40.1	15088	40.6	16142	39.8	17521	39.3	18490	36.5	18879	34.8
Patients with specific ocular co-morbidity																						
Anterior segment																						
1. Glaucoma	1126	6.1	1408	6.6	1655	6.8	1799	6.3	1976	6.5	2095	6.5	2349	6.3	2385	5.9	2861	6.4	3291	6.5	3411	6.3
2. Pterygium involving the cornea	288	1.6	319	1.5	345	1.4	387	1.4	405	1.3	405	1.3	477	1.3	540	1.3	534	1.2	565	1.1	637	1.2
3. Corneal opacity	176	1	194	0.9	231	0.9	251	0.9	299	1	311	1	338	0.9	447	1.1	460	1.0	520	1.0	519	1.0
4. Pseudoexfoliation	221	1.2	253	1.2	318	1.3	289	1	312	1	365	1.1	381	1.0	445	1.1	492	1.1	527	1.0	483	0.9
5. Chronic uveitis	81	0.4	63	0.3	80	0.3	89	0.3	98	0.3	70	0.2	96	0.3	100	0.2	125	0.3	128	0.3	170	0.3
Lens related complication																						
1. Phacomorphic	89	0.5	85	0.4	83	0.3	120	0.4	114	0.4	138	0.42	90	0.2	110	0.3	156	0.4	181	0.4	199	0.4
2. Subluxated/Disclosed	101	0.5	89	0.4	83	0.3	95	0.3	119	0.4	120	0.37	112	0.3	119	0.3	154	0.3	185	0.4	166	0.3
3. Phacolytic	44	0.2	45	0.2	47	0.2	59	0.2	69	0.2	41	0.13	56	0.2	63	0.2	88	0.2	93	0.2	80	0.1
Posterior segment																						
1. Cannot be assessed	1357	7.4	2092	9.7	3139	12.8	4457	15.6	5053	16.5	4914	15.13	5881	15.8	6238	15.4	5960	13.4	4962	9.8	4085	7.5
2. Diabetic Retinopathy: Non Proliferative	1125	6.1	1273	5.9	916	3.7	996	3.5	1783	5.8	1915	5.9	2214	6.0	2471	6.1	2603	5.8	3200	6.3	3659	6.7
3. Diabetic Retinopathy: Proliferative	465	2.5	614	2.9	1307	5.3	1973	6.9	1031	3.4	933	2.87	1021	2.7	1134	2.8	1338	3.0	1539	3.0	1633	3.0
4. ARMD	231	1.3	259	1.2	387	1.6	462	1.6	494	1.6	521	1.6	609	1.6	695	1.7	875	2.0	997	2.0	1103	2.0
5. Diabetic Retinopathy: CSME*	198	1.1	221	1	278	1.1	346	1.2	384	1.3	368	1.13	473	1.3	544	1.3	624	1.4	728	1.4	807	1.5
6. Other macular disease (includes hole or scar)	118	0.6	148	0.7	188	0.8	277	1	251	0.8	308	0.95	309	0.8	375	0.9	431	1.0	515	1.0	658	1.2
7. Retinal detachment	218	1.2	204	0.9	294	1.2	308	1.1	432	1.4	341	1.05	295	0.8	270	0.7	487	1.1	545	1.1	498	0.9
8. Diabetic Retinopathy: Vitreous haemorrhage	176	1	165	0.8	230	0.9	250	0.9	296	1	258	0.79	237	0.6	275	0.7	347	0.8	331	0.7	342	0.6
9. Optic nerve disease, any type	71	0.4	69	0.3	118	0.5	149	0.5	123	0.4	182	0.56	191	0.5	206	0.5	238	0.5	227	0.4	224	0.4
Miscellaneous																						

1. Amblyopia	71	0.4	65	0.3	62	0.3	75	0.3	99	0.3	98	0.3	97	0.3	93	0.2	106	0.2	92	0.2	143	0.3
2. Significant previous eye trauma	41	0.2	39	0.2	39	0.2	51	0.2	45	0.2	49	0.15	48	0.1	61	0.2	84	0.2	73	0.1	73	0.1
3. Pre-existing non glaucoma field defect	4	0	2	0	6	0	3	0	4	0	6	0.02	4	0.0	8	0.0	15	0.0	3	0.0	8	0.0
4. Others	668	3.6	755	3.5	1053	4.3	1321	4.6	1505	4.9	1729	5.32	2119	5.7	2065	5.1	2444	5.5	2890	5.7	3177	5.9

*CSME=Clinically Significant Macular Oedema

Number or percentage may be more than total or 100% as patients might have more than one ocular co-morbidity

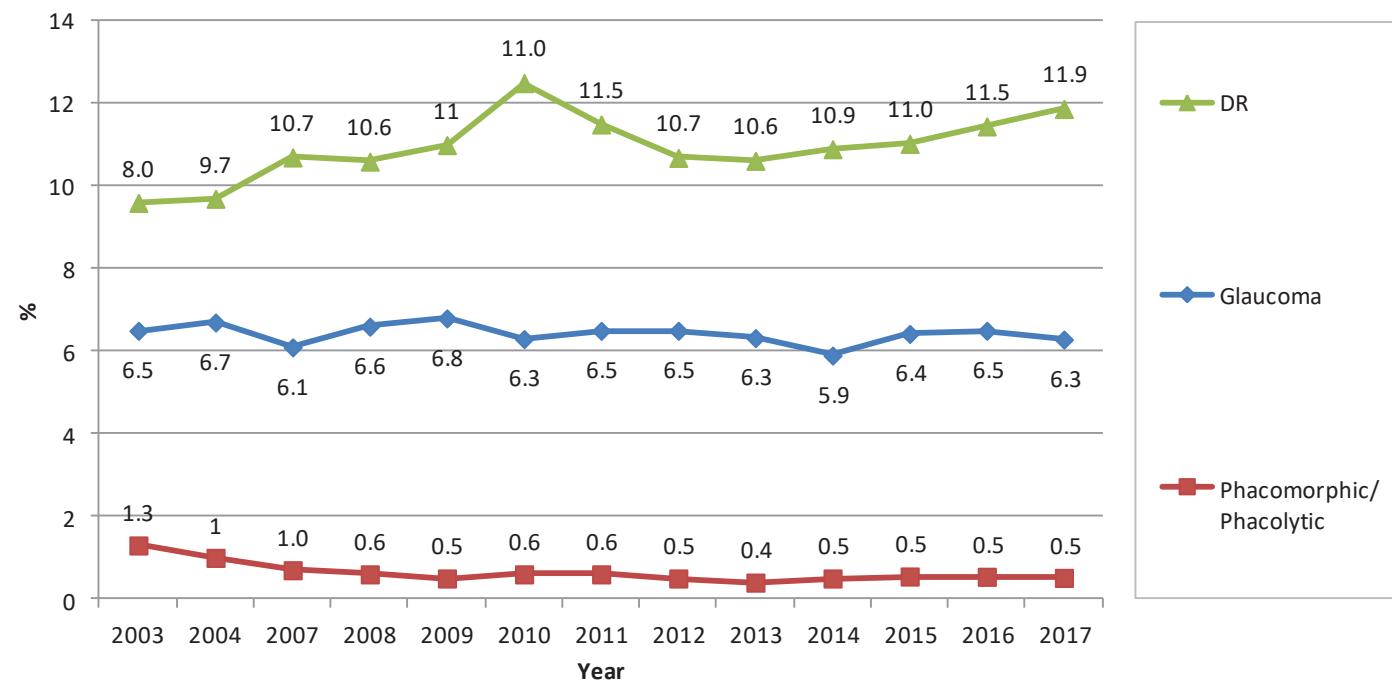


Figure 1.2.6-1: Percentage Distribution of Eyes with Diabetic Retinopathy, Glaucoma and Lens-induced Glaucoma, CSR 2002-2017

1.2.7. Pre-operative Vision

Table 1.2.7-1: Distribution of Pre-Operative Vision, CSR 2007-2017

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
No. of patients (N)	18426	21496	24438	28506	30611	32473	37150	40532	44534	50625	54242
	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %
Patients with unaided VA	18356 99.6	21212 98.7	23796 97.4	27977 98.1	30018 98.1	31833 98.0	35988 96.9	39019 96.3	43260 97.1	49635 98.0	53643 98.9
Patients with Pin Hole VA	8724 47.3	10487 48.8	11595 47.4	14126 49.6	15134 49.4	16120 49.6	16737 45.1	16444 40.6	19271 43.3	37356 73.8	48999 90.3
Patients with refracted VA	5071 27.8	5683 26.4	5150 21.1	7895 27.7	7932 25.9	7315 22.5	8418 22.7	9524 23.5	13455 30.2	17196 34.0	20914 38.6
Patients with no refraction	13355 72.5	15813 73.6	19288 78.9	20611 72.3	22679 74.1	25158 77.5	28732 77.3	31008 76.5	31079 69.8	33429 66.0	33328 61.4
6/12 and better	602 3.3	646 3.0	788 3.3	1016 3.6	1133 3.8	1397 4.4	1865 5.2	1855 4.8	2115 4.9	2671 5.4	2992 5.6
Unaided	1305 15.0	1682 16.0	2037 17.6	2408 17.0	2843 18.8	3099 19.2	3756 22.4	3706 22.5	4104 21.3	6506 17.4	8313 17.0
Refracted	678 13.4	935 16.5	944 18.3	1474 18.7	1712 21.6	1840 25.2	2297 27.3	2280 23.9	2966 22.0	4043 23.5	4761 22.8
<6/12 - 6/18	1010 5.5	1172 5.5	1392 5.8	1750 6.3	2087 7.0	2311 7.3	2701 7.5	2958 7.6	3483 8.1	4271 8.6	4957 9.2
Unaided	1464 16.8	1886 18.0	2220 19.1	2688 19.0	3128 20.7	3221 20.0	3525 21.1	3506 21.3	4000 20.8	6465 17.3	7966 16.3
Pin Hole	625 12.3	851 15.0	838 16.3	1262 16.0	1481 18.7	1503 20.5	1564 18.6	1832 19.2	2483 18.5	3115 18.1	3689 17.6
Refracted	5638 30.7	6840 32.2	7869 33.1	9238 33.0	10255 34.2	11296 35.5	12787 35.5	14404 36.9	15805 36.5	18372 37.0	20294 37.8
<6/18 - 6/60	3135 35.9	3611 34.4	4454 38.4	5116 36.2	5636 37.2	5989 37.2	6228 37.2	6320 38.4	7056 36.6	11511 30.8	14703 30.0
Unaided	1497 29.5	1800 31.7	1729 33.6	2672 33.8	2731 34.4	2531 34.6	2788 33.1	3243 34.1	4531 33.7	5274 30.7	6080 29.1
<6/60 - 3/60	1086 5.9	1363 6.4	1588 6.7	2085 7.5	2227 7.4	2316 7.3	2686 7.5	2954 7.6	3285 7.6	3794 7.6	3960 7.4
Unaided	316 3.6	419 4.0	438 3.8	580 4.1	636 4.2	646 4.0	678 4.1	673 4.1	846 4.4	1687 4.5	2124 4.3
Refracted	253 5.0	241 4.2	229 4.4	390 4.9	324 4.1	228 3.1	361 4.3	383 4.0	630 4.7	747 4.3	896 4.3
<3/60	9920 54.0	11180 52.7	12159 51.1	13888 49.6	14316 47.7	14513 45.6	15949 44.3	16848 43.2	18572 42.9	20527 41.4	21440 40.0
Unaided	2504 28.7	2889 27.5	2446 21.1	3334 23.6	2891 19.1	3165 19.6	2550 15.2	2239 13.6	3265 16.9	11187 29.9	15893 32.4
Pin Hole	2018 39.8	1845 32.5	1410 27.4	2097 26.6	1684 21.2	1213 16.6	1408 16.7	1786 18.8	2845 21.1	4017 23.4	5488 26.2
Unaided VA for patient with no refraction											
n	13355	15813	19288	20611	22679	25158	28732	31008	31079	33429	33328
6/12 and better	396 3.0	414 2.6	553 2.9	651 3.2	702 3.1	887 3.5	1210 4.2	1228 4.0	1335 4.3	1519 4.5	1630 4.9
<6/12 - 6/18	643 4.8	726 4.6	992 5.1	1062 5.2	1217 5.4	1431 5.7	1704 5.9	1893 6.1	2006 6.5	2376 7.1	2681 8.0
<6/18 - 6/60	3794 28.4	4509 28.5	5654 29.3	5795 28.1	6624 29.2	7762 30.9	8755 30.5	9875 31.8	9619 31.0	10817 32.4	11462 34.4
<6/60 - 3/60	696 5.2	920 5.8	1182 6.1	1382 6.7	1509 6.7	1755 7.0	1943 6.8	2056 6.6	2125 6.8	2372 7.1	2275 6.8
<3/60	7666 57.4	9009 57.0	10412 54.0	11302 54.8	12134 53.5	12777 50.8	14091 49.0	14525 46.8	14846 47.8	15487 46.3	14799 44.4

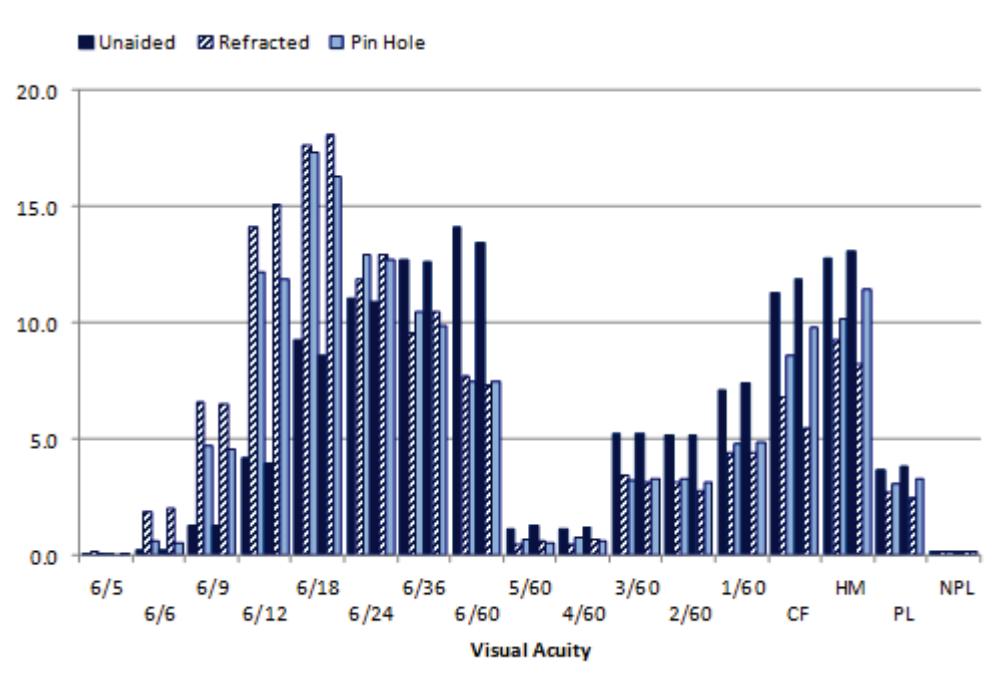


Figure 1.2.7-1: Distribution of Pre-operative Vision (Unaided, Refracted and Pin Hole) CSR 2017

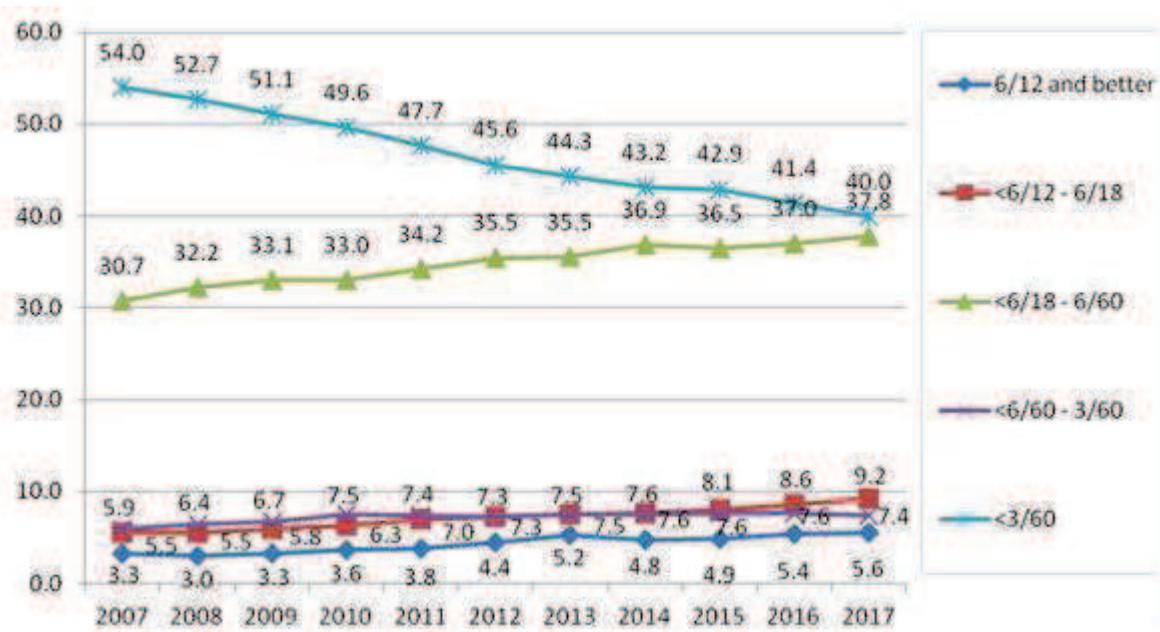


Figure 1.2.7-2: Distribution of Pre-operative Vision (Unaided), CSR 2002-2017

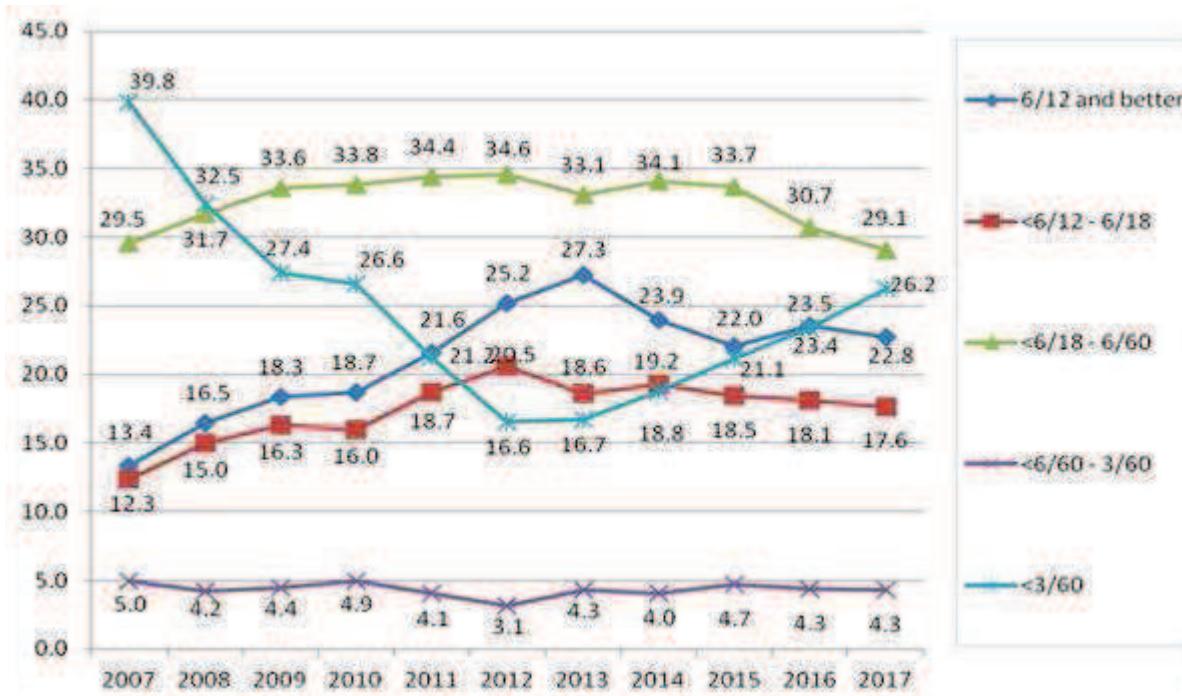


Figure 1.2.7-3: Distribution of Pre-operative Vision (Refracted), CSR 2002-20

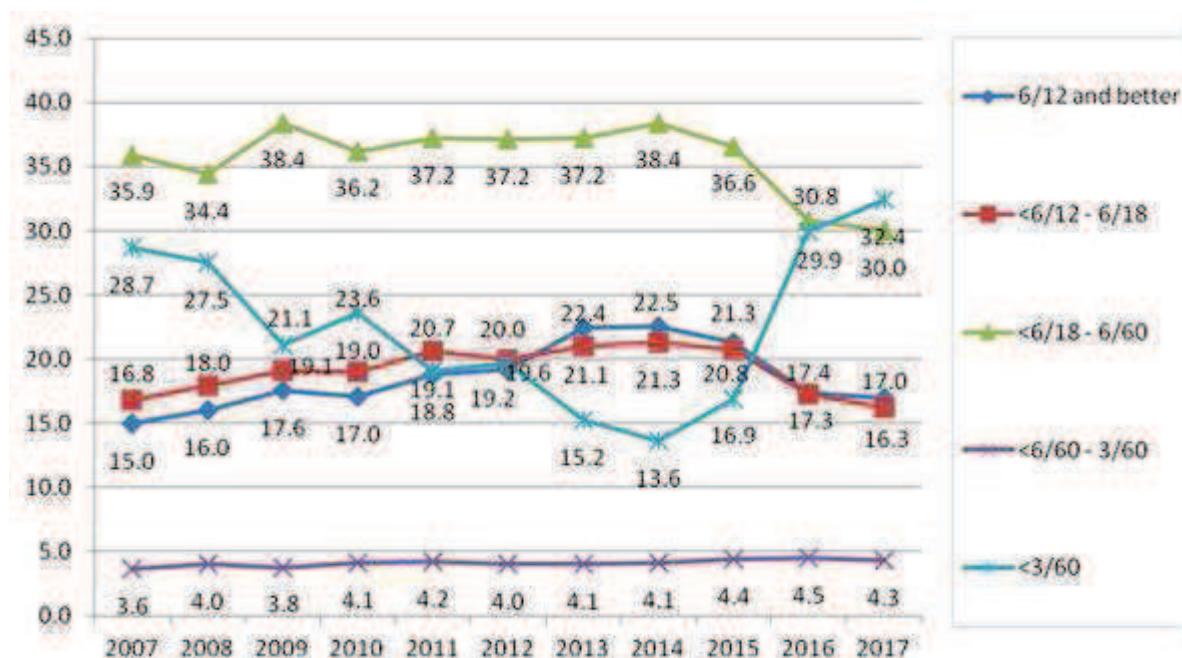


Figure 1.2.7-4: Distribution of Pre-operative Vision (Pin Hole), CSR 2002-2017

1.2.8. Target Refractive Power

Table 1.2.8-1: Distribution of Target Refractive Power, CSR 2007-2017

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Operated eye (N)	11876	15083	20279	24524	25885	26059	28685	32256	36703	43840	48153
Mean	-0.5	-0.1	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5
SD	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3
Median	-0.5	-0.5	-0.5	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5
Minimum	-9	-9.9	-9.9	-9.1	-9.1	-8	-8.5	-8.1	-9.9	-10.0	-10.0
Maximum	5	9.5	5.9	6	4.8	9	9	6.0	6.1	6.2	8.6

Table 1.2.8-2: Distribution of Target Refractive Power (excluding age 0-5 years), CSR 2009-2017

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017
Operated eye (N)	20236	24490	25848	26017	28678	32236	36663	43798	48083
Mean	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5
SD	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3
Median	-0.5	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5
Minimum	-9.9	-9.1	-9.1	-8	-8.5	-8.1	-9.9	-10.0	-10.0
Maximum	4.9	6	4.8	9	9	2.8	6.1	2.3	8.6

Table 1.2.8-3: Distribution of Target Refractive Power, CSR 2007-2017

Year	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017			
Target refractive power (Dioptries)	Operated eye N=11876	Operated eye N=15083	Operated eye N=20279	Operated eye N=24524	Operated eye N=25885	Operated eye N=26059	Operated eye N=28685	Operated eye N=32256	Operated eye N=36703	Operated eye N=43840	Operated eye N=48153	n	%	n	%	n	%	n	%	n	%	n	%	
-10-<(-9.5)	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	2	0.0	1	0.0
-9.5-<(-9)	2	0	1	0	1	0	2	0	1	0	0	0	0	0	0	0	0	0	1	0.0	2	0.0	2	0.0
-9-<(-8.5)	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.0	2	0.0	0	0.0	
-8.5-<(-8)	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0.0	1	0.0	1	0.0		
-8-<(-7.5)	2	0	3	0	1	0	1	0	0	0	1	0	0	0	1	0	1	0.0	0	0.0	1	0.0		
-7.5-<(-7)	1	0	0	0	1	0	1	0	0	0	2	0	0	0	0	0	1	0.0	0	0.0	1	0.0		
-7-<(-6.5)	3	0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	0	0.0	1	0.0	0	0.0		
-6.5-<(-5)	1	0	2	0	7	0	4	0	10	0	10	0	9	0	10	0	4	0.0	7	0.0	11	0.0		
-5-<(-4.5)	3	0	4	0	7	0	3	0	3	0	5	0	5	0	1	0	4	0.0	4	0.0	9	0.0		
-4.5-<(-4)	1	0	3	0	5	0	10	0	3	0	5	0	3	0	4	0	3	0.0	6	0.0	7	0.0		
-4-<(-3.5)	7	0.1	8	0.1	11	0.1	5	0	11	0	5	0	1	0	5	0	5	0.0	3	0.0	3	0.0		
-3.5-<(-3)	6	0.1	7	0	11	0.1	15	0.1	12	0.1	6	0	8	0	5	0	10	0.0	5	0.0	8	0.0		
-3-<(-2.5)	12	0.1	22	0.1	18	0.1	29	0.1	15	0.1	15	0.1	15	0.1	9	0.0	13	0.0	20	0.1	17	0.0		
-2.5-<(-2)	26	0.2	21	0.1	29	0.1	33	0.1	26	0.1	38	0.2	35	0.1	27	0.1	31	0.1	33	0.1	48	0.1		
-2-<(-1.5)	77	0.6	48	0.3	58	0.3	46	0.2	54	0.2	67	0.3	55	0.2	52	0.2	61	0.2	65	0.2	126	0.3		
-1.5-<(-1)	414	3.5	373	2.5	260	1.3	292	1.2	201	0.8	226	0.9	174	0.6	209	0.7	236	0.6	237	0.5	419	0.9		
-1-<(-0.5)	4299	36.2	6151	40.8	7972	39.3	7590	31	7507	29	7190	27.6	6241	21.8	6840	21.2	8908	24.3	12314	28.1	15812	32.8		
-0.5-<0	6077	51.2	7480	49.6	10604	52.3	15218	62.1	16913	65.3	17421	66.9	21135	73.7	24210	75.1	26887	73.3	30789	70.2	31292	65.0		
0-<0.5	821	6.9	731	4.8	977	4.8	920	3.8	849	3.3	629	2.4	697	2.4	790	2.5	461	1.3	293	0.7	259	0.5		
0.5-<1	91	0.8	158	1	182	0.9	237	1	234	0.9	216	0.8	187	0.7	73	0.2	35	0.1	28	0.1	39	0.1		
1-<1.5	8	0.1	31	0.2	17	0.1	23	0.1	20	0.1	32	0.1	8	0	4	0	13	0.0	14	0.0	13	0.0		
1.5-<2	5	0	14	0.1	22	0.1	19	0.1	9	0	52	0.2	28	0.1	5	0.0	8	0.0	3	0.0	16	0.0		
2-<2.5	13	0.1	10	0.1	85	0.4	69	0.3	12	0.1	123	0.5	69	0.2	5	0.0	3	0.0	3	0.0	32	0.1		
2.5-<3	1	0	6	0	4	0	3	0	2	0	10	0	11	0	2	0	2	0.0	0	0.0	10	0.0		
3-<3.5	1	0	2	0	2	0	0	0	1	0	1	0	0	0	0	0	1	0.0	0	0.0	10	0.0		
3.5-<4	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	4	0.0	3	0.0	4	0.0		

4-<4.5	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0.0	2	0.0	3	0.0
4.5-<5	1	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0.0	1	0.0	1	0.0
5-<5.5	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0.0	0	0.0	1	0.0
5.5-<6	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0.0	1	0.0	1	0.0
6-<6.5	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.0	2	0.0	1	0.0
6.5-<7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	1	0.0
7-<7.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	1	0.0
7.5-<8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0.0
8-<8.5	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.0	0	0.0	0	0.0
8.5-<9	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.0	0	0.0	1	0.0
9-<9.5	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0.0	0	0.0	0	0.0
9.5-10	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0.0

Values outside the +10D and -10D were excluded from analysis as they would skew the mean.

Table 1.2.8-4: Distribution of Target Refractive Power (excluding age 0-5 years), CSR 2009-2017

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017									
Target refractive power (Dioptries)	Operated eye N=20236	Operated eye N=24490	Operated eye N=25848	Operated eye N=26017	Operated eye N=28678	Operated eye N=32236	Operated eye N=36663	Operated eye N=43798	Operated eye N=48083									
-10-<(-9.5)	2	0.0	0	0	0	0	0	1	0	2	0	1	0.0					
-9.5-<(-9)	1	0.0	2	0	1	0	0	0	0	2	0	2	0.0					
-9-<(-8.5)	0	0.0	0	0	0	0	1	0	0	2	0	0	0.0					
-8.5-<(-8)	0	0.0	0	0	0	0	1	0	1	0	1	0	1.00					
-8-<(-7.5)	1	0.0	1	0	0	0.0	1	0	0	0	0	0	1.00					
-7.5-<(-7)	1	0.0	1	0	0	0.0	2	0.0	0	0	0	0	1.00					
-7-<(-6.5)	0	0.0	1	0.0	1	0.0	1	0	1	0	1	0	0.00					
-6.5-<(-5)	6	0.0	4	0.0	10	0.0	10	0.0	9	0	10	0	7	0	11	0.0		
-5-<(-4.5)	7	0.0	3	0.0	3	0.0	5	0.0	5	0	1	0	4	0	9	0.0		
-4.5-<(-4)	5	0.0	10	0.0	3	0.0	5	0.0	3	0	4	0	3	0	5	0	7	0.0
-4-<(-3.5)	9	0.0	5	0.0	11	0.0	5	0.0	1	0	5	0	5	0	2	0	3	0.0

-3.5-<(-3)	10	0.1	15	0.1	12	0.1	6	0.0	8	0	5	0	10	0	5	0	8	0.0
-3-<(-2.5)	18	0.1	29	0.1	15	0.1	15	0.1	15	0.1	9	0.0	13	0.0	19	0.0	17	0.0
-2.5-<(-2)	29	0.1	33	0.1	26	0.1	37	0.1	33	0.1	27	0.1	31	0.1	33	0.1	47	0.1
-2-<(-1.5)	58	0.3	46	0.2	53	0.2	67	0.3	55	0.2	52	0.2	59	0.2	65	0.2	126	0.3
-1.5-<(-1)	259	1.3	291	1.2	199	0.8	226	0.9	174	0.6	209	0.7	236	0.6	236	0.5	417	0.9
-1-<(-0.5)	7968	39.4	7587	31.0	7503	29.0	7186	27.6	6240	21.8	6839	21.2	8905	24.3	12310	28.1	15811	32.9
-0.5-<0	10587	52.3	15210	62.1	16903	65.4	17406	66.9	21132	73.7	24202	75.1	26878	73.3	30781	70.3	31284	65.1
0-<0.5	970	4.8	910	3.7	836	3.2	623	2.4	696	2.4	788	2.4	457	1.3	286	0.7	250	0.5
0.5-<1	177	0.9	235	1.0	232	0.9	215	0.8	187	0.7	69	0.2	34	0.1	27	0.1	34	0.1
1-<1.5	17	0.1	19	0.1	16	0.1	25	0.1	8	0	4	0	9	0	7	0	8	0.0
1.5-<2	20	0.1	16	0.1	8	0.0	49	0.2	28	0.1	3	0.0	3	0.0	1	0.0	10	0.0
2-<2.5	85	0.4	68	0.3	12	0.1	121	0.5	69	0.2	5	0.0	2	0.0	2	0.0	24	0.1
2.5-<3	4	0.0	3	0.0	2	0.0	8	0.0	11	0	1	0	1	0	0	0	8	0.0
3-<3.5	1	0.0	0	0.0	1	0.0	1	0.0	0	0	0	0	0	0	0	0	1	0.0
3.5-<4	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0	0	1	0	0	0	0	0.0
4-<4.5	0	0.0	0	0.0	0	0.0	1	0.0	0	0	0	0	0	0	0	0	0	0.0
4.5-<5	1	0.0	1	0.0	1	0.0	0	0.0	0	0	0	0	0	0	0	0	0	0.0
5-<5.5	0	0.0	1	0.0	0	0.0	0	0.0	0	0	0	0	0	0	0	0	0	0.0
5.5-<6	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0	0	0	0	0	0	0	0.0
6-<6.5	0	0.0	1	0.0	0	0.0	0	0.0	0	0	0	0	1	0	0	0	0	0.0
6.5-<7	0	0.0	0	0.0	0	0.0	0	0	0	0	0	0	0	0	0	0	0	0.0
7-<7.5	0	0.0	0	0.0	0	0.0	0	0	0	0	0	0	0	0	0	0	1	0.0
7.5-<8	0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
8-<8.5	0	0.0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.0
8.5-<9	0	0.0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.0
9-<9.5	0	0.0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0.0
9.5-10	0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0

Values outside the +10D and -10D were excluded from analysis as they would skew the mean..

1.3. Cataract Surgical Practice

1.3.1. Number of Cataract Surgery by SDP

Table 1.3.1-1: Range of Cataract Surgery Registered by SDP per year, Census versus CSR 2007-2017

Year	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017	
No. of SDP	Census	CSR																				
<100	1	1	1	1	1	1	1	1	1	1	1	1	4	4	2	2	7	8	8	8	3	3
100-500	15	10	10	15	12	15	10	13	9	9	8	8	7	9	8	11	8	9	11	11	15	15
501-1000	8	14	14	11	14	12	14	12	16	16	15	16	14	13	15	14	16	16	12	13	14	13
>1000	9	11	11	9	9	8	11	10	10	10	12	11	16	15	18	16	19	17	23	22	22	23

Table 1.3.1-2: Number of Cataract Surgery by Month, CSR 2007-2017

Year	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017	
No. of patients (N)	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Month	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
January	1579	8.6	1862	8.7	1668	6.8	2347	8.2	2241	7.3	2460	7.6	2844	7.7	3161	7.8	3528	7.9	3972	7.9	3889	7.2
February	1290	7.0	1653	7.7	1884	7.7	1985	7.0	1815	5.9	2762	8.5	2448	6.6	3258	8.0	2797	6.3	3732	7.4	4138	7.6
March	1782	9.7	1812	8.4	2122	8.7	2850	10.0	2676	8.7	3055	9.4	2997	8.1	3924	9.7	4057	9.1	4750	9.4	4848	8.9
April	1625	8.8	2321	10.8	2295	9.4	2714	9.5	2634	8.6	2612	8.0	3378	9.1	3855	9.5	4186	9.4	4495	8.9	4452	8.2
May	1618	8.8	1871	8.7	2036	8.3	2559	9.0	2576	8.4	3004	9.3	3233	8.7	3153	7.8	3561	8.0	4390	8.7	4464	8.2
June	1476	8.0	1950	9.1	2086	8.5	2591	9.1	2686	8.8	2652	8.2	3119	8.4	3501	8.6	3863	8.7	4286	8.5	3377	6.2
July	1808	9.8	2049	9.5	2322	9.5	2670	9.4	2845	9.3	3121	9.6	3557	9.6	3122	7.7	3080	6.9	3221	6.4	4888	9.0
August	1814	9.8	1791	8.3	1975	8.1	2401	8.4	2570	8.4	2237	6.9	2591	7.0	3403	8.4	3803	8.5	4939	9.8	5226	9.6
September	1486	8.1	1462	6.8	1572	6.4	1659	5.8	2468	8.1	2454	7.6	3372	9.1	3433	8.5	3702	8.3	3913	7.7	4182	7.7
October	1376	7.5	1552	7.2	2266	9.3	2447	8.6	2794	9.1	3064	9.4	3421	9.2	3163	7.8	4131	9.3	4471	8.8	5212	9.6
November	1443	7.8	1646	7.7	2006	8.2	2102	7.4	2632	8.6	2625	8.1	3162	8.5	3477	8.6	4107	9.2	5009	9.9	5877	10.8
December	1129	6.1	1527	7.1	2206	9.0	2181	7.6	2674	8.7	2427	7.5	3028	8.2	3082	7.6	3719	8.4	3447	6.8	3689	6.8

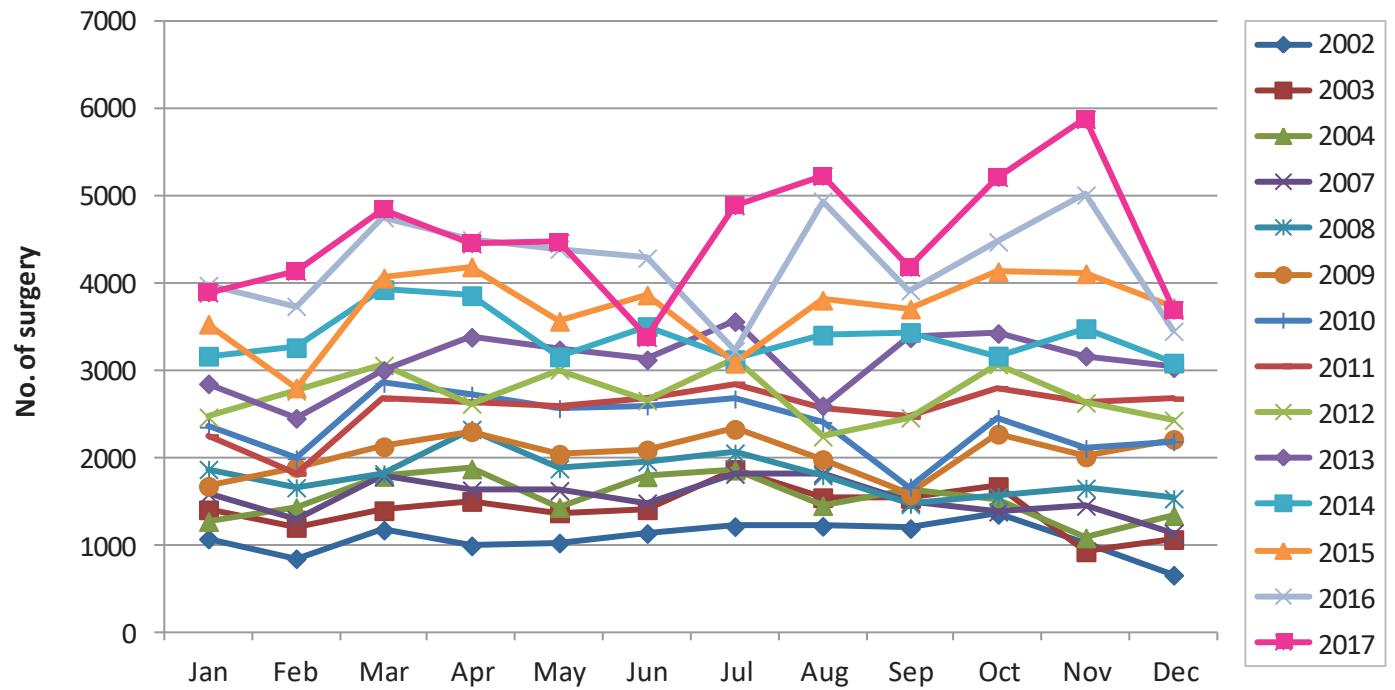


Figure 1.3.1-1: Number of Cataract Surgeries by Month, CSR 2002-2017

1.3.2. Number of Cataract Surgery Registered to CSR by State

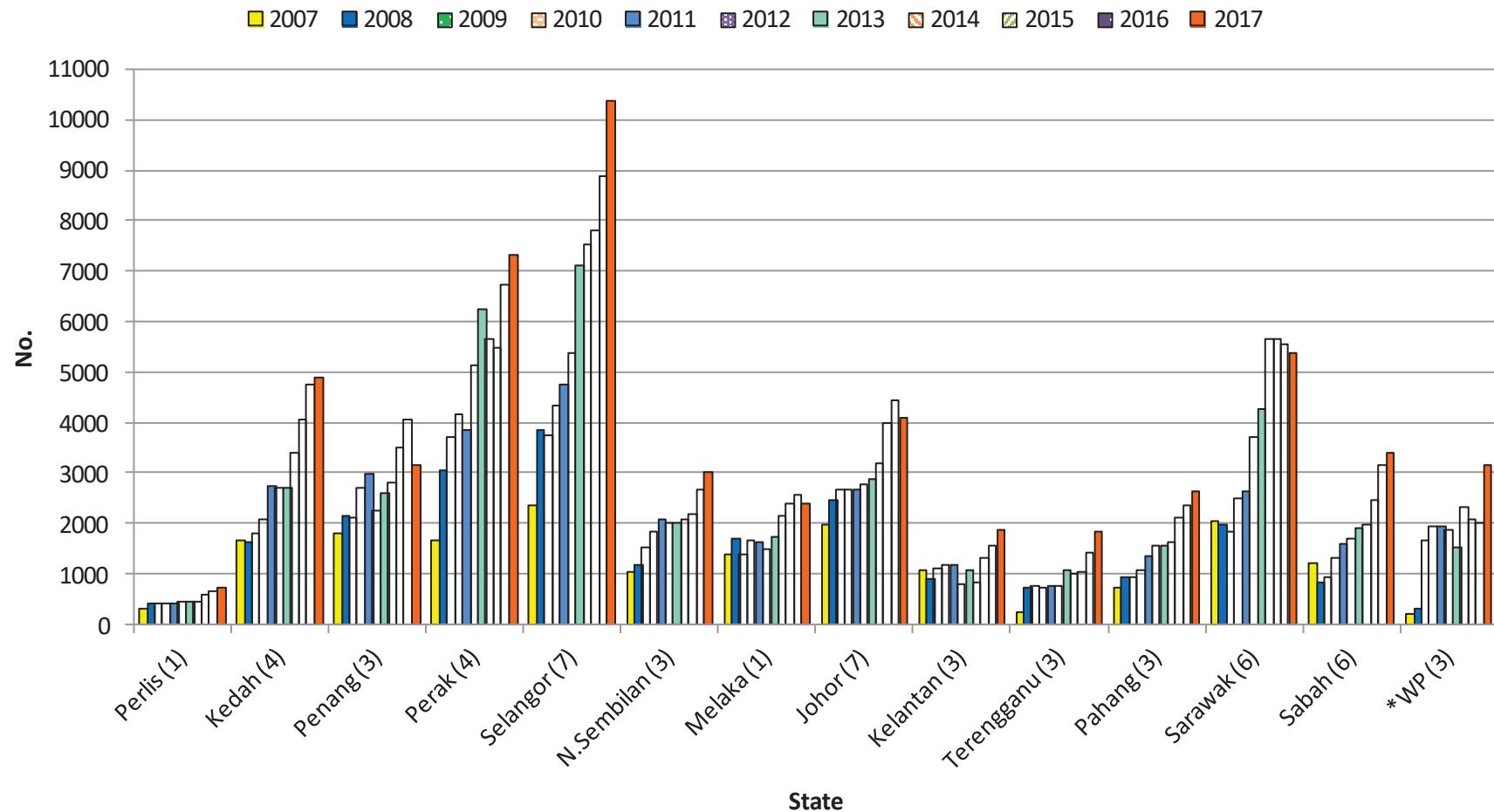


Figure 1.3.2-1: Number of Cataract Surgeries by State, CSR 2003-2017

*Wilayah Persekutuan in 2007 and 2008 for Putrajaya Hospital only

1.3.3. Surgeon Status

Table 1.3.3-1: Surgeon Status, CSR 2007-2017

Year	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
No. of patients (N)	18426		21496		24438		28506		30611		32473		37150		40532		44534		50625		54242	
Specialist	14327	77.8	16846	78.4	19400	79.4	24216	84.9	25590	83.6	27684	85.3	32861	88.5	36197	89.3	39624	89.0	44995	88.9	47641	87.8
Gazetting Specialist	1276	6.9	1399	6.5	2053	8.4	1405	4.9	2487	8.1	2411	7.4	2014	5.4	2034	5.0	2251	5.1	2282	4.5	3107	5.7
Medical Officer	2690	14.6	2697	12.5	2750	11.3	2871	10.1	2478	8.1	2354	7.3	2244	6.0	2249	5.6	2558	5.7	3090	6.1	3340	6.2
Missing/NA	133	1.0	554	2.6	235	1.0	14	0.1	56	0.2	24	0.1	31	0.1	52	0.1	101	0.2	258	0.5	154	0.3

Table 1.3.3-2: Surgeon Status for Phaco, CSR 2007-2017

Year	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
No. of patients (N)	11960		14781		17717		21810		23872		26345		31625		35429		39131		45346		49543	
Specialist	10294	86.1	12458	84.3	15206	85.8	19797	90.8	20963	87.8	23291	88.4	28774	91.0	32417	91.5	35766	91.4	41212	90.9	44302	89.4
Gazetting Specialist	805	6.7	882	6.0	1422	8.0	929	4.3	1845	7.7	1850	7.0	1694	5.4	1776	5.0	1899	4.9	2021	4.5	2807	5.7
Medical Officer	780	8.5	1064	7.2	923	5.2	1078	4.9	1050	4.4	1182	4.5	1132	3.6	1189	3.4	1372	3.5	1862	4.1	2283	4.6
Missing/NA	81	0.7	377	2.6	166	0.9	6	0.0	14	0.1	22	0.1	25	0.1	47	0.1	94	0.2	251	0.6	151	0.3

Table 1.3.3-3: Surgeon Status for ECCE, CSR 2007-2017

Year	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
No. of patients (N)	5524		5627		5457		5363		5291		4784		4086		3613		3677		3439		3656	
Specialist	3240	58.7	3528	62.7	3133	57.4	3237	60.4	3406	64.4	3231	67.5	2794	68.4	2434	67.4	2333	63.5	2113	61.4	2378	65.0
Gazetting Specialist	391	7.1	403	7.2	516	9.5	405	7.6	513	9.7	435	9.1	218	5.3	170	4.7	226	6.2	164	4.8	259	7.1
Medical Officer	1848	33.5	1555	27.6	1754	32.1	1718	32.0	1369	25.9	1116	23.3	1072	26.2	1007	27.9	1116	30.4	1162	33.8	1017	27.8
Missing/NA	45	0.8	141	2.5	54	1.0	3	0.0	3	0.1	2	0.0	2	0.1	2	0.1	2	0.0	0	0.0	2	0.1

Table 1.3.3-4: Specialist by SDP, CSR 2007-2017

Year	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017			
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%		
All Centres	14327	77.8	16846	78.4	19400	79.4	24216	85.0	25590	83.6	27684	85.3	32861	88.5	36197	89.3	39624	89.0	44995	88.9	47641	87.8		
Bintulu	-	-	25	83.3	101	81.5	219	84.9	330	99.4	389	99.5	375	97.9	374	100.0	350	100.0	197	100.0	261	100.0		
Kemaman	-	-	-	-	-	-	-	-	-	-	-	-	47	100.0	72	100.0	3	100.0	17	60.7	161	100.0		
Kluang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	227	100.0		
Likas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	100.0	23	100.0	33	100.0			
Sarikei	-	-	-	-	-	-	-	-	-	-	-	285	99.7	554	99.8	643	99.4	689	99.3	431	100.0	-	-	
Segamat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	121	100.0	398	100.0	-	-	
Shah Alam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	353	100.0	668	100.0	-	-	
Taiping	279	100.0	378	99.7	610	99.7	683	76.8	853	89.5	899	80.4	1195	93.1	1231	99.8	1317	99.8	1575	100.0	1765	100.0	-	-
KK-KKM Johor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	93	100.0	33	100.0	-	-	
KK-KKM Pulau Pinang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	79	94.0	90	100.0	-	-	
Sungai Buloh	144	98.6	273	85.6	361	93.3	467	99.8	450	100.0	514	100.0	579	99.8	686	99.0	770	99.5	817	99.9	727	99.5	-	-
Tawau	184	91.5	312	98.4	296	99.3	399	99.5	574	99.8	648	100.0	503	100.0	540	100.0	603	99.3	634	93.1	296	99.0	-	-
Pulau Pinang	754	68.2	1142	84.2	1024	74.5	1516	80.8	1816	83.1	1079	81.1	1320	77.8	1639	91.5	2076	92.7	2343	90.4	1626	98.6	-	-
Kulim	-	-	-	-	-	-	-	-	-	-	-	-	-	-	265	100.0	395	94.5	528	92.8	600	98.5	-	-
Sibu	337	88.0	254	96.6	130	33.6	345	75.8	230	45.5	675	90.6	759	84.3	859	99.2	521	89.7	763	95.9	787	98.4	-	-
KK-KKM Kelantan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	185	99.5	2	100.0	62	100.0	135	97.8	-	-
Klang	841	80.8	841	69.1	690	76.3	833	82.7	966	91.0	1317	93.3	1523	94.5	1363	93.3	1946	98.4	2164	97.2	2236	96.3	-	-
KK-KKM Sarawak	-	-	-	-	-	-	-	-	-	-	-	76	100.0	798	96.0	1111	98.2	908	99.0	852	96.3	-	-	
Putrajaya	196	96.6	254	99.2	251	100.0	282	100.0	329	100.0	349	98.3	386	98.7	360	98.1	452	97.6	416	97.0	479	96.2	-	-
KK-KKM Pahang	-	-	-	-	-	-	-	-	-	-	-	59	92.2	-	-	186	99.5	114	95.8	282	95.9	-	-	
Kuala Lumpur	-	-	28	70.0	871	62.0	1359	82.5	1265	78.0	1387	91.5	1090	94.8	1750	90.6	1512	94.0	1403	90.2	1388	94.8	-	-
KK-KKM Sabah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	125	95.4	270	98.2	452	94.2	-	-
Bukit Mertajam	620	91.0	434	89.1	715	96.2	782	97.3	744	92.7	879	94.7	853	93.8	967	96.9	1178	93.1	1345	97.5	1336	93.7	-	-
Miri	12	75.0	356	89.9	404	100.0	576	99.8	501	76.3	513	56.9	904	98.8	888	93.6	583	64.6	742	71.0	1101	93.0	-	-
Ipoh	1068	68.2	1392	80.8	1460	68.3	1859	84.5	1479	81.0	2459	83.9	2741	90.4	2614	94.7	1978	77.7	2727	87.3	3192	92.1	-	-
Alor Setar	334	81.3	765	77.6	846	76.2	1376	90.1	1742	89.8	1595	86.9	1429	81.3	1839	87.3	2153	92.2	2400	91.7	2351	91.7	-	-
Temerloh	244	55.0	405	76.3	382	59.7	290	64.4	651	95.6	827	95.3	837	96.7	954	91.1	845	99.3	923	91.5	850	91.7	-	-

Serdang	532	87.9	620	89.1	567	94.8	506	97.3	610	91.6	677	95.5	957	93.5	1233	97.5	981	99.9	530	98.9	808	91.6
KK-KKM Kedah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	209	100.0	339	100.0	321	91.2
KK-KKM Terengganu	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33	86.8	33	82.5	50	100.0	252	91.0
Muar	332	94.3	237	70.1	388	71.6	606	98.2	405	58.5	493	74.1	699	97.5	445	61.0	922	99.4	1085	100.0	944	90.9
MAIWP	-	-	-	-	-	-	-	-	-	-	-	-	1564	98.8	2197	97.0	1714	94.0	2536	87.4	3187	90.9
KK-KKM Neg. Sembilan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	100.0	191	86.8	402	90.5	
Kuantan	21	87.5	306	77.5	235	80.2	553	89.9	614	90.3	607	88.7	490	79.2	497	86.3	707	65.5	1004	82.0	1245	88.9
Kota Bharu	680	83.5	583	78.9	804	88.3	858	89.4	862	91.1	485	89.0	625	91.6	279	97.9	831	90.2	1021	91.7	1239	88.8
Teluk Intan	504	75.1	511	86.9	539	88.1	642	93.0	397	59.9	439	71.3	677	61.4	684	67.5	731	78.4	1256	94.6	1034	85.7
Sri Manjung	121	79.6	285	81.4	318	97.2	375	96.9	417	99.3	464	99.6	820	98.6	623	99.7	666	100.0	490	71.6	737	84.9
Kuala Terengganu	371	70.4	611	84.2	665	89.5	612	85.7	629	81.7	700	91.5	890	87.8	712	79.1	779	78.9	1046	79.2	1174	84.3
Umum Sarawak	719	71.8	763	75.5	698	78.2	941	78.0	993	87.8	1375	83.0	1490	86.6	1514	73.2	1731	85.7	1631	86.8	1526	83.8
Melaka	1112	72.8	1119	66.6	1098	79.2	1342	80.9	1367	83.3	1392	93.5	1550	90.2	1968	92.0	2133	89.3	2247	88.2	1992	83.2
Batu Pahat	511	91.9	500	87.3	336	55.8	290	70.6	410	74.0	262	43.1	405	93.5	467	100.0	561	100.0	666	100.0	536	82.6
Sultan Ismail	101	94.4	180	100.0	183	98.9	203	78.7	283	100.0	279	100.0	353	94.4	609	100.0	827	100.0	885	100.0	669	82.2
Selayang	1221	86.2	1190	83.3	1164	82.1	1414	83.2	1523	81.9	1465	80.1	1088	81.4	730	81.2	1119	82.7	1098	85.3	932	82.0
Kuala Krai	99	79.2	168	98.8	169	96.6	211	97.2	230	95.8	226	91.5	397	100.0	354	97.0	351	90.2	316	91.9	284	81.8
Sultanah Aminah JB	1031	66.8	825	60.0	1079	81.9	1097	79.7	770	68.3	1079	90.3	1177	87.2	1362	98.6	1607	97.8	1253	79.6	744	80.8
Sungei Petani	488	98.2	626	98.9	683	99.9	546	97.8	731	90.1	740	87.6	859	92.4	932	91.2	896	89.1	1104	97.0	1090	79.3
Ampang	4	100.0	200	96.2	421	97.2	491	78.3	620	87.6	809	90.3	813	82.7	722	76.3	633	71.9	526	70.1	889	78.8
Queen Elizabeth KK	423	79.4	265	75.5	344	79.4	552	88.5	540	78.7	551	72.2	658	67.3	737	70.9	900	79.4	1022	73.2	1354	77.9
Kuala Pilah	180	84.1	225	79.8	257	88.6	310	96.3	465	96.3	424	98.8	425	86.4	461	93.5	377	83.4	516	86.0	478	74.0
Seremban	547	57.2	249	27.7	812	66.1	1147	75.5	1262	78.6	1109	71.1	1167	76.8	1078	68.0	1213	70.3	1435	78.3	1426	73.4
Sandakan	-	-	100	73.0	72	45.6	123	59.1	98	36.2	128	48.3	404	98.3	235	99.2	411	82.4	364	87.9	365	71.2
Pusat Perubatan UKM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	807	68.3	
Kangar	317	97.8	390	97.5	395	99.0	395	98.8	402	99.8	445	98.0	386	82.8	365	85.7	458	79.5	567	87.0	449	60.4
Keningau	-	-	34	100.0	31	100.0	16	21.1	32	61.5	5	29.4	6	40.0	22	16.5	0	0.0	14	3.8	0	0.0
Langkawi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	57	95.0	80	89.9	-	-	
Tanah Merah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	100.0	17	94.4	-	-	

Table 1.3.3-5: Gazetting Specialist by SDP, CSR 2007-2017

Year	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
All Centres	1276	6.9	1399	6.5	2053	8.4	1405	4.9	2487	8.1	2411	7.4	2014	5.4	2034	5.0	2251	5.1	2282	4.5	3107	5.7
Kangar	0	0.0	0	0.0	1	0.3	0	0.0	1	0.2	0	0.0	66	14.2	14	3.3	0	0.0	0	0.0	213	28.7
Kuala Pilah	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	53	10.8	30	6.1	71	15.7	66	11.0	165	25.5
Sultan Ismail	0	0.0	0	0.0	2	1.1	55	21.3	0	0.0	0	0.0	21	5.6	0	0.0	0	0.0	0	0.0	145	17.8
Batu Pahat	0	0.0	60	10.5	197	32.7	75	18.2	135	24.4	329	54.1	26	6.0	0	0.0	0	0.0	0	0.0	113	17.4
Sandakan	-	-	1	0.7	1	0.6	0	0.0	55	20.3	17	6.4	0	0.0	0	0.0	0	0.0	0	0.0	89	17.3
Queen Elizabeth KK	0	0.0	9	2.6	44	10.2	42	6.7	92	13.4	152	19.9	173	17.7	202	19.4	169	14.9	279	20.0	264	15.2
Sri Manjung	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.4	7	0.8	0	0.0	0	0.0	191	27.9	128	14.7
Sultanah Aminah JB	273	17.7	232	16.9	136	10.3	202	14.7	320	28.4	82	6.9	158	11.7	8	0.6	6	0.4	263	16.7	134	14.5
Sungei Petani	6	1.2	0	0.0	0	0.0	0	0.0	47	5.8	3	0.4	0	0.0	0	0.0	74	7.4	0	0.0	194	14.1
Umum Sarawak	147	14.7	96	9.5	56	6.3	96	8.0	54	4.8	141	8.5	175	10.2	483	23.4	240	11.9	153	8.1	250	13.7
Melaka	216	14.1	267	15.9	44	3.2	66	4.0	147	9.0	14	0.9	2	0.1	4	0.2	80	3.3	193	7.6	234	9.8
KK-KKM Neg. Sembilan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	28	12.7	42	9.5
Teluk Intan	0	0.0	0	0.0	0	0.0	4	0.6	221	33.3	133	21.6	362	32.8	282	27.8	153	16.4	0	0.0	111	9.2
Muar	0	0.0	93	27.5	149	27.5	6	1.0	287	41.5	172	25.9	13	1.8	282	38.7	5	0.5	0	0.0	95	9.1
Seremban	43	4.5	28	3.1	18	1.5	46	3.0	6	0.4	4	0.3	32	2.1	74	4.7	120	7.0	48	2.6	157	8.1
Temerloh	115	25.9	64	12.1	139	21.7	99	22.0	0	0.0	25	2.9	16	1.8	82	7.8	0	0.0	77	7.6	74	8.0
Selayang	47	3.3	34	2.4	118	8.3	24	1.4	3	0.2	60	3.3	40	3.0	24	2.7	93	6.9	34	2.6	79	6.9
Serdang	35	5.8	58	8.3	29	4.8	6	1.2	33	5.0	16	2.3	31	3.0	3	0.2	1	0.1	0	0.0	59	6.7
Kuala Terengganu	97	18.4	35	4.8	9	1.2	28	3.9	93	12.1	8	1.0	50	4.9	133	14.8	130	13.2	172	13.0	76	5.5
Kota Bharu	41	5.0	42	5.7	2	0.2	2	0.2	4	0.4	6	1.1	5	0.7	0	0.0	6	0.7	4	0.4	76	5.4
Bukit Mertajam	0	0.0	0	0.0	2	0.3	0	0.0	40	5.0	33	3.6	13	1.4	0	0.0	55	4.3	0	0.0	69	4.8
KK-KKM Kedah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	15	4.3
KK-KKM Sarawak	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	32	3.9	20	1.8	9	1.0	33	3.7
KK-KKM Terengganu	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	7.9	5	12.5	0	0.0	8	2.9
Alor Setar	0	0.0	74	7.5	30	2.7	7	0.5	3	0.2	131	7.1	165	9.4	96	4.6	1	0.0	4	0.2	65	2.5
Klang	104	10.0	194	15.9	142	15.7	109	10.8	92	8.7	94	6.7	68	4.2	79	5.4	1	0.1	15	0.7	57	2.5
KK-KKM Sabah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	12	2.5

Kuantan	0	0.0	27	6.8	17	5.8	1	0.2	1	0.1	0	0.0	38	6.1	12	2.1	206	19.1	97	7.9	33	2.4	
KK-KKM Kelantan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0	3	2.2	
Miri	0	0.0	4	1.0	0	0.0	0	0.0	148	22.5	383	42.5	11	1.2	58	6.1	313	34.7	261	25.0	22	1.9	
Pulau Pinang	141	12.8	26	1.9	226	16.4	220	11.7	186	8.5	30	2.3	63	3.7	22	1.2	79	3.5	80	3.1	22	1.3	
Kuala Lumpur	-	-	8	20.0	368	26.2	15	0.9	86	5.3	20	1.3	15	1.3	62	3.2	31	1.9	33	2.1	16	1.1	
Keningau	-	-	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	0.9	
Kuala Krai	0	0.0	0	0.0	0	0.0	0	0.0	10	4.2	21	8.5	0	0.0	0	0.0	0	0.0	0	0.0	3	0.9	
Ipoh	10	0.6	0	0.0	118	5.5	0	0.0	63	3.5	230	7.8	156	5.1	43	1.6	322	12.6	180	5.8	26	0.8	
Putrajaya	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	0.8	
Ampang	0	0.0	0	0.0	0	0.0	4	0.6	6	0.8	18	2.0	7	0.7	0	0.0	59	6.7	60	8.0	5	0.4	
Tawau	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	9	1.3	1	0.3	
Pusat Perubatan UKM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	0.3
MAIWP	-	-	-	-	-	-	-	-	-	-	-	-	7	0.4	2	0.1	6	0.3	6	0.2	9	0.3	
Bintulu	-	-	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	8	2.1	0	0.0	0	0.0	0	0.0	0	0.0	
Kemaman	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0	11	39.3	0	0.0	
Kluang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
Kulim	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0	0	0.0	
Likas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0	
Sarikei	-	-	-	-	-	-	-	-	-	-	-	-	1	0.3	0	0.0	0	0.0	0	0.0	0	0.0	
Segamat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	
Shah Alam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	
Sibu	1	0.3	0	0.0	194	50.1	92	20.2	254	50.3	68	9.1	138	15.3	0	0.0	0	0.0	0	0.0	0	0.0	
Sungai Buloh	0	0.0	46	14.4	9	2.3	0	0.0	0	0.0	0	0.0	0	0.0	2	0.3	1	0.1	0	0.0	0	0.0	
Taiping	0	0.0	1	0.3	2	0.3	206	23.2	100	10.5	219	19.6	89	6.9	2	0.2	3	0.2	0	0.0	0	0.0	
KK-KKM Johor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	
KK-KKM Pahang	-	-	-	-	-	-	-	-	-	-	-	-	5	7.8	-	-	1	0.5	5	4.2	0	0.0	
KK-KKM Pulau Pinang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4.8	0	0.0	
Langkawi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	-	-	
Tanah Merah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	-	-	

Table 1.3.3-6: Medical Officer by SDP, CSR 2007-2017

Year	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
All Centres	2690	14.6	2697	12.5	2750	11.3	2871	10.1	2478	8.1	2354	7.2	2244	6.0	2249	5.5	2558	5.7	3090	6.1	3340	6.2	
Keningau	-	-	0	0.0	0	0.0	60	78.9	20	38.5	12	70.6	9	60.0	111	83.5	82	100.0	356	96.2	321	99.1	
Pusat Perubatan UKM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	372	31.5	
Ampang	0	0.0	2	1.0	12	2.8	132	21.1	82	11.6	69	7.7	163	16.6	224	23.7	188	21.4	164	21.9	234	20.7	
Seremban	351	36.7	163	18.2	392	31.9	326	21.5	337	21.0	446	28.6	321	21.1	433	27.3	393	22.8	349	19.1	359	18.5	
Kuala Krai	26	20.8	2	1.2	6	3.4	6	2.8	0	0.0	0	0.0	0	0.0	11	3.0	38	9.8	28	8.1	60	17.3	
Sandakan	-	-	35	25.5	85	53.8	85	40.9	118	43.5	120	45.3	7	1.7	2	0.8	88	17.6	50	12.1	59	11.5	
Selayang	139	9.8	199	13.9	136	9.6	261	15.4	333	17.9	304	16.6	209	15.6	145	16.1	141	10.4	155	12.0	126	11.1	
Kangar	5	1.5	6	1.5	3	0.8	5	1.3	0	0.0	9	2.0	14	3.0	47	11.0	118	20.5	85	13.0	81	10.9	
Kuala Terengganu	59	11.2	78	10.7	69	9.3	74	10.4	48	6.2	57	7.5	74	7.3	55	6.1	78	7.9	103	7.8	143	10.3	
Kuantan	3	12.5	62	15.7	41	14.0	61	9.9	65	9.6	77	11.3	90	14.5	67	11.6	166	15.4	124	10.1	123	8.8	
Ipoh	441	28.2	291	16.9	335	15.7	330	15.0	230	12.6	220	7.5	114	3.8	102	3.7	247	9.7	216	6.9	248	7.2	
Melaka	198	13.0	285	17.0	244	17.6	250	15.1	128	7.8	82	5.5	167	9.7	166	7.8	176	7.4	109	4.3	168	7.0	
Queen Elizabeth KK	104	19.5	76	21.7	45	10.4	30	4.8	54	7.9	60	7.9	147	15.0	100	9.6	64	5.6	96	6.9	121	7.0	
Sungei Petani	2	0.4	0	0.0	1	0.1	12	2.2	33	4.1	102	12.1	71	7.6	90	8.8	36	3.6	34	3.0	91	6.6	
KK-KKM Terengganu	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	5.3	2	5.0	0	0.0	17	6.1	
Kota Bharu	91	11.2	114	15.4	105	11.5	100	10.4	80	8.5	54	9.9	52	7.6	6	2.1	84	9.1	88	7.9	81	5.8	
Alor Setar	76	18.5	146	14.8	234	21.1	144	9.4	194	10.0	109	5.9	164	9.3	169	8.0	182	7.8	212	8.1	147	5.7	
Miri	4	25.0	36	9.1	0	0.0	1	0.2	8	1.2	5	0.6	0	0.0	3	0.3	7	0.8	42	4.0	61	5.2	
Teluk Intan	166	24.7	77	13.1	73	11.9	44	6.4	45	6.8	44	7.1	62	5.6	46	4.5	48	5.2	71	5.4	61	5.1	
Sultanah Aminah JB	234	15.2	313	22.7	102	7.7	77	5.6	37	3.3	34	2.8	15	1.1	11	0.8	30	1.8	59	3.7	43	4.7	
KK-KKM Kedah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	16	4.5	
MAIWP	-	-	-	-	-	-	-	-	-	-	-	-	-	12	0.8	23	1.0	7	0.4	100	3.4	157	4.5
Kuala Lumpur	-	-	3	7.5	166	11.8	274	16.6	271	16.7	108	7.1	44	3.8	120	6.2	64	4.0	120	7.7	60	4.1	
KK-KKM Pahang	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	-	-	0	0.0	0	0.0		
KK-KKM Sabah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	4.6	5	1.8	16	3.3	
Putrajaya	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	6	1.7	5	1.3	7	1.9	11	2.4	13	3.0	15	3.0	
Umum Sarawak	134	13.4	150	14.8	139	15.6	170	14.1	84	7.4	141	8.5	56	3.3	71	3.4	48	2.4	95	5.1	46	2.5	

Serdang	38	6.3	18	2.6	2	0.3	8	1.5	23	3.5	16	2.3	35	3.4	28	2.2	0	0.0	6	1.1	15	1.7
Sibu	44	11.5	9	3.4	63	16.3	18	4.0	21	4.2	2	0.3	3	0.3	7	0.8	60	10.3	33	4.1	13	1.6
Bukit Mertajam	59	8.7	53	10.9	26	3.5	22	2.7	19	2.4	16	1.7	43	4.7	31	3.1	32	2.5	34	2.5	21	1.5
Kulim	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	22	5.3	41	7.2	9	1.5	
Klang	89	8.5	179	14.7	70	7.7	63	6.3	1	0.1	0	0.0	20	1.2	19	1.3	31	1.6	48	2.2	28	1.2
Tawau	16	8.0	5	1.6	2	0.7	2	0.5	1	0.2	0	0.0	0	0.0	0	0.0	4	0.7	38	5.6	2	0.7
Kuala Pilah	31	14.5	57	20.2	33	11.4	12	3.7	18	3.7	5	1.2	14	2.8	2	0.4	4	0.9	18	3.0	3	0.5
Sungai Buloh	0	0.0	0	0.0	17	4.4	1	0.2	0	0.0	0	0.0	1	0.2	5	0.7	2	0.3	1	0.1	4	0.5
Sri Manjung	24	15.8	64	18.3	9	2.8	12	3.1	3	0.7	0	0.0	0	0.0	0	0.0	0	0.0	3	0.4	3	0.3
Temerloh	81	18.2	60	11.3	119	18.6	61	13.6	30	4.4	16	1.8	13	1.5	11	1.1	6	0.7	9	0.9	3	0.3
Pulau Pinang	208	18.8	188	13.9	124	9.0	140	7.5	184	8.4	221	16.6	312	18.4	130	7.3	85	3.8	168	6.5	1	0.1
Batu Pahat	45	8.1	13	2.3	69	11.5	46	11.2	9	1.6	17	2.8	2	0.5	0	0.0	0	0.0	0	0.0	0	0.0
Bintulu	-	-	5	16.7	23	18.5	39	15.1	2	0.6	2	0.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Kemaman	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Kluang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
Likas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0
Muar	17	4.8	8	2.4	5	0.9	5	0.8	0	0.0	0	0.0	5	0.7	2	0.3	1	0.1	0	0.0	0	0.0
Sarikei	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	1	0.2	4	0.6	5	0.7	0	0.0
Segamat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0
Shah Alam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0
Sultan Ismail	5	4.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Taiping	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
KK-KKM Johor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0
KK-KKM Kelantan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0.5	0	0.0	0	0.0	0	0.0
KK-KKM Neg. Sembilan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	1	0.5	0	0.0
KK-KKM Pulau Pinang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1.2	0	0.0
KK-KKM Sarawak	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0
Langkawi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	5.0	9	10.1	-	-
Tanah Merah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	1	5.6	-	-

1.3.4. Duration of Surgery

Table 1.3.4-1: Duration of Surgery by Types of Cataract Surgery, CSR 2007-2017

Year	2007		2008		2009*		2010*		2011*		2012*		2013*		2014*		2015*		2016*		2017*	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Median	IQR	Median	IQR	Median	IQR	Median	IQR	Median	IQR	Median	IQR	Median	IQR
Phaco	36.8	19.7	34.1	17.7	33.6	17.7	31.3	16.4	26	20-35	25	19-33	25	20-33	25	20-32	25	20-31	23	19-30	23	19-30
All eyes	40.2	20.6	38.2	19.6	38.2	20.4	35.5	19.3	30	20-40	30	20-40	27	20-38	26	20-36	25	20-36	25	20-35	25	20-34
Lens Aspiration	47.8	27.2	60.0	25.6	46.1	25.9	45.4	28.9	40	30-60	35	25-56	31	23-50	35	25-50.5	39	25-60	35	25-53	37	25-57
ECCE	45.3	19.7	45.8	19.5	49.1	20.9	47.4	20.2	43	31-60	40	30-55	45	33-60	45	35-61	50	37-65	50	36-65	53	40-70
ICCE	57.6	23.7	57.5	23.7	58.1	24.4	57.6	28.3	55	45-71	55	40-71	52	35-69.5	53	42-70	58	44-74.5	55	42-70	60	45-77
SICS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	-	
Phaco → ECCE	57.8	20.6	44.8	24	59.7	24.2	56.1	21.7	55	40-70	55	40-70	55	41-67	55	43-70	58	45-74	58	45-73	-	-

Data entered with extreme values i.e. more than 3 hours and less than 15 minutes were not analyzed as it would skew the data

Table 1.3.4-2: Duration of Surgery by Surgeon Status, CSR 2007-2017

Year	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Median	IQR	Median	IQR	Median	IQR	Median	IQR	Median	IQR	Median	IQR	Median	IQR	
Phaco	Specialist	36	19.8	35.4	17.9	32.6	17.3	30.7	16.3	25	20-35	25	20-34	25	20-31	25	20-30	24	20-30	23	18-30	23	18-30
	Gazetting Specialist	40.2	18	47.5	20.8	39.8	19.9	36.2	15.8	30	24-40	28	21-37	30	23-40	30	25-40	33	25-45	31	24-42	30	23-38
	Medical Officers	42.2	18.2	49.2	22.8	41.5	17.7	38.2	16.6	30	25-43.5	34	25-45	32	25-44	30	25-40	30	22-40	26	20-40	32	23-45
ECCE	Specialist	40.2	17.6	43.9	69.5	42.6	18	42	17.3	36	30-50	35	30-48	40	30-53	40	30-55	42	32-55	41	31-56	46	35-61
	Gazetting Specialist	45.9	17.8	54	71.5	48.4	19.1	48.6	16.1	46	39-60	45	35-55	50	40-60	54	45-70	60	45-75	57	45-70	60	45-74
	Medical Officers	53.9	20.2	63	89.8	60.5	21.4	57.4	22	55	45-70	57	45-66	60	50-72	60	50-75	60.5	50-78	61	50-80	64	51-85

1.3.5. Distribution of Cataract Surgery Performed as Day Care

Table 1.3.5-1: Distribution of Cataract Surgery Performed as Day Care, CSR 2007-2017

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Number of SDPs	32	36	36	36	36	36	41	43	50	54	54
Total number of cataract surgery registered to CSR	18426	21496	24438	28506	30611	32473	37150	40532	44534	50625	54242
Number of surgery excluding children and combined surgery	17402	19835	22517	26514	28398	30144	32833	37999	41956	48915	52475
Number and % of day care surgery excluding children and combined surgery	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %
	7297 41.9	8449 42.6	10633 47.2	13657 51.5	14842 52.3	17827 59.1	20495 62.4	25342 66.7	28959 69.0	34843 71.2	39591 75.4

*SDP in 2002, 2003 and 2004 included private centres and university hospitals

Table 1.3.5-2: Distribution of Cataract Surgery Performed as Day Care (Excluding Children and Combined Surgery), CSR 2007-2017

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %
All Centres	7297 41.9	8449 42.6	10633 47.2	13657 51.5	14842 52.3	17827 59.1	20495 62.4	25342 66.7	28959 69.0	34843 71.2	39591 75.4
KK-KKM Kelantan	- -	- -	- -	- -	- -	- -	- -	- -	184 99.5	2 100.0	61 100.0
KK-KKM Pulau Pinang	- -	- -	- -	- -	- -	- -	- -	- -	- -	83 100.0	90 100.0
KK-KKM Sarawak	- -	- -	- -	- -	- -	- -	74 98.7	811 99.8	1087 96.5	914 99.9	883 100.0
MAIWP	- -	- -	- -	- -	- -	- -	0 0.0	2264 100.0	1824 100.0	2893 100.0	3501 100.0
Kuala Krai	0 0.0	0 0.0	0 0.0	2 1.0	75 33.3	133 61.6	295 79.1	306 89.0	374 98.2	338 98.8	345 99.4
Sarikei	- -	- -	- -	- -	- -	- -	274 96.1	536 96.9	623 98.7	688 99.6	425 99.3
Miri	15 100.0	385 99.7	397 99.7	568 99.3	640 100.0	868 99.9	910 100.0	939 100.0	859 98.7	1012 98.4	1147 99.1
Shah Alam	- -	- -	- -	- -	- -	- -	- -	- -	- -	346 99.7	655 98.8
Bukit Mertajam	82 12.4	25 5.5	650 88.8	714 90.8	719 93.5	846 94.3	840 96.2	906 95.3	1182 96.6	1336 98.2	1391 98.4
Sibu	0 0.0	1 0.4	1 0.3	2 0.4	3 0.6	394 59.7	630 76.1	790 93.9	549 95.6	755 96.1	771 97.7

Melaka	1420	98.2	1483	95.9	1121	89.3	1425	90.2	1530	95.7	1384	95.5	1504	91.9	1983	96.7	2233	96.8	2446	98.0	2295	97.5
Pulau Pinang	960	93.5	1193	91.9	1232	92.0	1682	94.8	1946	97.1	1262	96.8	1606	97.7	1599	97.7	2005	96.1	2384	96.7	1531	96.8
Seremban	589	70.3	399	69.3	789	85.3	1241	89.4	1433	93.7	1410	96.4	1405	96.8	1442	96.1	1591	97.1	1688	96.2	1808	95.6
KK-KKM Sabah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	91	70.0	263	96.0	446	94.5
Umum Sarawak	863	91.0	893	93.6	809	95.2	1096	95.0	1055	97.1	1547	97.7	1575	97.9	1838	95.5	1770	95.6	1715	95.1	1650	94.3
Putrajaya	182	95.3	201	81.7	191	76.7	254	90.7	299	92.3	335	96.3	367	94.1	331	90.9	433	95.2	409	95.6	460	94.1
KK-KKM Neg. Sembilan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	100.0	139	64.1	399	92.4
KK-KKM Johor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	30.1	30	90.9
Ampang	3	100.0	181	99.5	412	97.4	574	93.6	685	98.8	832	96.4	886	92.3	824	91.0	777	92.2	638	86.0	1012	90.8
Sultanah Aminah JB	48	3.2	44	3.3	42	3.5	45	3.7	14	1.4	26	2.5	75	6.0	529	40.3	1152	74.6	1265	83.9	780	90.5
Selayang	1011	90.7	995	78.8	1026	86.8	1219	87.0	1305	91.1	1388	90.4	1088	93.5	760	94.1	855	84.5	800	80.6	839	86.6
Queen Elizabeth KK	326	67.2	212	64.8	384	97.0	500	98.4	640	97.3	703	97.4	918	96.0	901	90.6	929	88.1	1092	81.7	1395	85.5
Sandakan	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	92	35.7	343	88.2	177	95.2	454	92.1	330	80.1	421	83.4
Bintulu	0	0.0	2	7.7	1	0.9	9	3.8	18	6.1	206	60.4	225	71.0	204	65.2	183	68.5	102	57.0	209	82.0
Kota Bharu	8	1.1	17	2.5	124	14.8	294	33.5	220	24.9	102	20.5	70	11.4	18	6.6	477	56.9	827	79.0	1053	81.1
Kemaman	-	-	-	-	-	-	-	-	-	-	-	-	44	100.0	69	97.2	3	100.0	26	92.9	126	78.8
Pusat Perubatan UKM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	870	78.4
Sungai Buloh	99	78.0	230	74.4	312	81.0	392	85.4	377	85.9	422	82.9	376	65.7	442	74.9	536	72.8	598	73.4	564	77.8
Sungei Petani	5	1.0	2	0.4	3	0.5	59	11.0	377	47.3	291	35.7	366	41.2	297	30.6	352	36.4	920	81.9	1044	76.4
Ipoh	672	48.2	896	58.1	1267	66.0	1487	75.4	1104	71.5	1894	78.5	2284	92.2	2058	86.6	1872	79.1	2242	75.4	2471	75.4
KK-KKM Kedah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	170	81.3	307	90.6	263	74.9
Kuantan	7	30.4	50	14.8	20	7.9	28	5.1	38	5.9	168	26.5	280	48.6	352	63.4	679	66.6	841	71.3	978	72.4
Kuala Terengganu	142	29.5	194	28.0	168	24.3	222	34.2	334	47.0	356	50.6	488	51.0	449	55.1	500	55.7	941	75.4	940	71.9
Sri Manjung	10	7.0	45	13.1	83	25.9	194	51.2	224	53.8	304	66.7	556	70.7	385	66.5	424	67.2	520	77.3	607	70.4
KK-KKM Terengganu	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	15.2	25	64.1	8	16.0	187	69.5
Kluang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	153	68.0
Taiping	54	20.5	46	12.7	95	16.4	117	13.9	130	14.3	516	48.5	621	50.1	689	57.4	750	58.0	925	60.4	1167	67.3
KK-KKM Pahang	-	-	-	-	-	-	-	-	-	-	-	-	2	3.2	-	-	157	86.7	109	91.6	188	65.1
Muar	2	0.6	0	0.0	1	0.2	0	0.0	1	0.1	22	3.3	4	0.6	8	1.1	187	20.4	515	48.0	631	61.7
Segamat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	241	61.0		

Serdang	313	55.0	382	57.4	388	67.2	310	60.5	291	46.5	434	62.7	415	42.7	652	53.7	599	63.2	331	62.1	491	56.6
Keningau	0	0.0	1	3.5	3	10.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	11	13.8	116	31.4	181	56.2
Kuala Lumpur	0	0.0	35	92.1	725	53.3	684	42.4	486	30.3	351	24.8	46	4.5	426	25.3	380	27.1	355	23.6	781	56.2
Batu Pahat	317	62.2	311	56.9	303	52.0	246	61.3	353	65.2	367	61.2	248	58.6	248	54.0	300	54.2	366	55.3	353	55.0
Sultan Ismail	1	1.0	8	4.6	1	0.5	1	0.4	2	0.7	1	0.4	0	0.0	21	3.5	261	32.2	409	46.7	438	54.8
Alor Setar	91	27.6	74	8.0	3	0.3	186	13.8	206	11.9	265	16.1	330	21.4	613	33.4	837	39.8	1062	44.2	1193	51.9
Klang	11	1.1	22	1.9	65	7.5	87	9.6	159	17.9	373	28.2	631	41.1	547	40.0	764	40.9	843	38.4	987	43.0
Temerloh	1	0.2	5	1.0	2	0.3	1	0.2	151	22.3	438	52.4	456	53.3	567	54.8	512	61.0	474	47.5	374	41.1
Tawau	1	0.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.4	1	0.2	2	0.4	33	5.3	101	35.8
Kangar	1	0.3	2	0.5	3	0.8	3	0.8	5	1.3	7	1.6	3	0.7	3	0.7	11	2.0	27	4.3	176	23.9
Teluk Intan	2	0.3	66	11.5	1	0.2	1	0.1	5	0.8	3	0.5	6	0.9	4	0.4	11	1.2	80	6.0	286	23.8
Kuala Pilah	61	29.0	49	19.0	10	5.1	14	4.6	17	4.0	87	22.1	252	54.4	153	33.2	89	20.7	116	19.8	94	14.6
Kulim	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	4.4	48	11.6	90	16.0	34	5.7
Likas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0	
Langkawi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	27.6	19	21.3	-	-	
Tanah Merah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	100.0	18	100.0	-	-	

Average day care (all patients) = 73.8%

■ Day care ■ Inpatient

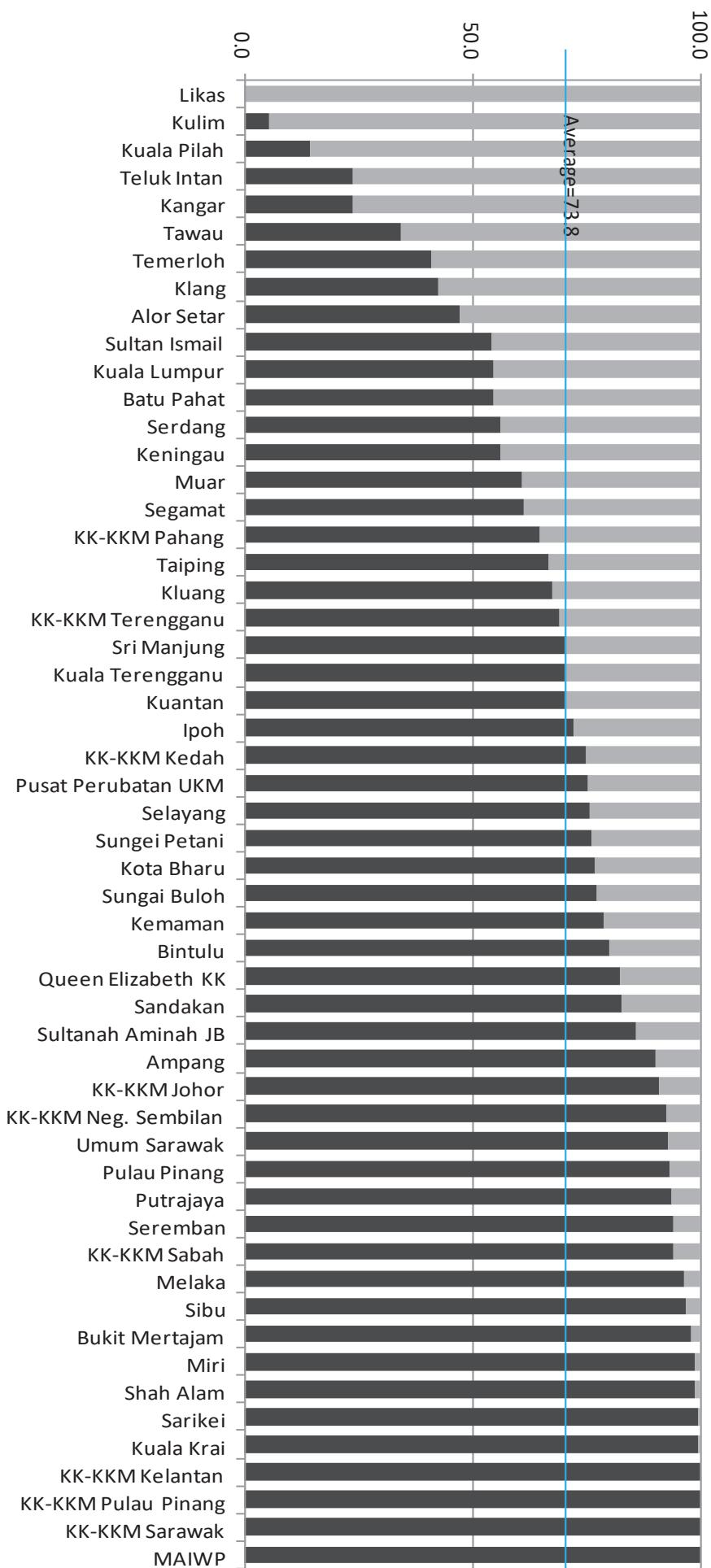


Figure 1.3.5-1: Distribution of Cataract Surgery by SDP (Day Care VS In Patient), CSR 2017

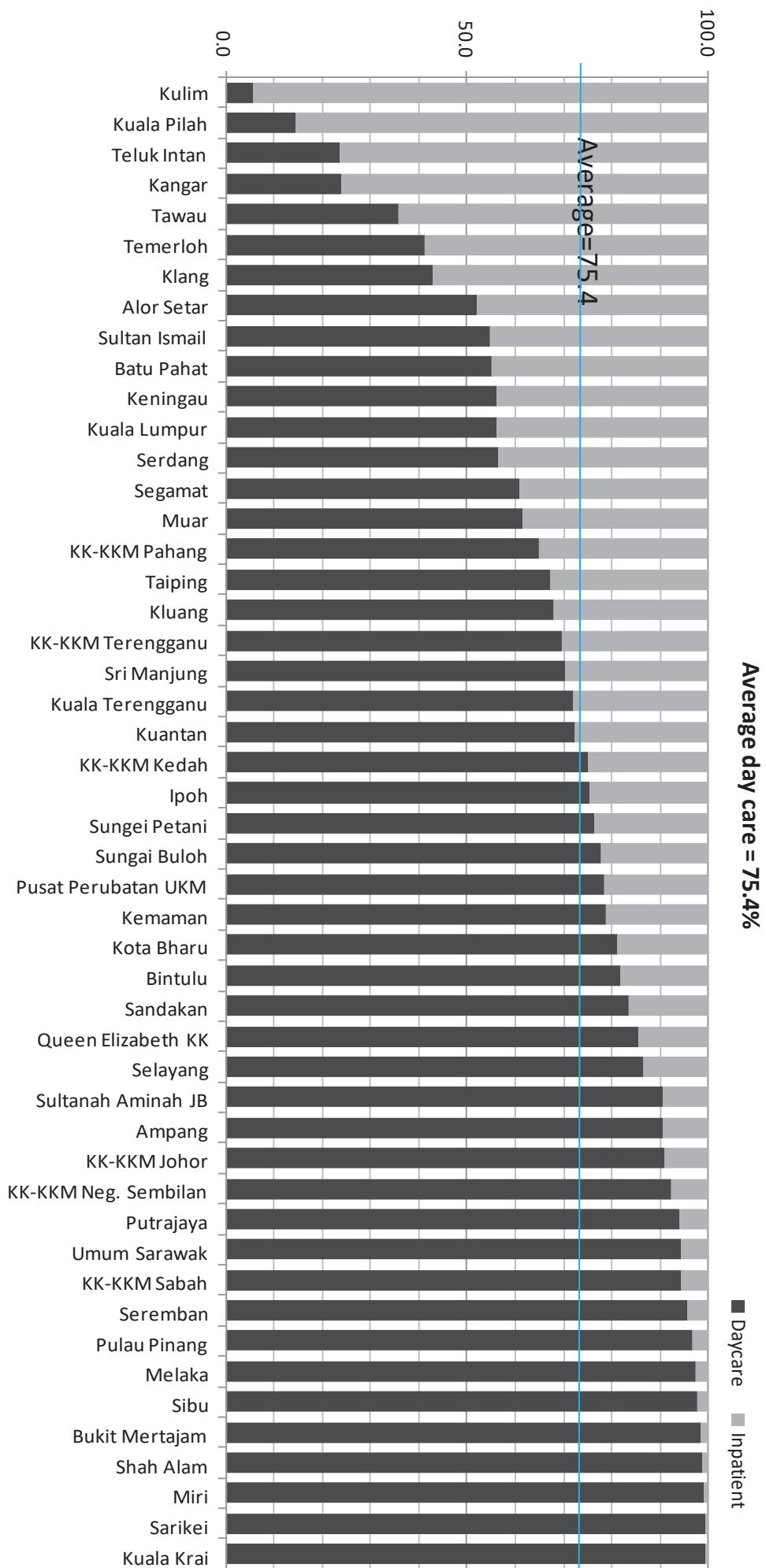


Figure 1.3.5-2: Distribution of Cataract Surgery Performed by SDP (Day Care VS In Patient, Excluding Surgery Done in Children and Combined Surgery), CSR 2017

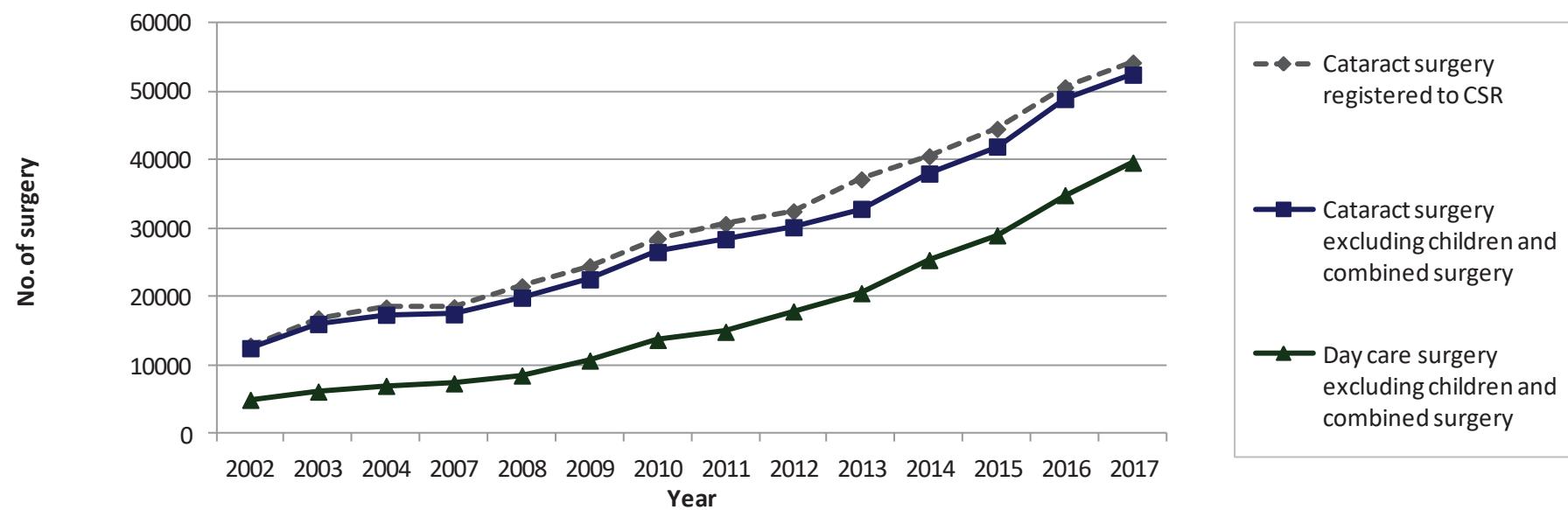


Figure 1.3.5-3: Distribution of Cataract Surgery Performed as Day Care by SDP (Excluding Surgery Done in Children and Combined Surgery), CSR 2002-2017

1.3.6. Distribution of Types of Cataract Surgery

Table 1.3.6-1: Distribution of Types Cataract Surgery, CSR 2007-2017

Year	2007		2008*		2009		2010		2011		2012		2013		2014		2015		2016		2017	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
No of patients (N)	18426		21496		24438		28506		30611		32473		37150		40532		44534		50625		54242	
Phacoemulsification	11960	65.1	14781	69.1	17717	72.5	21810	76.5	23872	78	26345	81.1	31625	85.1	35429	87.4	39131	87.9	45346	89.6	49543	91.3
ECCE	5524	30.1	5627	26.3	5457	22.3	5363	18.8	5291	17.3	4784	14.7	4086	11.0	3613	8.9	3677	8.3	3439	6.8	3656	6.7
Lens Aspiration	323	1.8	340	1.6	400	1.6	451	1.6	460	1.5	444	1.4	364	1.0	370	0.9	521	1.2	527	1.0	572	1.1
ICCE	141	0.8	129	0.6	134	0.5	143	0.5	123	0.4	136	0.4	173	0.5	176	0.4	223	0.5	275	0.5	284	0.5
SICS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	0.0	
Phaco converted to ECCE	432	2.4	524	2.4	573	2.3	586	2.1	652	2.1	621	1.9	769	2.1	805	2.0	833	1.9	870	1.7	-	-

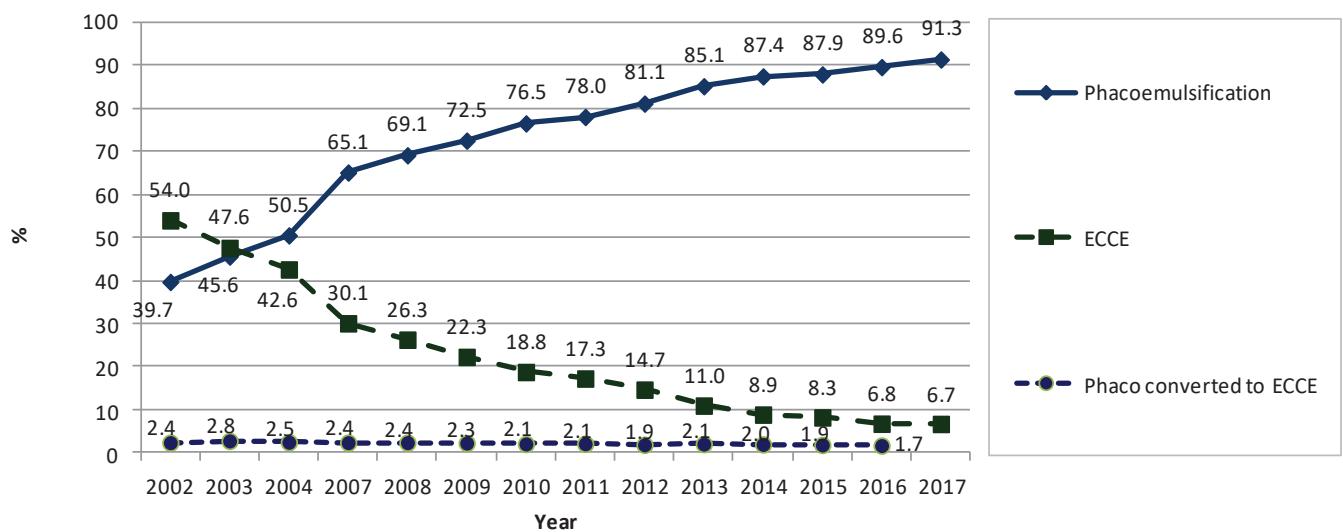


Figure 1.3.6-1: Distribution of Phaco, ECCE and Phaco Converted to ECCE, CSR 2002-2017

Table 1.3.6-2: Distribution of Types Cataract Surgery by SDP, CSR 2017

	Type of Cataract Surgery											
	All Surgeries		Phaco		ECCE		Lens Aspiration		ICCE		SICS	
	N	%	n	%	n	%	n	%	n	%	n	%
All Centres	54242	100.0	49543	91.3	3656	6.7	572	1.1	284	0.5	2	0.0
KK-KKM Johor	33	100.0	33	100.0	0	0.0	0	0.0	0	0.0	0	0.0
Sarikei	431	100.0	425	98.6	5	1.2	0	0.0	1	0.2	0	0.0
KK-KKM Pulau Pinang	90	100.0	88	97.8	1	1.1	0	0.0	0	0.0	0	0.0
KK-KKM Sarawak	885	100.0	865	97.7	16	1.8	0	0.0	3	0.3	0	0.0
Shah Alam	668	100.0	651	97.5	13	1.9	1	0.1	1	0.1	0	0.0
MAIWP	3,507	100.0	3,419	97.5	51	1.5	26	0.7	6	0.2	0	0.0
Sri Manjung	868	100.0	844	97.2	17	2.0	6	0.7	1	0.1	0	0.0
Pulau Pinang	1,649	100.0	1,589	96.4	43	2.6	5	0.3	9	0.5	0	0.0
Umum Sarawak	1,822	100.0	1,752	96.2	27	1.5	30	1.6	9	0.5	0	0.0
Bukit Mertajam	1426	100.0	1368	95.9	46	3.2	1	0.1	8	0.6	0	0.0
Segamat	398	100.0	380	95.5	10	2.5	3	0.8	4	1.0	0	0.0
Keningau	324	100.0	309	95.4	10	3.1	2	0.6	1	0.3	0	0.0
Kuala Pilah	646	100.0	616	95.4	24	3.7	3	0.5	3	0.5	0	0.0
Ipoh	3,466	100.0	3,281	94.7	125	3.6	17	0.5	27	0.8	0	0.0
Klang	2,321	100.0	2,192	94.4	89	3.8	22	0.9	12	0.5	0	0.0
Bintulu	261	100.0	246	94.3	8	3.1	3	1.1	2	0.8	0	0.0
Melaka	2,394	100.0	2,253	94.1	97	4.1	23	1.0	7	0.3	0	0.0
KK-KKM Sabah	480	100.0	450	93.8	24	5.0	2	0.4	2	0.4	0	0.0
KK-KKM Neg. Sembilan	444	100.0	416	93.7	19	4.3	2	0.5	3	0.7	0	0.0
Serdang	882	100.0	825	93.5	50	5.7	5	0.6	2	0.2	0	0.0
Sultan Ismail	814	100.0	761	93.5	38	4.7	10	1.2	5	0.6	0	0.0
Muar	1039	100.0	970	93.4	47	4.5	14	1.3	8	0.8	0	0.0
Sungai Buloh	731	100.0	681	93.2	46	6.3	1	0.1	1	0.1	0	0.0
KK-KKM Pahang	294	100.0	274	93.2	20	6.8	0	0.0	0	0.0	0	0.0
Kluang	227	100.0	211	93.0	10	4.4	1	0.4	2	0.9	0	0.0
Sibu	800	100.0	740	92.5	25	3.1	6	0.8	27	3.4	0	0.0

Selayang	1,137	100.0	1,048	92.2	39	3.4	30	2.6	8	0.7	0	0.0
Temerloh	927	100.0	855	92.2	60	6.5	10	1.1	2	0.2	0	0.0
Sungei Petani	1375	100.0	1265	92.0	88	6.4	13	0.9	8	0.6	0	0.0
Miri	1184	100.0	1087	91.8	76	6.4	14	1.2	6	0.5	0	0.0
Kulim	609	100.0	557	91.5	43	7.1	6	1.0	2	0.3	0	0.0
Pusat Perubatan UKM	1,182	100.0	1,074	90.9	91	7.7	10	0.8	2	0.2	0	0.0
Kuala Lumpur	1,464	100.0	1,329	90.8	67	4.6	58	4.0	7	0.5	0	0.0
Sultanah Aminah JB	921	100.0	834	90.6	41	4.5	28	3.0	13	1.4	0	0.0
Seremban	1,942	100.0	1,755	90.4	161	8.3	8	0.4	8	0.4	0	0.0
Batu Pahat	649	100.0	584	90.0	52	8.0	7	1.1	3	0.5	0	0.0
KK-KKM Terengganu	277	100.0	247	89.2	30	10.8	0	0.0	0	0.0	0	0.0
Teluk Intan	1206	100.0	1071	88.8	112	9.3	20	1.7	1	0.1	0	0.0
Taiping	1,765	100.0	1562	88.5	199	11.3	1	0.1	2	0.1	0	0.0
KK-KKM Kedah	352	100.0	311	88.4	41	11.6	0	0.0	0	0.0	0	0.0
Queen Elizabeth KK	1739	100.0	1531	88.0	158	9.1	22	1.3	14	0.8	0	0.0
Alor Setar	2,563	100.0	2,236	87.2	262	10.2	29	1.1	4	0.2	2	0.1
Tawau	299	100.0	255	85.3	40	13.4	1	0.3	3	1.0	0	0.0
Ampang	1128	100.0	961	85.2	153	13.6	8	0.7	2	0.2	0	0.0
Sandakan	513	100.0	432	84.2	72	14.0	2	0.4	4	0.8	0	0.0
Kuala Terengganu	1393	100.0	1163	83.5	172	12.3	40	2.9	16	1.1	0	0.0
Putrajaya	498	100.0	416	83.5	75	15.1	6	1.2	1	0.2	0	0.0
Kangar	743	100.0	615	82.8	117	15.7	4	0.5	6	0.8	0	0.0
Kuantan	1401	100.0	1157	82.6	213	15.2	13	0.9	8	0.6	0	0.0
Kota Bharu	1396	100.0	1084	77.7	269	19.3	26	1.9	14	1.0	0	0.0
KK-KKM Kelantan	138	100.0	105	76.1	32	23.2	0	0.0	1	0.7	0	0.0
Kuala Krai	347	100.0	253	72.9	91	26.2	1	0.3	2	0.6	0	0.0
Kemaman	161	100.0	116	72.0	41	25.5	0	0.0	3	1.9	0	0.0
Likas	33	100.0	1	3.0	0	0.0	32	97.0	0	0.0	0	0.0

Table 1.3.6-3: Distribution of Phaco by SDP, CSR 2007-2017

Years	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		
	n	%																					
All Centres	11960	65.1	14781	69.1	17717	72.5	21810	76.5	23872	78.0	26345	81.1	31625	85.1	35429	87.4	39131	87.9	45346	89.6	49543	91.3	
KK-KKM Johor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	96.8	33	100.0	
Sarikei	-	-	-	-	-	-	-	-	-	-	-	-	281	98.3	538	96.9	633	97.8	674	97.1	425	98.6	
KK-KKM Pulau Pinang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	95.2	88	97.8	
KK-KKM Sarawak	-	-	-	-	-	-	-	-	-	-	-	-	74	97.4	808	97.2	1,096	96.9	898	97.9	865	97.7	
Shah Alam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	340	96.3	651	97.5	
MAIWP	-	-	-	-	-	-	-	-	-	-	-	-	1504	95.0	2196	96.9	1,777	97.4	2,841	98.0	3,419	97.5	
Sri Manjung	14	9.3	111	31.7	203	62.1	314	81.1	344	81.9	412	88.4	799	96.0	608	97.3	650	97.6	659	96.3	844	97.2	
Pulau Pinang	751	68.1	1116	82.3	1208	87.9	1707	91.0	2077	95.0	1260	94.7	1589	93.7	1712	95.6	2,139	95.5	2,487	96.0	1,589	96.4	
Umum Sarawak	680	68.0	702	69.4	654	73.2	966	80.0	996	88.1	1546	93.3	1648	95.8	1986	96.0	1,929	95.5	1,807	96.2	1,752	96.2	
Bukit Mertajam	403	59.2	163	33.5	462	62.2	503	62.6	427	53.2	564	60.8	620	68.2	749	75.1	988	78.1	1094	79.3	1368	95.9	
Segamat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	82.6	380	95.5	
Keningau	-	-	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	6	40.0	96	72.2	75	91.5	340	91.9	309	95.4	
Kuala Pilah	24	11.4	58	20.6	73	25.2	149	46.3	376	77.8	361	84.1	416	84.6	430	87.2	399	88.3	542	90.3	616	95.4	
Ipoh	1117	71.4	1434	83.6	1801	84.3	1913	87.0	1496	81.9	2596	88.5	2801	92.4	2566	93.0	2,258	88.7	2,893	92.6	3,281	94.7	
Klang	570	55.0	655	53.8	486	53.8	617	61.3	907	85.5	1224	86.7	1476	91.6	1351	92.5	1,801	91.1	2,027	91.0	2,192	94.4	
Bintulu	-	-	9	31.0	75	60.5	183	70.9	241	72.6	245	62.7	357	93.2	353	94.4	337	96.3	176	89.3	246	94.3	
Melaka	1152	75.9	1335	80.3	1111	80.1	1295	78.1	1315	80.1	1203	80.8	1395	81.2	1919	89.7	2,189	91.6	2,377	93.3	2,253	94.1	
KK-KKM Sabah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	107	81.7	262	95.3	450	93.8
KK-KKM Neg. Sembilan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	75.0	206	93.6	416	93.7
Serdang	412	68.1	521	75.0	483	80.8	371	71.3	466	70.0	564	79.5	836	81.7	1072	84.7	893	90.9	483	90.1	825	93.5	
Sultan Ismail	64	63.4	114	63.7	131	70.8	172	66.7	189	66.8	208	74.6	276	73.8	496	81.4	712	86.1	815	92.1	761	93.5	
Muar	281	80.1	236	70.7	452	83.4	526	85.3	616	89.0	608	91.4	647	90.2	628	86.1	855	92.1	1021	94.1	970	93.4	
Sungai Buloh	121	82.9	271	85.2	272	70.3	346	73.9	371	82.4	419	81.5	450	77.6	599	86.4	708	91.5	739	90.3	681	93.2	
KK-KKM Pahang	-	-	-	-	-	-	-	-	-	-	-	-	47	73.4	-	-	161	86.1	108	90.8	274	93.2	
Kluang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	211	93.0	
Sibu	0	0.0	0	0.0	126	32.6	386	84.8	376	74.5	683	91.7	835	92.8	826	95.4	538	92.6	752	94.5	740	92.5	

Selayang	1305	92.4	1291	91.0	1255	88.5	1542	90.8	1619	87.1	1625	88.8	1233	92.2	809	90.0	1,166	86.2	1,131	87.9	1,048	92.2
Temerloh	210	47.3	354	67.0	393	61.4	317	70.4	537	78.9	717	82.6	718	82.9	898	85.8	731	85.9	863	85.5	855	92.2
Sungei Petani	410	82.5	483	76.4	580	84.8	455	81.5	662	81.6	604	71.5	704	75.7	743	72.7	883	87.8	1006	88.4	1265	92.0
Miri	7	46.7	296	74.7	392	97.0	556	96.4	593	90.3	849	94.2	892	97.5	893	94.1	837	92.7	998	95.5	1087	91.8
Kulim	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	239	90.2	360	86.1	492	86.5
Pusat Perubatan UKM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	557	91.5
Kuala Lumpur	NA	NA	25	62.5	925	65.8	1141	69.2	1091	67.3	1208	79.7	956	83.1	1576	81.6	1,393	86.6	1,290	82.9	1,329	90.8
Sultanah Aminah JB	1418	91.9	1293	94.0	1166	88.5	1274	92.5	986	87.5	1069	89.5	1261	93.4	1303	94.4	1,512	92.0	1,468	93.2	834	90.6
Seremban	589	61.9	610	68.9	912	74.2	1249	82.2	1368	85.2	1315	84.3	1363	89.7	1441	90.9	1,570	91.0	1,662	90.7	1,755	90.4
Batu Pahat	453	81.6	451	79.1	443	73.6	307	74.7	425	76.7	447	73.5	332	76.7	341	73.0	486	86.6	588	88.3	584	90.0
KK-KKM Terengganu	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	84.2	30	75.0	45	90.0
Teluk Intan	435	64.8	358	60.9	465	76.0	564	81.7	571	86.1	505	82.0	963	87.4	923	91.1	808	86.7	1191	89.8	1071	88.8
Taiping	100	35.8	169	44.6	440	71.9	552	62.1	618	64.8	885	79.2	1060	82.6	1030	83.5	1107	83.9	1346	85.5	1562	88.5
KK-KKM Kedah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	209	100.0	332	97.9	311	88.4
Queen Elizabeth KK	346	65.4	260	74.3	331	76.4	481	77.1	534	77.8	529	69.3	694	71.0	847	81.4	932	82.3	1177	84.3	1531	88.0
Alor Setar	240	58.4	715	72.9	702	63.2	1147	75.1	1510	77.9	1451	79.1	1358	77.2	1687	80.1	1,953	83.6	2,336	89.3	2,236	87.2
Tawau	0	0.0	3	1.0	0	0.0	0	0.0	0	0.0	1	0.2	133	26.4	354	65.6	497	81.9	574	84.3	255	85.3
Ampang	3	75.0	75	36.1	308	71.1	558	89.0	661	93.4	779	86.9	822	83.6	809	85.5	693	78.8	578	77.1	961	85.2
Sandakan	NA	NA	0	0.0	0	0.0	4	1.9	21	7.7	104	39.2	354	86.1	206	86.9	420	84.2	358	86.5	432	84.2
Kuala Terengganu	242	46.5	429	59.4	473	63.7	453	63.4	517	67.1	537	70.2	778	76.7	707	78.6	773	78.3	1067	80.8	1163	83.5
Putrajaya	93	45.8	166	64.8	186	74.1	200	70.9	263	79.9	271	76.3	303	77.5	289	78.7	395	85.3	350	81.6	416	83.5
Kangar	91	28.1	303	75.9	367	92.0	342	85.5	375	93.1	412	90.7	421	90.3	356	83.6	423	73.4	518	79.4	615	82.8
Kuantan	22	91.7	314	80.9	218	74.4	448	72.8	533	78.4	555	81.1	450	72.7	421	73.1	824	76.4	980	80.0	1157	82.6
Kota Bharu	406	49.9	383	51.8	538	59.1	604	62.9	580	61.3	367	67.3	386	56.6	162	56.8	549	59.6	793	71.2	1084	77.7
KK-KKM Kelantan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	94	50.5	2	100.0	34	54.8	
Kuala Krai	0	0.0	78	45.9	85	48.6	168	77.4	211	87.9	222	89.9	350	88.2	292	80.0	274	70.4	255	74.1	253	72.9
Kemaman	-	-	-	-	-	-	-	-	-	-	-	-	37	78.7	44	61.1	2	66.7	19	67.9	116	72.0
Likas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	1	3.0	
Langkawi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49	81.7	75	84.3	-	-	
Tanah Merah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	55.6	9	50.0	-	-	

Table 1.3.6-4: Distribution of ECCE by SDP, CSR 2007-2017

Years	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		
	n	%	n	832	n	%	n	%	n	%	n	%											
All Centres	5524	30.1	5627	26.3	5457	22.3	5363	18.8	5291	17.3	4784	14.7	4086	11.0	3613	8.9	3677	8.3	3439	6.8	3656	6.7	
Kuala Krai	119	95.2	81	47.6	82	46.9	33	15.2	15	6.3	16	6.5	24	6.0	51	14.0	108	27.8	71	20.6	91	26.2	
Kemaman	-	-	-	-	-	-	-	-	-	-	-	-	9	19.1	25	34.7	1	33.3	6	21.4	41	25.5	
KK-KKM Kelantan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	82	44.1	0	0.0	26	41.9	32	23.2	
Kota Bharu	337	41.4	302	40.9	302	33.2	280	29.2	287	30.3	141	25.9	246	36.1	106	37.2	305	33.1	249	22.4	269	19.3	
Kangar	223	68.8	86	21.6	18	4.5	46	11.5	19	4.7	27	5.9	34	7.3	50	11.7	140	24.3	119	18.3	117	15.7	
Kuantan	1	4.2	37	9.5	46	15.7	114	18.5	98	14.4	89	13.0	140	22.6	132	22.9	182	16.9	171	14.0	213	15.2	
Putrajaya	104	51.2	79	30.9	57	22.7	65	23.0	42	12.8	48	13.5	48	12.3	46	12.5	35	7.6	56	13.1	75	15.1	
Sandakan	NA	NA	130	99.2	154	97.5	191	91.8	231	85.2	148	55.8	45	10.9	29	12.2	64	12.8	44	10.6	72	14.0	
Ampang	1	25.0	106	51.0	102	23.6	38	6.1	28	4.0	72	8.0	118	12.0	105	11.1	134	15.2	133	17.7	153	13.6	
Tawau	196	97.5	305	97.1	292	98.0	380	94.8	557	96.9	634	97.8	308	61.2	149	27.6	88	14.5	78	11.5	40	13.4	
Kuala Terengganu	243	46.7	238	33.0	226	30.4	207	29.0	201	26.1	177	23.1	185	18.2	150	16.7	162	16.4	166	12.6	172	12.3	
KK-KKM Kedah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	2	0.6	41	11.6
Taiping	159	57.0	194	51.2	154	25.2	303	34.1	315	33.1	208	18.6	206	16.0	190	15.4	199	15.1	203	12.9	199	11.3	
KK-KKM Terengganu	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	15.8	9	22.5	3	6.0	30	10.8	
Alor Setar	160	38.9	247	25.2	349	31.4	310	20.3	349	18.0	294	16.0	338	19.2	343	16.3	302	12.9	214	8.2	262	10.2	
Teluk Intan	222	33.1	193	32.8	111	18.1	92	13.3	72	10.9	86	14.0	109	9.9	68	6.7	78	8.4	96	7.2	112	9.3	
Queen Elizabeth KK	155	29.3	74	21.1	62	14.3	117	18.8	96	14.0	163	21.4	223	22.8	131	12.6	132	11.7	152	10.9	158	9.1	
Seremban	319	33.5	219	24.7	261	21.2	226	14.9	194	12.1	207	13.3	128	8.4	101	6.4	121	7.0	121	6.6	161	8.3	
Batu Pahat	83	15.0	95	16.7	130	21.6	78	19.0	104	18.8	111	18.3	81	18.7	80	17.1	48	8.6	47	7.1	52	8.0	
Pusat Perubatan UKM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	91	7.7	
Kulim	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	6.4	40	9.6	66	11.6	43	7.1	
KK-KKM Pahang	-	-	-	-	-	-	-	-	-	-	-	-	11	17.2	-	-	17	9.1	8	6.7	20	6.8	
Temerloh	210	47.3	138	26.1	204	31.9	104	23.1	79	11.6	87	10.0	81	9.4	101	9.6	79	9.3	84	8.3	60	6.5	
Miri	7	46.7	95	24.0	10	2.5	15	2.6	48	7.3	28	3.1	11	1.2	38	4.0	39	4.3	30	2.9	76	6.4	
Sungei Petani	57	11.5	99	15.7	58	8.5	70	12.5	101	12.5	204	24.1	167	18.0	191	18.7	79	7.9	82	7.2	88	6.4	
Sungai Buloh	8	5.5	25	7.9	88	22.7	89	19.0	54	12.0	63	12.3	89	15.3	58	8.4	39	5.0	37	4.5	46	6.3	
Serdang	151	25.0	133	19.1	79	13.2	113	21.7	156	23.4	109	15.4	128	12.5	122	9.6	52	5.3	33	6.2	50	5.7	

KK-KKM Sabah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	13.7	7	2.5	24	5.0		
Sultan Ismail	32	31.7	61	34.1	49	26.5	72	27.9	83	29.3	55	19.7	63	16.8	70	11.5	58	7.0	36	4.1		
Kuala Lumpur	NA	NA	12	30.0	403	28.7	447	27.1	454	28.0	263	17.3	163	14.2	289	15.0	150	9.3	177	11.4		
Muar	49	14.0	81	24.3	52	9.6	44	7.1	38	5.5	19	2.9	41	5.7	56	7.7	42	4.5	25	2.3		
Sultanah Aminah JB	53	3.4	30	2.2	55	4.2	27	2.0	72	6.4	69	5.8	44	3.3	26	1.9	51	3.1	35	2.2		
Kluang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	4.4	
KK-KKM Neg. Sembilan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	1	0.5	19	4.3	
Melaka	307	20.2	271	16.3	205	14.8	283	17.1	274	16.7	248	16.7	279	16.2	147	6.9	127	5.3	106	4.2	97	4.1
Klang	403	38.9	499	41.0	368	40.7	341	33.9	120	11.3	146	10.3	64	4.0	76	5.2	107	5.4	119	5.3	89	3.8
Kuala Pilah	164	77.7	190	67.6	175	60.3	137	42.5	81	16.8	52	12.1	44	8.9	32	6.5	26	5.8	19	3.2	24	3.7
Ipoh	396	25.3	240	14.0	238	11.1	208	9.5	193	10.6	250	8.5	146	4.8	126	4.6	170	6.7	135	4.3	125	3.6
Selayang	44	3.1	70	4.9	106	7.5	80	4.7	116	6.2	75	4.1	43	3.2	34	3.8	57	4.2	27	2.1	39	3.4
Bukit Mertajam	265	38.9	315	64.7	265	35.7	284	35.3	350	43.6	338	36.4	277	30.5	237	23.7	262	20.7	270	19.6	46	3.2
Bintulu	-	-	19	65.5	38	30.6	70	27.1	83	25.0	136	34.8	14	3.7	6	1.6	6	1.7	10	5.1	8	3.1
Keningau	-	-	33	97.1	28	90.3	72	94.7	51	98.1	17	100.0	9	60.0	33	24.8	6	7.3	23	6.2	10	3.1
Sibu	372	97.1	257	97.7	258	66.7	48	10.5	96	19.0	43	5.8	34	3.8	12	1.4	18	3.1	11	1.4	25	3.1
Pulau Pinang	270	24.5	177	13.1	124	9.0	127	6.8	68	3.1	34	2.6	47	2.8	29	1.6	52	2.3	51	2.0	43	2.6
Segamat	-	-	-	-	-	-	-	-	-	-	-	-	2	0.7	10	1.8	8	1.2	7	5.8	10	2.5
Sri Manjung	134	88.7	233	66.6	122	37.3	71	18.3	65	15.5	40	8.6	14	1.7	11	1.8	9	1.4	17	2.5	17	2.0
Shah Alam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	1.4	13	1.9
KK-KKM Sarawak	-	-	-	-	-	-	-	-	-	-	-	-	1	1.3	12	1.4	13	1.1	4	0.4	16	1.8
Umum Sarawak	276	27.6	263	26.0	186	20.8	181	15.0	101	8.9	87	5.3	33	1.9	18	0.9	17	0.8	13	0.7	27	1.5
MAIWP	-	-	-	-	-	-	-	-	-	-	-	-	39	2.5	18	0.8	13	0.7	10	0.3	51	1.5
Sarikei	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	1.4	5	1.2
KK-KKM Pulau Pinang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2.4	1	1.1
Likas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0
KK-KKM Johor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1.1	0	0.0
Langkawi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	16.7	14	15.7
Tanah Merah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	44.4	7	38.9

1.3.7. Distribution of Combined Surgery

Table 1.3.7-1: Distribution of Combined Surgery, CSR 2007-2017

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
No of patients (N)	18426	21496	24438	28506	30611	32473	37150	40532	44534	50625	54242	
	n	%	n	%	n	%	n	%	n	%	n	
Any types of combined surgeries	891	4.8	664	3.1	871	3.6	1082	3.8	1194	3.9	1221	3.8
Specific types of combined surgery												
Vitreoretinal Surgery	435	2.4	237	1.1	402	1.6	601	2.1	672	2.2	585	1.8
Pterygium Surgery	135	0.7	94	0.4	100	0.4	99	0.3	133	0.4	111	0.3
Filtering Glaucoma Surgery	131	0.7	142	0.7	132	0.5	121	0.4	64	0.2	71	0.2
Penetrating Keratoplasty	0	0.0	3	0.0	6	0.0	2	0.0	1	0.0	3	0.0
Others	190	1.0	188	0.9	259	1.1	272	1.0	344	1.1	477	1.5

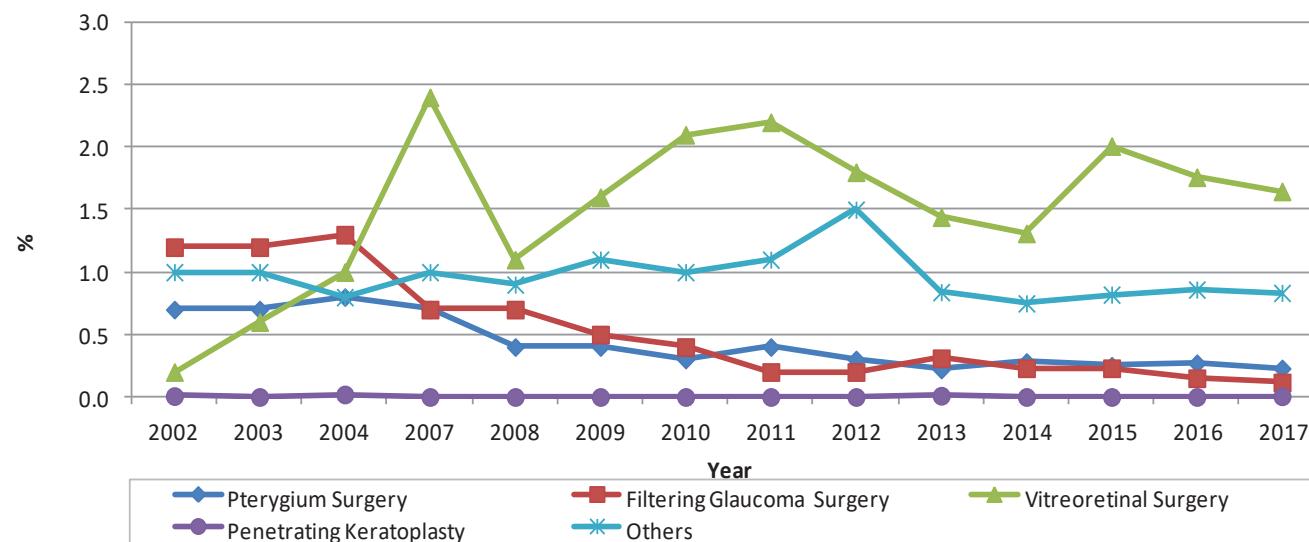


Figure 1.3.7-1: Distribution of Specific Combined Surgery, CSR 2002-2017

Table 1.3.7-2: Distribution of Combined Surgery by SDP, CSR 2017

	All Surgeries N	Combined Surgery									
		Any Combined Surgery		Pterygium Surgery		Filtering Surgery		Vitreo-Retinal Surgery		Penetrating Keratoplasty	
		n	%	n	%	n	%	n	%	n	%
All Centres	54242	1495	2.8	124	0.2	63	0.1	893	1.6	3	0.0
Selayang	1137	160	14.1	0	0.0	10	0.9	137	12.0	0	0.0
Alor Setar	2563	252	9.8	13	0.5	14	0.5	204	8.0	0	0.0
Kota Bharu	1396	90	6.4	6	0.4	3	0.2	47	3.4	0	0.0
Queen Elizabeth KK	1739	105	6.0	11	0.6	1	0.1	63	3.6	0	0.0
Pusat Perubatan UKM	1182	68	5.8	1	0.1	0	0.0	33	2.8	1	0.1
Tawau	299	16	5.4	9	3.0	0	0.0	0	0.0	0	0.0
Ipoh	3466	185	5.3	5	0.1	13	0.4	152	4.4	0	0.0
Sultanah Aminah JB	921	49	5.3	0	0.0	1	0.1	31	3.4	0	0.0
Kuala Terengganu	1393	72	5.2	21	1.5	0	0.0	22	1.6	0	0.0
Pulau Pinang	1649	65	3.9	0	0.0	3	0.2	62	3.8	0	0.0
Kuantan	1401	46	3.3	4	0.3	0	0.0	38	2.7	0	0.0
Likas	33	1	3.0	0	0.0	0	0.0	0	0.0	0	0.0
KK-KKM Terengganu	277	8	2.9	7	2.5	0	0.0	0	0.0	0	0.0
Umum Sarawak	1822	51	2.8	2	0.1	1	0.1	36	2.0	0	0.0
KK-KKM Neg. Sembilan	444	12	2.7	1	0.2	0	0.0	0	0.0	0	0.0
Seremban	1942	47	2.4	0	0.0	0	0.0	31	1.6	1	0.1
Kuala Lumpur	1464	30	2.0	1	0.1	0	0.0	8	0.5	0	0.0
Miri	1184	20	1.7	6	0.5	0	0.0	0	0.0	0	0.0
KK-KKM Pahang	294	5	1.7	0	0.0	0	0.0	0	0.0	0	0.0
KK-KKM Sabah	480	8	1.7	5	1.0	0	0.0	0	0.0	0	0.0
Kulim	609	10	1.6	0	0.0	0	0.0	0	0.0	0	0.0
Bintulu	261	4	1.5	2	0.8	0	0.0	0	0.0	0	0.0
Melaka	2394	35	1.5	1	0.0	10	0.4	21	0.9	0	0.0
Putrajaya	498	7	1.4	1	0.2	0	0.0	3	0.6	0	0.0
Serdang	882	12	1.4	1	0.1	1	0.1	0	0.0	0	0.0
Taiping	1765	25	1.4	2	0.1	0	0.0	0	0.0	0	0.0

KK-KKM Kelantan	138	2	1.4	1	0.7	0	0.0	0	0.0	0	0.0	1	0.7
Temerloh	927	11	1.2	1	0.1	0	0.0	0	0.0	0	0.0	10	1.1
Sultan Ismail	814	9	1.1	3	0.4	0	0.0	0	0.0	0	0.0	6	0.7
Muar	1039	10	1.0	0	0.0	5	0.5	0	0.0	0	0.0	5	0.5
Sandakan	513	5	1.0	1	0.2	0	0.0	0	0.0	0	0.0	4	0.8
Ampang	1128	9	0.8	4	0.4	0	0.0	0	0.0	0	0.0	5	0.4
Batu Pahat	649	5	0.8	0	0.0	0	0.0	0	0.0	0	0.0	5	0.8
Kangar	743	6	0.8	4	0.5	0	0.0	0	0.0	0	0.0	2	0.3
Segamat	398	3	0.8	0	0.0	0	0.0	0	0.0	0	0.0	3	0.8
Kemaman	161	1	0.6	0	0.0	0	0.0	0	0.0	0	0.0	1	0.6
Shah Alam	668	4	0.6	0	0.0	0	0.0	0	0.0	0	0.0	4	0.6
Bukit Mertajam	1426	7	0.5	2	0.1	0	0.0	1	0.1	0	0.0	4	0.3
Klang	2321	12	0.5	1	0.0	0	0.0	3	0.1	0	0.0	8	0.3
Kuala Pilah	646	3	0.5	2	0.3	0	0.0	0	0.0	0	0.0	1	0.2
Sibu	800	4	0.5	1	0.1	0	0.0	0	0.0	0	0.0	4	0.5
Sri Manjung	868	4	0.5	1	0.1	0	0.0	0	0.0	0	0.0	3	0.3
Sungai Buloh	731	4	0.5	0	0.0	0	0.0	0	0.0	1	0.1	3	0.4
Kluang	227	1	0.4	0	0.0	0	0.0	0	0.0	0	0.0	1	0.4
Keningau	324	1	0.3	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
KK-KKM Kedah	352	1	0.3	1	0.3	0	0.0	0	0.0	0	0.0	0	0.0
Sarikei	431	1	0.2	1	0.2	0	0.0	0	0.0	0	0.0	0	0.0
KK-KKM Sarawak	885	2	0.2	2	0.2	0	0.0	0	0.0	0	0.0	0	0.0
MAIWP	3507	6	0.2	0	0.0	1	0.0	1	0.0	0	0.0	4	0.1
Sungei Petani	1375	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
Kuala Krai	347	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Teluk Intan	1206	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
KK-KKM Johor	33	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
KK-KKM Pulau Pinang	90	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

1.3.8. Anaesthesia in Cataract Surgery

Table 1.3.8-1: Types of Anaesthesia, CSR 2007-2017

Year	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
No of patients (N)	18426		21496		24438		28506		30611		32473		37150		40532		44534		50625		54242	
General Anesthesia	1207	6.6	1223	5.7	1578	6.5	1884	6.6	1845	6.0	2117	6.5	2229	6.0	2415	6.0	2655	6.0	2764	5.5	2770	5.1
Local Anesthesia	17143	93.4	20188	94.3	22776	93.2	26440	92.8	28634	93.5	30215	93.1	34622	93.2	37654	92.9	41422	93.0	47349	93.5	50435	93.0
Type of local anaesthesia																						
Topical	4853	28.3	6680	33.1	8382	36.8	13112	49.6	16825	58.8	18461	61.1	22220	64.2	25068	66.6	28458	68.7	34825	73.5	39624	78.6
Intracameral	249	1.5	710	3.5	1596	7.0	2587	9.8	2933	10.2	3419	11.3	4733	13.7	6311	16.8	8938	21.6	11155	23.6	16346	32.4
Combined local anaesthesia	720	4.2	1274	6.3	1918	8.4	3182	12.0	4038	14.1	4375	14.5	4868	14.1	5954	15.8	7902	19.1	10461	22.1	15034	29.8
Subtenon	9990	58.3	11014	54.6	11525	50.6	10952	41.4	10512	36.7	9849	32.6	9913	28.6	9351	24.8	9294	22.4	8973	19.0	7856	15.6
Subconjunctival	232	1.4	251	1.2	437	1.9	898	3.4	771	2.7	1266	4.2	1338	3.9	1352	3.6	1253	3.0	1240	2.6	817	1.6
Retrobulbar	1031	6.0	1182	5.9	1037	4.6	864	3.3	808	2.8	667	2.2	503	1.5	436	1.2	753	1.8	623	1.3	562	1.1
Peribulbar	1282	7.5	1227	6.1	1244	5.5	881	3.3	440	1.5	279	0.9	308	0.9	474	1.3	218	0.5	203	0.4	170	0.3
Facial block	20	0.1	143	0.7	95	0.4	40	0.2	43	0.2	21	0.1	24	0.1	14	0.0	11	0.0	13	0.0	14	0.0
Others	0	0.0	NA	NA	0	0.0	NA	NA	NA													
Types of sedation for patients under local anaesthesia																						
No sedation	9668	56.4*	11234	55.6	12809	56.2	15970	60.4	18646	65.1	19379	64.1	18685	54.0	19249	51.1	22260	53.7	25926	54.8	28151	55.8
Oral sedation alone	2387	13.9	2923	14.5	3532	15.5	3171	12.0	2852	10.0	1810	6.0	1391	4.0	1823	4.8	2879	7.0	3218	6.8	866	1.7
Intravenous alone	72	0.4	37	0.2	35	0.2	22	0.1	27	0.1	36	0.1	31	0.1	36	0.1	66	0.2	124	0.3	198	0.4
Intravenous plus oral	0	0.0	NA	NA	NA	NA	2	0.0	6	0.0	6	0.0	1	0.0	2	0.0	1	0.0	3	0.0	0	0.0
Intramuscular alone	3	0.0	121	0.6	52	0.2	0	0.0	3	0.0	2	0.0	18	0.1	1	0.0	0	0.0	5	0.0	8	0.0

*There was a significant percentage of missing values in sedation for 2007; these missing values may be in 'no sedation' category where data were not entered.

Table 1.3.8-2: Types of Anaesthesia (50 years and above), CSR 2007-2017

Year	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
No of patients (N)	16715		19709		22496		26336		28425		30228		34815		38305		41880		47859		51355	
General Anesthesia	628	3.8	681	3.5	950	6.5	1184	4.5	1173	4.1	1412	4.7	1545	4.4	1760	4.6	1784	4.3	1872	3.9	1833	3.6
Local Anesthesia	16018	95.8	18946	96.1	21468	93.2	24981	94.9	27131	95.5	28689	94.9	32985	94.7	36107	94.3	39658	94.7	45502	95.1	48534	94.5
Type of local anaesthesia																						
Topical	4510	28.2	6274	33.1	7952	37.0	12473	49.9	16003	59.0	17557	61.2	21203	64.3	24071	66.7	27349	69.0	33542	73.7	38196	78.7
Intracamerale	231	1.4	685	3.6	1527	7.1	2447	9.8	2818	10.4	3287	11.5	4539	13.8	6089	16.9	8585	21.6	10759	23.6	15802	32.6
Combined local anaesthesia	672	4.2	1219	6.4	1815	8.5	3030	12.1	3830	14.1	4135	14.4	4645	14.1	5700	15.8	7564	19.1	10049	22.1	14467	29.8
Subtenon	9397	58.7	10354	54.7	10861	50.6	10338	41.4	9979	36.8	9340	32.6	9435	28.6	8938	24.8	8885	22.4	8653	19.0	7520	15.5
Subconjunctival	218	1.4	233	1.2	412	1.9	847	3.4	721	2.7	1200	4.2	1272	3.9	1295	3.6	1202	3.0	1196	2.6	781	1.6
Retrobulbar	905	5.6	1084	5.7	921	4.3	749	3.0	665	2.5	573	2.0	430	1.3	382	1.1	608	1.5	483	1.1	463	1.0
Peribulbar	1224	7.6	1159	6.1	1173	5.5	842	3.4	415	1.5	257	0.9	287	0.9	441	1.2	197	0.5	169	0.4	139	0.3
Facial block	20	0.1	134	0.7	86	0.4	39	0.2	40	0.1	20	0.1	24	0.1	13	0.0	11	0.0	13	0.0	14	0.0
Others	0	0.0	NA	NA	0	0.0	NA	NA														
Types of sedation for patients under local anaesthesia																						
No sedation	9027	56.4	10524	55.5	12056	56.2	15019	60.1	17616	64.9	18386	64.1	17810	54.0	18485	51.2	21347	53.8	24981	54.9	27150	55.9
Oral sedation alone	2264	14.1	2798	14.8	3355	15.6	3055	12.2	2731	10.1	1748	6.1	1339	4.1	1755	4.9	2776	7.0	3106	6.8	834	1.7
Intravenous alone	55	0.3	37	0.2	29	0.1	18	0.1	23	0.1	34	0.1	28	0.1	26	0.1	62	0.2	114	0.3	186	0.4
Intravenous plus oral	0	0.0	NA	NA	NA	NA	2	0.0	5	0.0	6	0.0	1	0.0	1	0.0	1	0.0	3	0.0	0	0.0
Intramuscular alone	3	0.0	114	0.6	47	0.2	0	0.0	2	0.0	2	0.0	17	0.1	1	0.0	0	0.0	4	0.0	8	0.0

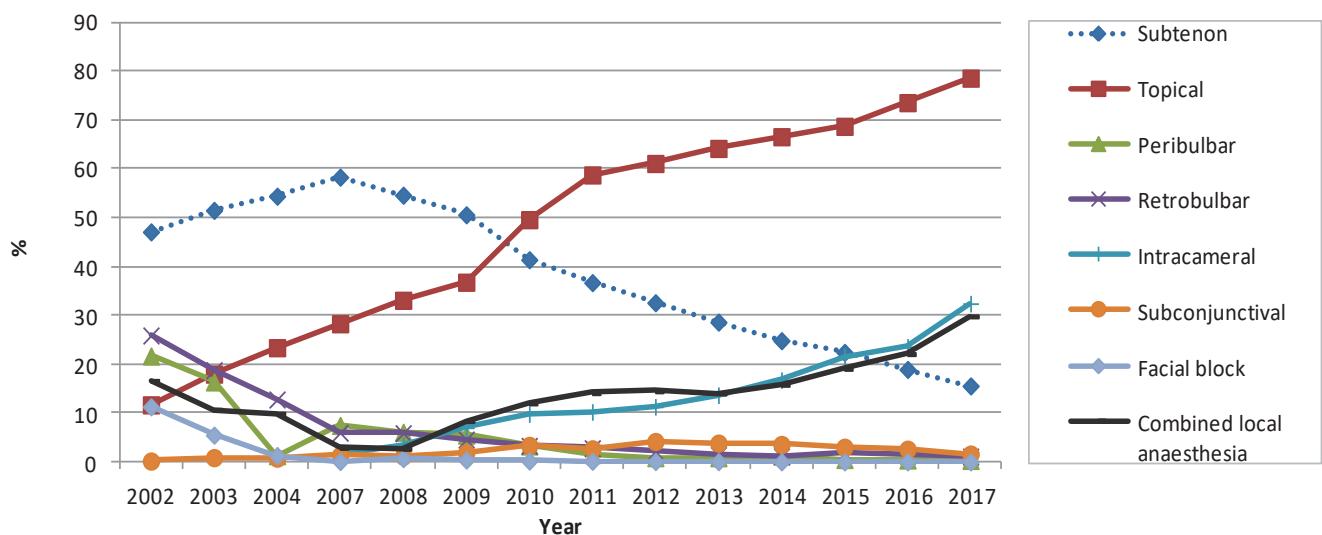


Figure 1.3.8-1: Types of Anaesthesia, CSR 2002-2017

Table 1.3.8-3: Types of Anaesthesia by SDP, CSR 2017

	N	General		Local	
		n	%	n	%
All Centres	54242	2770	5.1	50435	93.0
KK-KKM Johor	33	0	0.0	33	100.0
KK-KKM Kelantan	138	0	0.0	138	100.0
KK-KKM Pulau Pinang	90	0	0.0	90	100.0
KK-KKM Sarawak	885	0	0.0	885	100.0
MAIWP	3,507	0	0.0	3,507	100.0
KK-KKM Pahang	294	1	0.3	293	99.7
Sarikei	431	2	0.5	429	99.5
Kuala Krai	347	2	0.6	344	99.1
KK-KKM Neg. Sembilan	444	2	0.5	439	98.9
Kluang	227	3	1.3	224	98.7
Kangar	743	9	1.2	731	98.4
Melaka	2,394	38	1.6	2,353	98.3
Muar	1039	19	1.8	1020	98.2
Kemaman	161	3	1.9	158	98.1
Miri	1184	23	1.9	1161	98.1
Segamat	398	10	2.5	388	97.5
KK-KKM Terengganu	277	0	0.0	270	97.5
Sibu	800	22	2.8	778	97.3
Pulau Pinang	1,649	45	2.7	1,603	97.2
Kuala Pilah	646	19	2.9	627	97.1
Tawau	299	9	3.0	290	97.0
Teluk Intan	1,206	35	2.9	1,170	97.0
Kulim	609	21	3.4	586	96.2
Bintulu	261	12	4.6	249	95.4
Putrajaya	498	20	4.0	475	95.4

Temerloh	927	38	4.1	883	95.3
KK-KKM Sabah	480	3	0.6	457	95.2
Kota Bharu	1396	61	4.4	1328	95.1
Selayang	1,137	54	4.7	1,080	95.0
Seremban	1,942	96	4.9	1,844	95.0
Ampang	1128	56	5.0	1066	94.5
Shah Alam	668	12	1.8	628	94.0
Pusat Perubatan UKM	1,182	41	3.5	1,105	93.5
Umum Sarawak	1,822	121	6.6	1,701	93.4
Kuala Terengganu	1,393	74	5.3	1300	93.3
Batu Pahat	649	43	6.6	604	93.1
Klang	2,321	150	6.5	2,159	93.0
Sri Manjung	868	61	7.0	807	93.0
Ipoh	3,466	264	7.6	3,198	92.3
Sultan Ismail	814	77	9.5	737	90.5
Sungei Petani	1375	133	9.7	1242	90.3
Queen Elizabeth KK	1739	150	8.6	1567	90.1
Kuantan	1401	148	10.6	1250	89.2
Alor Setar	2563	287	11.2	2272	88.6
Sultanah Aminah JB	921	64	6.9	812	88.2
Kuala Lumpur	1,464	113	7.7	1,290	88.1
Sungai Buloh	731	84	11.5	644	88.1
Bukit Mertajam	1426	19	1.3	1249	87.6
Taiping	1,765	231	13.1	1,534	86.9
KK-KKM Kedah	352	8	2.3	299	84.9
Keningau	324	1	0.3	255	78.7
Sandakan	513	5	1.0	367	71.5
Serdang	882	49	5.6	515	58.4
Likas	33	32	97.0	1	3.0

Table 1.3.8-4: Types of Anaesthesia by SDP (50 years and above), CSR 2017

	N	Types of Anaesthesia		Local	
		n	%	n	%
All Centres	51,355	1,833	3.6	48,534	94.5
Sarikei	400	0	0.0	400	100.0
KK-KKM Johor	31	0	0.0	31	100.0
KK-KKM Kelantan	136	0	0.0	136	100.0
KK-KKM Pulau Pinang	87	0	0.0	87	100.0
KK-KKM Sarawak	862	0	0.0	862	100.0
MAIWP	3,375	0	0.0	3,375	100.0
KK-KKM Pahang	288	1	0.3	287	99.7
Kuala Krai	331	1	0.3	329	99.4
Kangar	711	3	0.4	705	99.2
Melaka	2,292	16	0.7	2,274	99.2
Kluang	217	2	0.9	215	99.1
Muar	992	9	0.9	983	99.1

KK-KKM Neg. Sembilan	438	1	0.2	434	99.1
Sibu	742	8	1.1	734	98.9
Miri	1125	15	1.3	1110	98.7
Teluk Intan	1,150	15	1.3	1,134	98.6
Kuala Pilah	627	10	1.6	617	98.4
Kemaman	152	3	2.0	149	98.0
Segamat	382	8	2.1	374	97.9
Kulim	581	11	1.9	568	97.8
Pulau Pinang	1,591	34	2.1	1,556	97.8
Tawau	278	6	2.2	272	97.8
Selayang	1,007	20	2.0	984	97.7
Kota Bharu	1301	24	1.8	1270	97.6
Bintulu	233	6	2.6	227	97.4
KK-KKM Terengganu	266	0	0.0	259	97.4
Temerloh	885	20	2.3	859	97.1
Putrajaya	466	11	2.4	452	97.0
Kuala Terengganu	1293	28	2.2	1246	96.4
Ampang	1081	35	3.2	1040	96.2
Umum Sarawak	1,706	69	4.0	1,637	96.0
Seremban	1,859	75	4.0	1,782	95.9
Batu Pahat	617	24	3.9	591	95.8
KK-KKM Sabah	459	1	0.2	438	95.4
Sri Manjung	825	40	4.8	785	95.2
Pusat Perubatan UKM	1,132	24	2.1	1,073	94.8
Klang	2,204	109	4.9	2,083	94.5
Shah Alam	639	8	1.3	604	94.5
Ipoh	3,335	214	6.4	3,117	93.5
Sultan Ismail	763	51	6.7	712	93.3
Alor Setar	2,378	178	7.5	2,197	92.4
Sungei Petani	1313	105	8.0	1208	92.0
Kuantan	1326	107	8.1	1216	91.7
Kuala Lumpur	1,339	56	4.2	1225	91.5
Queen Elizabeth KK	1631	117	7.2	1493	91.5
Sultanah Aminah JB	823	34	4.1	745	90.5
Sungai Buloh	673	67	10.0	603	89.6
Bukit Mertajam	1353	11	0.8	1194	88.2
Taiping	1,705	213	12.5	1,492	87.5
KK-KKM Kedah	339	6	1.8	292	86.1
Keningau	298	1	0.3	237	79.5
Sandakan	473	1	0.2	338	71.5
Serdang	845	35	4.1	503	59.5
Likas	0	0	0.0	0	0.0

Table 1.3.8-5: Types of Local Anaesthesia by SDP, CSR 2017

	All N	Local Anaesthesia															
		Topical		Intracameral		Combined		Subtenon		Sub-conjunctival		Retrobulbar	Peribulbar	Facial block			
		n	%	n	%	n	%	n	%	n	%	n	n	%	n	n	%
All Centres	50,435	39,624	78.6	16,346	32.4	15,034	29.8	7,856	15.6	817	1.6	562	1.1	170	0.3	14	0.0
Likas	1	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Sri Manjung	807	806	99.9	0	0.0	4	0.5	5	0.6	0	0.0	0	0.0	0	0.0	0	0.0
Melaka	2,353	2,336	99.3	10	0.4	47	2.0	35	1.5	0	0.0	19	0.8	0	0.0	0	0.0
Kulim	586	581	99.1	501	85.5	517	88.2	28	4.8	1	0.2	0	0.0	0	0.0	0	0.0
Sibu	778	770	99.0	1	0.1	43	5.5	49	6.3	0	0.0	0	0.0	0	0.0	0	0.0
Keningau	255	252	98.8	63	24.7	62	24.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
KK-KKM Sabah	457	449	98.2	222	48.6	233	51.0	22	4.8	4	0.9	0	0.0	1	0.2	0	0.0
Sarakei	429	420	97.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Muar	1020	998	97.8	472	46.3	506	49.6	64	6.3	0	0.0	0	0.0	0	0.0	0	0.0
Umum Sarawak	1,701	1,660	97.6	12	0.7	24	1.4	19	1.1	2	0.1	22	1.3	2	0.1	0	0.0
Ipoh	3,198	3,106	97.1	2,963	92.7	3,029	94.7	137	4.3	2	0.1	125	3.9	16	0.5	3	0.1
KK-KKM Neg. Sembilan	439	425	96.8	169	38.5	199	45.3	44	10.0	1	0.2	0	0.0	0	0.0	0	0.0
KK-KKM Pulau Pinang	90	87	96.7	39	43.3	38	42.2	2	2.2	0	0.0	0	0.0	0	0.0	0	0.0
Pulau Pinang	1,603	1,527	95.3	42	2.6	89	5.6	49	3.1	2	0.1	66	4.1	1	0.1	1	0.1
Shah Alam	628	596	94.9	353	56.2	359	57.2	24	3.8	1	0.2	0	0.0	0	0.0	0	0.0
Queen Elizabeth KK	1567	1479	94.4	1168	74.5	1266	80.8	210	13.4	5	0.3	0	0.0	41	2.6	0	0.0
KK-KKM Johor	33	31	93.9	1	3.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Miri	1161	1082	93.2	0	0.0	54	4.7	131	11.3	0	0.0	1	0.1	0	0.0	0	0.0
Klang	2,159	2,011	93.1	516	23.9	528	24.5	147	6.8	0	0.0	3	0.1	0	0.0	1	0.0
KK-KKM Terengganu	270	250	92.6	0	0.0	7	2.6	26	9.6	0	0.0	0	0.0	0	0.0	0	0.0
Sungei Petani	1242	1,116	89.9	1	0.1	0	0.0	125	10.1	0	0.0	0	0.0	0	0.0	0	0.0
Seremban	1,844	1655	89.8	489	26.5	505	27.4	190	10.3	7	0.4	1	0.1	3	0.2	2	0.1
Taiping	1,534	1365	89.0	0	0.0	4	0.3	173	11.3	0	0.0	0	0.0	0	0.0	0	0.0
Tawau	290	256	88.3	188	64.8	199	68.6	80	27.6	2	0.7	0	0.0	0	0.0	0	0.0
Kuala Terengganu	1300	1141	87.8	3	0.2	59	4.5	195	15.0	11	0.8	0	0.0	0	0.0	0	0.0
Kuala Pilah	627	544	86.8	69	11.0	138	22.0	154	24.6	2	0.3	1	0.2	0	0.0	0	0.0

KK-KKM Kedah	299	257	86.0	21	7.0	19	6.4	37	12.4	2	0.7	0	0.0	0	0.0	0	0.0
MAIWP	3,507	2,981	85.0	1,952	55.7	1,584	45.2	77	2.2	6	0.2	1	0.0	0	0.0	0	0.0
Ampang	1066	880	82.6	735	68.9	627	58.8	83	7.8	0	0.0	0	0.0	0	0.0	1	0.1
Kemaman	158	125	79.1	6	3.8	24	15.2	52	32.9	0	0.0	0	0.0	0	0.0	0	0.0
Sandakan	367	286	77.9	43	11.7	35	9.5	65	17.7	0	0.0	0	0.0	0	0.0	0	0.0
Kuala Lumpur	1,290	995	77.1	727	56.4	550	42.6	70	5.4	1	0.1	8	0.6	30	2.3	2	0.2
Selayang	1,080	818	75.7	273	25.3	359	33.2	203	18.8	6	0.6	129	11.9	10	0.9	1	0.1
Kuala Krai	344	260	75.6	0	0.0	19	5.5	94	27.3	0	0.0	0	0.0	0	0.0	0	0.0
Pusat Perubatan UKM	1,105	833	75.4	479	43.3	595	53.8	383	34.7	6	0.5	0	0.0	20	1.8	0	0.0
Sultanah Aminah JB	812	567	69.8	450	55.4	487	60.0	204	25.1	112	13.8	30	3.7	6	0.7	0	0.0
Alor Setar	2,272	1525	67.1	741	32.6	346	15.2	239	10.5	4	0.2	99	4.4	3	0.1	0	0.0
Kluang	224	149	66.5	126	56.3	155	69.2	106	47.3	2	0.9	0	0.0	0	0.0	0	0.0
KK-KKM Pahang	293	182	62.1	113	38.6	66	22.5	60	20.5	1	0.3	0	0.0	0	0.0	0	0.0
Kota Bharu	1328	802	60.4	128	9.6	580	43.7	930	70.0	13	1.0	18	1.4	27	2.0	0	0.0
Bintulu	249	137	55.0	57	22.9	79	31.7	139	55.8	0	0.0	0	0.0	0	0.0	0	0.0
Temerloh	883	472	53.5	280	31.7	260	29.4	364	41.2	2	0.2	0	0.0	1	0.1	2	0.2
Sultan Ismail	737	387	52.5	109	14.8	173	23.5	14	1.9	401	54.4	0	0.0	0	0.0	0	0.0
Sungai Buloh	644	338	52.5	315	48.9	236	36.6	74	11.5	3	0.5	1	0.2	0	0.0	1	0.2
Serdang	515	269	52.2	71	13.8	17	3.3	175	34.0	10	1.9	1	0.2	0	0.0	0	0.0
KK-KKM Sarawak	885	868	50.7	0	0.0	3	0.3	15	1.7	0	0.0	0	0.0	0	0.0	0	0.0
Bukit Mertajam	1249	613	49.1	1005	80.5	464	37.1	38	3.0	3	0.2	0	0.0	1	0.1	0	0.0
KK-KKM Kelantan	138	61	44.2	20	14.5	31	22.5	88	63.8	0	0.0	0	0.0	0	0.0	0	0.0
Kuantan	1250	479	38.3	324	25.9	273	21.8	679	54.3	2	0.2	24	1.9	6	0.5	0	0.0
Kangar	731	208	28.5	0	0.0	5	0.7	526	72.0	0	0.0	1	0.1	0	0.0	0	0.0
Putrajaya	475	62	13.1	421	88.6	55	11.6	46	9.7	0	0.0	0	0.0	0	0.0	0	0.0
Teluk Intan	1,170	100	8.5	288	24.6	8	0.7	783	66.9	1	0.1	0	0.0	2	0.2	0	0.0
Segamat	388	25	6.4	221	57.0	1	0.3	94	24.2	0	0.0	12	3.1	0	0.0	0	0.0
Batu Pahat	604	1	0.2	159	26.3	73	12.1	309	51.2	202	33.4	0	0.0	0	0.0	0	0.0

Table 1.3.8-6: Types of Local Anaesthesia by SDP (50 years and above), CSR 2017

	All N	Local Anaesthesia															
		Topical		Intracameral		Combined		Subtenon		Sub-conjunctival		Retrobulbar		Peribulbar		Facial block	
		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
All Centres	48,534	38,196	78.7	15,802	32.6	14,467	29.8	7,520	15.5	781	1.6	463	1.0	139	0.3	14	0.0
Sri Manjung	785	784	99.9	0	0.0	4	0.5	5	0.6	0	0.0	0	0.0	0	0.0	0	0.0
Melaka	2,274	2,257	99.3	9	0.4	41	1.8	35	1.5	0	0.0	14	0.6	0	0.0	0	0.0
Kulim	568	563	99.1	483	85.0	499	87.9	28	4.9	1	0.2	0	0.0	0	0.0	0	0.0
Sibu	734	726	98.9	1	0.1	39	5.3	45	6.1	0	0.0	0	0.0	0	0.0	0	0.0
Keningau	237	234	98.7	59	24.9	58	24.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
KK-KKM Sabah	438	432	98.6	217	49.5	227	51.8	21	4.8	3	0.7	0	0.0	0	0.0	0	0.0
Sarikei	400	394	98.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
KK-KKM Sarawak	862	845	98.0	0	0.0	3	0.3	15	1.7	0	0.0	0	0.0	0	0.0	0	0.0
Muar	983	962	97.9	462	47.0	493	50.2	60	6.1	0	0.0	0	0.0	0	0.0	0	0.0
Umum Sarawak	1,637	1,602	97.9	12	0.7	20	1.2	15	0.9	2	0.1	18	1.1	0	0.0	0	0.0
Ipoh	3,117	3,030	97.2	2,898	93.0	2,955	94.8	130	4.2	2	0.1	111	3.6	14	0.4	3	0.1
KK-KKM Neg. Sembilan	434	420	96.8	165	38.0	195	44.9	44	10.1	1	0.2	0	0.0	0	0.0	0	0.0
KK-KKM Pulau Pinang	87	84	96.6	37	42.5	36	41.4	2	2.3	0	0.0	0	0.0	0	0.0	0	0.0
Pulau Pinang	1,556	1,491	95.8	42	2.7	83	5.3	46	3.0	2	0.1	52	3.3	1	0.1	1	0.1
Shah Alam	604	575	95.2	342	56.6	346	57.3	21	3.5	1	0.2	0	0.0	0	0.0	0	0.0
Queen Elizabeth KK	1,493	1,415	94.8	1,117	74.8	1,209	81.0	202	13.5	5	0.3	0	0.0	27	1.8	0	0.0
Miri	1,110	1,038	93.5	0	0.0	49	4.4	119	10.7	0	0.0	1	0.1	0	0.0	0	0.0
KK-KKM Johor	31	29	93.5	1	3.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Klang	2,083	1,944	93.3	496	23.8	506	24.3	137	6.6	0	0.0	1	0.0	0	0.0	1	0.0
KK-KKM Terengganu	259	239	92.3	0	0.0	7	2.7	26	10.0	0	0.0	0	0.0	0	0.0	0	0.0
Sungei Petani	1,208	1,089	90.1	1	0.1	0	0.0	118	9.8	0	0.0	0	0.0	0	0.0	0	0.0
Seremban	1,782	1601	89.8	478	26.8	491	27.6	179	10.0	7	0.4	0	0.0	3	0.2	2	0.1
Taiping	1,492	1,330	89.1	0	0.0	4	0.3	166	11.1	0	0.0	0	0.0	0	0.0	0	0.0
Tawau	272	241	88.6	180	66.2	191	70.2	73	26.8	2	0.7	0	0.0	0	0.0	0	0.0
Kuala Terengganu	1,246	1,095	87.9	3	0.2	57	4.6	186	14.9	11	0.9	0	0.0	0	0.0	0	0.0

Kuala Pilah	617	534	86.5	68	11.0	136	22.0	153	24.8	2	0.3	1	0.2	0	0.0	0	0.0
KK-KKM Kedah	292	250	85.6	21	7.2	19	6.5	37	12.7	2	0.7	0	0.0	0	0.0	0	0.0
MAIWP	3,375	2,862	84.8	1,878	55.6	1,516	44.9	73	2.2	6	0.2	1	0.0	0	0.0	0	0.0
Ampang	1040	859	82.6	717	68.9	612	58.8	81	7.8	0	0.0	0	0.0	0	0.0	1	0.1
Kemaman	149	118	79.2	6	4.0	23	15.4	49	32.9	0	0.0	0	0.0	0	0.0	0	0.0
Sandakan	338	267	79.0	39	11.5	31	9.2	56	16.6	0	0.0	0	0.0	0	0.0	0	0.0
Selayang	984	761	77.3	257	26.1	332	33.7	193	19.6	5	0.5	92	9.3	8	0.8	1	0.1
Kuala Lumpur	1,225	946	77.2	695	56.7	527	43.0	65	5.3	1	0.1	8	0.7	29	2.4	2	0.2
Pusat Perubatan UKM	1,073	814	75.9	468	43.6	578	53.9	362	33.7	6	0.6	0	0.0	20	1.9	0	0.0
Kuala Krai	329	246	74.8	0	0.0	17	5.2	91	27.7	0	0.0	0	0.0	0	0.0	0	0.0
Sultanah Aminah JB	745	525	70.5	412	55.3	446	59.9	191	25.6	100	13.4	21	2.8	3	0.4	0	0.0
Alor Setar	2,197	1475	67.1	721	32.8	336	15.3	234	10.7	4	0.2	90	4.1	2	0.1	0	0.0
Kluang	215	144	67.0	121	56.3	150	69.8	102	47.4	1	0.5	0	0.0	0	0.0	0	0.0
KK-KKM Pahang	287	178	62.0	110	38.3	65	22.6	60	20.9	1	0.3	0	0.0	0	0.0	0	0.0
Kota Bharu	1,270	769	60.6	126	9.9	557	43.9	888	69.9	13	1.0	17	1.3	23	1.8	0	0.0
Bintulu	227	126	55.5	55	24.2	72	31.7	122	53.7	0	0.0	0	0.0	0	0.0	0	0.0
Temerloh	859	459	53.4	274	31.9	253	29.5	353	41.1	2	0.2	0	0.0	0	0.0	2	0.2
Sungai Buloh	603	320	53.1	300	49.8	225	37.3	71	11.8	3	0.5	1	0.2	0	0.0	1	0.2
Sultan Ismail	712	374	52.5	107	15.0	167	23.5	13	1.8	386	54.2	0	0.0	0	0.0	0	0.0
Serdang	503	262	52.1	68	13.5	15	3.0	171	34.0	10	2.0	1	0.2	0	0.0	0	0.0
Bukit Mertajam	1,194	581	48.7	965	80.8	441	36.9	33	2.8	2	0.2	0	0.0	1	0.1	0	0.0
KK-KKM Kelantan	136	60	44.1	20	14.7	31	22.8	87	64.0	0	0.0	0	0.0	0	0.0	0	0.0
Kuantan	1,216	464	38.2	312	25.7	266	21.9	667	54.9	2	0.2	23	1.9	6	0.5	0	0.0
Kangar	705	201	28.5	0	0.0	5	0.7	507	71.9	0	0.0	1	0.1	0	0.0	0	0.0
Putrajaya	452	59	13.1	404	89.4	53	11.7	40	8.8	0	0.0	0	0.0	0	0.0	0	0.0
Teluk Intan	1,134	98	8.6	284	25.0	7	0.6	752	66.3	1	0.1	0	0.0	2	0.2	0	0.0
Segamat	374	24	6.4	215	57.5	1	0.3	91	24.3	0	0.0	10	2.7	0	0.0	0	0.0
Batu Pahat	591	0	0.0	156	26.4	73	12.4	305	51.6	197	33.3	0	0.0	0	0.0	0	0.0
Likas	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Table 1.3.8-7: Types of Local Anaesthesia by SDP (Excluding Combined Surgery), CSR 2017

	Local Anaesthesia																
	All N	Topical		Intracameral		Combined		Subtenon		Sub-conjunctival		Retrobulbar	Peribulbar	Facial block			
		n	%	n	%	n	%	n	%	n	%	n	n	%			
All Centres	49,297	39,006	79.1	16,115	32.7	14,532	29.5	7,571	15.4	784	1.6	97	0.2	56	0.1	14	0.0
Likas	1	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Sri Manjung	804	803	99.9	0	0.0	4	0.5	5	0.6	0	0.0	0	0.0	0	0.0	0	0.0
Melaka	2,323	2,312	99.5	10	0.4	32	1.4	30	1.3	0	0.0	3	0.1	0	0.0	0	0.0
Kulim	578	573	99.1	494	85.5	509	88.1	25	4.3	1	0.2	0	0.0	0	0.0	0	0.0
Sibu	775	767	99.0	1	0.1	40	5.2	46	5.9	0	0.0	0	0.0	0	0.0	0	0.0
Keningau	254	251	98.8	63	24.8	62	24.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Umum Sarawak	1,662	1,639	98.6	12	0.7	11	0.7	7	0.4	2	0.1	3	0.2	1	0.1	0	0.0
KK-KKM Sabah	450	442	98.2	217	48.2	228	50.7	22	4.9	3	0.7	0	0.0	1	0.2	0	0.0
KK-KKM Sarawak	883	867	98.2	0	0.0	3	0.3	14	1.6	0	0.0	0	0.0	0	0.0	0	0.0
Ipoh	3,033	2,969	97.9	2,868	94.6	2,891	95.3	128	4.2	2	0.1	13	0.4	4	0.1	3	0.1
Sarikei	428	419	97.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Muar	1,012	990	97.8	471	46.5	500	49.4	59	5.8	0	0.0	0	0.0	0	0.0	0	0.0
Pulau Pinang	1,544	1,508	97.7	42	2.7	74	4.8	47	3.0	2	0.1	13	0.8	1	0.1	1	0.1
KK-KKM Neg. Sembilan	427	414	97.0	167	39.1	190	44.5	36	8.4	0	0.0	0	0.0	0	0.0	0	0.0
KK-KKM Pulau Pinang	90	87	96.7	39	43.3	38	42.2	2	2.2	0	0.0	0	0.0	0	0.0	0	0.0
Queen Elizabeth KK	1,490	1,421	95.4	1,131	75.9	1,210	81.2	195	13.1	4	0.3	0	0.0	2	0.1	0	0.0
Shah Alam	625	594	95.0	350	56.0	356	57.0	23	3.7	1	0.2	0	0.0	0	0.0	0	0.0
KK-KKM Johor	33	31	93.9	1	3.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Miri	1,144	1,070	93.5	0	0.0	47	4.1	119	10.4	0	0.0	1	0.1	0	0.0	0	0.0
Klang	2,151	2,004	93.2	514	23.9	522	24.3	144	6.7	0	0.0	1	0.0	0	0.0	1	0.0
KK-KKM Terengganu	262	242	92.4	0	0.0	6	2.3	25	9.5	0	0.0	0	0.0	0	0.0	0	0.0
Seremban	1,824	1,641	90.0	483	26.5	495	27.1	180	9.9	5	0.3	1	0.1	2	0.1	2	0.1
Sungei Petani	1,241	1,115	89.8	1	0.1	0	0.0	125	10.1	0	0.0	0	0.0	0	0.0	0	0.0
Taiping	1,520	1,363	89.7	0	0.0	4	0.3	161	10.6	0	0.0	0	0.0	0	0.0	0	0.0
Kuala Terengganu	1,248	1,118	89.6	3	0.2	48	3.8	165	13.2	1	0.1	0	0.0	0	0.0	0	0.0
Tawau	276	246	89.1	178	64.5	190	68.8	71	25.7	2	0.7	0	0.0	0	0.0	0	0.0

Kuala Pilah	624	541	86.7	69	11.1	137	22.0	154	24.7	1	0.2	1	0.2	0	0.0	0	0.0
KK-KKM Kedah	298	257	86.2	21	7.0	18	6.0	36	12.1	1	0.3	0	0.0	0	0.0	0	0.0
MAIWP	3,501	2,975	85.0	1,951	55.7	1,582	45.2	77	2.2	5	0.1	1	0.0	0	0.0	0	0.0
Ampang	1,061	876	82.6	731	68.9	623	58.7	81	7.6	0	0.0	0	0.0	0	0.0	1	0.1
Selayang	939	757	80.6	264	28.1	306	32.6	189	20.1	5	0.5	17	1.8	7	0.7	1	0.1
Kemaman	157	125	79.6	6	3.8	24	15.3	51	32.5	0	0.0	0	0.0	0	0.0	0	0.0
Sandakan	363	284	78.2	43	11.8	33	9.1	61	16.8	0	0.0	0	0.0	0	0.0	0	0.0
Kuala Lumpur	1,262	978	77.5	717	56.8	540	42.8	68	5.4	1	0.1	7	0.6	25	2.0	2	0.2
Pusat Perubatan UKM	1,049	807	76.9	473	45.1	568	54.1	352	33.6	6	0.6	0	0.0	0	0.0	0	0.0
Kuala Krai	344	260	75.6	0	0.0	19	5.5	94	27.3	0	0.0	0	0.0	0	0.0	0	0.0
Sultanah Aminah JB	769	554	72.0	447	58.1	472	61.4	196	25.5	108	14.0	3	0.4	1	0.1	0	0.0
Alor Setar	2,130	1,477	69.3	726	34.1	319	15.0	222	10.4	1	0.0	13	0.6	2	0.1	0	0.0
Kluang	223	148	66.4	126	56.5	154	69.1	105	47.1	2	0.9	0	0.0	0	0.0	0	0.0
KK-KKM Pahang	288	177	61.5	111	38.5	63	21.9	57	19.8	1	0.3	0	0.0	0	0.0	0	0.0
Kota Bharu	1,263	771	61.0	127	10.1	551	43.6	903	71.5	12	1.0	2	0.2	6	0.5	0	0.0
Bintulu	247	137	55.5	57	23.1	79	32.0	137	55.5	0	0.0	0	0.0	0	0.0	0	0.0
Temerloh	874	471	53.9	279	31.9	259	29.6	356	40.7	2	0.2	0	0.0	1	0.1	2	0.2
Serdang	508	267	52.6	70	13.8	17	3.3	172	33.9	10	2.0	1	0.2	0	0.0	0	0.0
Sultan Ismail	732	384	52.5	108	14.8	171	23.4	13	1.8	398	54.4	0	0.0	0	0.0	0	0.0
Sungai Buloh	642	337	52.5	314	48.9	235	36.6	74	11.5	3	0.5	1	0.2	0	0.0	1	0.2
Bukit Mertajam	1,242	608	49.0	1,002	80.7	462	37.2	37	3.0	2	0.2	0	0.0	1	0.1	0	0.0
KK-KKM Kelantan	136	59	43.4	20	14.7	30	22.1	87	64.0	0	0.0	0	0.0	0	0.0	0	0.0
Kuantan	1,215	474	39.0	323	26.6	269	22.1	673	55.4	1	0.1	3	0.2	0	0.0	0	0.0
Kangar	727	208	28.6	0	0.0	5	0.7	522	71.8	0	0.0	1	0.1	0	0.0	0	0.0
Putrajaya	468	61	13.0	418	89.3	55	11.8	43	9.2	0	0.0	0	0.0	0	0.0	0	0.0
Teluk Intan	1,170	100	8.5	288	24.6	8	0.7	783	66.9	1	0.1	0	0.0	2	0.2	0	0.0
Segamat	386	25	6.5	221	57.3	1	0.3	92	23.8	0	0.0	12	3.1	0	0.0	0	0.0
Batu Pahat	601	1	0.2	158	26.3	72	12.0	307	51.1	201	33.4	0	0.0	0	0.0	0	0.0

Table 1.3.8-8: Types of Local Anaesthesia by SDP (50 years and above, Excluding Combined Surgery), CSR 2017

	All N	Local Anaesthesia															
		Topical		Intracamerual		Combined		Subtenon		Sub-conjunctival		Retrobulbar	Peribulbar	Facial block			
		n	%	n	%	n	%	n	%	n	%	n	n	%			
All Centres	47,566	37,670	79.2	15,590	32.8	14,038	29.5	7,264	15.3	750	1.6	84	0.2	51	0.1	14	0.0
Sri Manjung	782	781	99.9	0	0.0	4	0.5	5	0.6	0	0.0	0	0.0	0	0.0	0	0.0
Melaka	2,249	2,238	99.5	9	0.4	30	1.3	30	1.3	0	0.0	2	0.1	0	0.0	0	0.0
Kulim	560	555	99.1	476	85.0	491	87.7	25	4.5	1	0.2	0	0.0	0	0.0	0	0.0
Sibu	733	725	98.9	1	0.1	38	5.2	44	6.0	0	0.0	0	0.0	0	0.0	0	0.0
Keningau	236	233	98.7	59	25.0	58	24.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Umum Sarawak	1,607	1,585	98.6	12	0.7	10	0.6	7	0.4	2	0.1	3	0.2	0	0.0	0	0.0
KK-KKM Sabah	431	425	98.6	212	49.2	222	51.5	21	4.9	2	0.5	0	0.0	0	0.0	0	0.0
Sarikei	399	393	98.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
KK-KKM Sarawak	860	844	98.1	0	0.0	3	0.3	14	1.6	0	0.0	0	0.0	0	0.0	0	0.0
Ipoh	2,969	2,908	97.9	2,808	94.6	2,832	95.4	122	4.1	2	0.1	13	0.4	4	0.1	3	0.1
Pulau Pinang	1,508	1,476	97.9	42	2.8	72	4.8	44	2.9	2	0.1	10	0.7	1	0.1	1	0.1
Muar	975	954	97.8	461	47.3	487	49.9	55	5.6	0	0.0	0	0.0	0	0.0	0	0.0
KK-KKM Neg. Sembilan	422	409	96.9	163	38.6	186	44.1	36	8.5	0	0.0	0	0.0	0	0.0	0	0.0
KK-KKM Pulau Pinang	87	84	96.6	37	42.5	36	41.4	2	2.3	0	0.0	0	0.0	0	0.0	0	0.0
Queen Elizabeth KK	1,432	1,367	95.5	1,085	75.8	1,162	81.1	187	13.1	4	0.3	0	0.0	2	0.1	0	0.0
Shah Alam	601	573	95.3	339	56.4	343	57.1	20	3.3	1	0.2	0	0.0	0	0.0	0	0.0
Miri	1,094	1,026	93.8	0	0.0	42	3.8	108	9.9	0	0.0	1	0.1	0	0.0	0	0.0
KK-KKM Johor	31	29	93.5	1	3.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Klang	2,079	1,941	93.4	494	23.8	504	24.2	136	6.5	0	0.0	1	0.0	0	0.0	1	0.0
KK-KKM Terengganu	251	231	92.0	0	0.0	6	2.4	25	10.0	0	0.0	0	0.0	0	0.0	0	0.0
Seremban	1,762	1,587	90.1	472	26.8	481	27.3	169	9.6	5	0.3	0	0.0	2	0.1	2	0.1
Sungei Petani	1,208	1,089	90.1	1	0.1	0	0.0	118	9.8	0	0.0	0	0.0	0	0.0	0	0.0
Taiping	1,478	1,328	89.9	0	0.0	4	0.3	154	10.4	0	0.0	0	0.0	0	0.0	0	0.0
Kuala Terengganu	1,198	1,073	89.6	3	0.3	46	3.8	159	13.3	1	0.1	0	0.0	0	0.0	0	0.0
Tawau	258	231	89.5	170	65.9	182	70.5	64	24.8	2	0.8	0	0.0	0	0.0	0	0.0
Kuala Pilah	614	531	86.5	68	11.1	135	22.0	153	24.9	1	0.2	1	0.2	0	0.0	0	0.0

KK-KKM Kedah	291	250	85.9	21	7.2	18	6.2	36	12.4	1	0.3	0	0.0	0	0.0	0	0.0
MAIWP	3,373	2,860	84.8	1,878	55.7	1,515	44.9	73	2.2	5	0.1	1	0.0	0	0.0	0	0.0
Ampang	1,035	855	82.6	713	68.9	608	58.7	79	7.6	0	0.0	0	0.0	0	0.0	1	0.1
Selayang	887	715	80.6	249	28.1	292	32.9	183	20.6	5	0.6	13	1.5	7	0.8	1	0.1
Kemaman	148	118	79.7	6	4.1	23	15.5	48	32.4	0	0.0	0	0.0	0	0.0	0	0.0
Sandakan	335	266	79.4	39	11.6	30	9.0	53	15.8	0	0.0	0	0.0	0	0.0	0	0.0
Kuala Lumpur	1,206	937	77.7	687	57.0	519	43.0	64	5.3	1	0.1	7	0.6	24	2.0	2	0.2
Pusat Perubatan UKM	1,020	790	77.5	463	45.4	553	54.2	333	32.6	6	0.6	0	0.0	0	0.0	0	0.0
Kuala Krai	329	246	74.8	0	0.0	17	5.2	91	27.7	0	0.0	0	0.0	0	0.0	0	0.0
Sultanah Aminah JB	713	517	72.5	410	57.5	437	61.3	184	25.8	97	13.6	2	0.3	0	0.0	0	0.0
Alor Setar	2,070	1,433	69.2	707	34.2	312	15.1	219	10.6	1	0.0	12	0.6	2	0.1	0	0.0
Kluang	214	143	66.8	121	56.5	149	69.6	101	47.2	1	0.5	0	0.0	0	0.0	0	0.0
KK-KKM Pahang	282	173	61.3	108	38.3	62	22.0	57	20.2	1	0.4	0	0.0	0	0.0	0	0.0
Kota Bharu	1,210	740	61.2	125	10.3	530	43.8	862	71.2	12	1.0	2	0.2	6	0.5	0	0.0
Bintulu	226	126	55.8	55	24.3	72	31.9	121	53.5	0	0.0	0	0.0	0	0.0	0	0.0
Temerloh	851	458	53.8	273	32.1	252	29.6	346	40.7	2	0.2	0	0.0	0	0.0	2	0.2
Sungai Buloh	602	320	53.2	300	49.8	225	37.4	71	11.8	3	0.5	1	0.2	0	0.0	1	0.2
Sultan Ismail	707	371	52.5	106	15.0	165	23.3	12	1.7	383	54.2	0	0.0	0	0.0	0	0.0
Serdang	496	260	52.4	67	13.5	15	3.0	168	33.9	10	2.0	1	0.2	0	0.0	0	0.0
Bukit Mertajam	1,189	578	48.6	962	80.9	440	37.0	33	2.8	1	0.1	0	0.0	1	0.1	0	0.0
KK-KKM Kelantan	134	58	43.3	20	14.9	30	22.4	86	64.2	0	0.0	0	0.0	0	0.0	0	0.0
Kuantan	1,182	459	38.8	311	26.3	262	22.2	661	55.9	1	0.1	3	0.3	0	0.0	0	0.0
Kangar	701	201	28.7	0	0.0	5	0.7	503	71.8	0	0.0	1	0.1	0	0.0	0	0.0
Putrajaya	447	58	13.0	402	89.9	53	11.9	38	8.5	0	0.0	0	0.0	0	0.0	0	0.0
Teluk Intan	1,134	98	8.6	284	25.0	7	0.6	752	66.3	1	0.1	0	0.0	2	0.2	0	0.0
Segamat	372	24	6.5	215	57.8	1	0.3	89	23.9	0	0.0	10	2.7	0	0.0	0	0.0
Batu Pahat	588	0	0.0	155	26.4	72	12.2	303	51.5	196	33.3	0	0.0	0	0.0	0	0.0
Likas	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Table 1.3.8-9: Subtenon Anaesthesia by SDP, CSR 2007-2017

Years	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
All Centres	9990	58.3	11014	54.6	11525	50.6	10952	41.4	10512	36.7	9849	32.6	9913	28.6	9351	24.8	9294	22.4	8973	19.0	7856	15.6
Kangar	313	98.4	389	98.5	383	98.5	383	98.7	397	100.0	442	99.1	457	98.5	414	99.0	559	98.9	628	99.2	526	72.0
Kota Bharu	726	99.2	672	99.3	837	98.0	885	97.6	884	99.0	495	97.6	629	98.6	273	99.3	784	90.2	884	83.6	930	70.0
Teluk Intan	190	28.6	406	72.0	397	66.4	386	58.2	472	73.2	586	99.2	1,063	98.9	986	99.1	903	99.2	953	73.0	783	66.9
KK-KKM Kelantan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	138	75.4	0	0.0	39	62.9	88	63.8
Bintulu	-	-	24	0.0	118	99.2	255	99.6	328	100.0	382	100.0	374	98.9	374	100.0	346	99.1	133	69.3	139	55.8
Kuantan	9	47.4	162	54.9	143	63.8	358	78.9	456	77.2	345	63.3	366	76.3	399	86.0	769	80.9	670	61.1	679	54.3
Batu Pahat	545	99.6	567	99.5	562	94.8	280	69.5	156	29.1	161	27.4	166	39.8	293	64.8	348	65.2	501	79.4	309	51.2
Kluang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	106	47.3
Temerloh	390	94.4	429	83.1	425	67.8	410	96.7	611	94.0	586	69.9	403	47.5	491	48.2	378	45.6	364	38.2	364	41.2
Pusat Perubatan UKM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	383	34.7
Serdang	522	91.7	375	56.9	396	70.7	375	80.5	432	70.7	414	60.6	339	36.1	362	31.0	247	26.2	228	48.9	175	34.0
Kemaman	-	-	-	-	-	-	-	-	-	-	-	-	8	17.4	24	33.8	1	33.3	9	34.6	52	32.9
Tawau	195	100.0	303	98.4	287	99.7	382	99.5	553	100.0	615	99.2	380	78.8	406	77.2	154	25.6	109	16.4	80	27.6
Kuala Krai	115	100.0	142	86.6	169	98.8	203	95.8	222	94.9	243	99.6	388	100.0	248	69.3	86	22.3	60	18.1	94	27.3
Sultanah Aminah JB	1103	74.0	801	60.1	942	74.8	464	35.3	436	41.1	501	43.9	521	40.4	278	20.7	354	22.6	438	29.3	204	25.1
Kuala Pilah	208	99.5	270	97.8	252	89.7	237	79.5	371	79.6	304	72.6	208	44.1	303	65.9	300	69.8	264	45.8	154	24.6
Segamat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	20.7	94	24.2
KK-KKM Pahang	-	-	-	-	-	-	-	-	-	-	-	-	51	79.7	-	-	105	57.4	49	41.2	60	20.5
Selayang	152	11.1	174	12.7	190	13.9	249	15.1	211	11.8	323	18.4	260	19.9	131	16.8	166	14.2	102	9.3	203	18.8
Sandakan	NA	NA	0	0.0	86	57.7	116	61.4	140	55.6	113	45.0	24	6.0	7	3.0	23	4.9	46	13.4	65	17.7
Kuala Terengganu	419	85.2	590	84.8	417	59.7	267	39.8	274	38.1	291	40.6	215	22.7	207	24.7	304	33.6	260	22.0	195	15.0
Queen Elizabeth KK	195	39.2	81	24.1	82	20.3	115	22.0	91	14.0	142	19.9	206	22.3	248	25.9	249	24.4	279	22.3	210	13.4
KK-KKM Kedah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1.0	13	3.9
Sungai Buloh	98	80.3	221	90.2	325	99.4	374	91.2	319	79.4	292	67.4	373	77.9	158	26.7	88	12.7	75	10.4	74	11.5
Miri	1	6.3	352	90.0	187	46.9	90	15.7	161	24.9	60	6.8	24	2.7	364	38.4	317	35.9	151	14.7	131	11.3
Taiping	156	71.2	166	54.2	121	22.4	328	41.4	402	48.4	356	36.4	373	32.5	189	17.5	343	28.8	279	20.4	173	11.3
Alor Setar	35	9.5	109	12.1	239	25.3	274	20.7	323	18.8	426	26.5	600	40.8	379	21.1	275	13.4	213	9.0	239	10.5

Seremban	210	24.1	294	35.4	356	30.7	563	38.3	591	38.5	422	29.1	270	18.7	240	15.8	199	12.0	151	8.7	190	10.3	
Sungei Petani	472	99.0	591	98.2	646	99.2	235	44.9	180	23.3	236	29.3	229	26.1	218	24.7	104	11.5	138	13.3	125	10.1	
KK-KKM Neg. Sembilan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	75.0	99	45.0	44	10.0	
Putrajaya	188	98.9	236	99.6	240	99.2	260	100.0	240	80.3	125	37.4	100	27.0	77	21.8	45	10.3	55	13.4	46	9.7	
KK-KKM Terengganu	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	28.6	9	24.3	3	6.3	26	9.6	
Ampang	3	75.0	162	78.3	110	27.1	70	11.5	27	3.8	58	6.7	117	12.4	125	13.8	134	15.9	126	17.6	83	7.8	
Klang	468	57.1	297	27.3	178	24.1	326	38.5	67	7.2	62	5.0	45	3.3	58	4.6	168	9.8	239	12.0	147	6.8	
Muar	166	49.7	326	98.5	528	99.2	460	77.7	104	15.8	54	8.3	37	5.4	53	7.6	37	4.1	44	4.1	64	6.3	
Sibu	33	9.6	96	38.9	155	40.4	26	5.8	37	7.4	10	1.3	11	1.2	22	2.6	22	3.9	34	4.3	49	6.3	
Kuala Lumpur	NA	NA	27	73.0	620	50.7	800	56.7	829	60.7	601	46.8	310	31.0	761	43.9	332	23.3	391	27.7	70	5.4	
Kulim	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	5.4	45	11.0	62	11.1	28	4.8
KK-KKM Sabah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	14.4	13	4.8	22	4.8
Ipoh	702	47.1	921	56.2	872	43.5	567	27.3	387	23.5	517	19.6	448	16.8	198	8.9	279	13.4	214	7.7	137	4.3	
Shah Alam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	6.4	24	3.8
Pulau Pinang	967	97.6	687	54.5	474	37.3	328	18.5	76	3.5	56	4.4	165	10.0	122	7.0	124	5.9	112	4.4	49	3.1	
Bukit Mertajam	422	69.5	294	64.1	239	32.7	399	50.8	423	54.3	384	42.7	275	31.0	283	29.3	281	23.1	237	18.4	38	3.0	
KK-KKM Pulau Pinang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3.6	2	2.2
MAIWP	-	-	-	-	-	-	-	-	-	-	-	-	171	10.8	123	5.4	87	4.8	86	3.0	77	2.2	
Sultan Ismail	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.5	15	5.3	159	32.9	170	24.0	42	5.5	14	1.9	
KK-KKM Sarawak	-	-	-	-	-	-	-	-	-	-	-	-	1	1.3	5	0.6	13	1.2	12	1.3	15	1.7	
Melaka	443	30.1	463	28.9	376	28.5	310	19.5	211	13.4	128	9.0	223	13.7	123	6.0	64	2.8	44	1.8	35	1.5	
Umum Sarawak	404	42.7	254	26.3	145	17.1	142	12.5	54	4.9	86	5.4	56	3.4	59	3.0	25	1.3	21	1.2	19	1.1	
Sri Manjung	136	92.5	133	38.7	28	8.6	35	9.2	47	11.4	32	7.2	9	1.1	4	0.7	8	1.3	6	0.9	5	0.6	
Keningau	-	-	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	7.1	20	15.5	1	1.3	1	0.3	0	0.0	
Likas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0		
Sarikei	-	-	-	-	-	-	-	-	-	-	-	-	2	0.7	5	0.9	6	0.9	0	0.0	0	0.0	
KK-KKM Johor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	25.0	0	0.0	
Langkawi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	17.9	7	11.7	-	-	
Tanah Merah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	100.0	18	100.0	-	-	

Table 1.3.8-10: Subtenon Anaesthesia by SDP (50 years and above), CSR 2007-2017

Years	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
All Centres	9397	56.2	10354	54.7	10861	50.6	10338	41.4	9979	36.8	9340	32.6	9435	28.6	8938	24.8	8885	22.4	8653	19.0	7520	15.5
Kangar	298	97.1	363	98.6	365	98.4	365	98.6	383	100.0	418	99.1	446	98.5	395	99.0	544	98.9	608	99.3	507	71.9
Kota Bharu	683	95.5	628	99.2	760	98.1	818	97.4	828	99.0	459	97.7	591	98.7	252	99.2	731	89.9	847	84.2	888	69.9
Teluk Intan	176	28.2	386	72.0	375	65.6	371	58.2	458	73.0	570	99.3	1031	98.8	964	99.1	860	99.3	929	73.3	752	66.3
KK-KKM Kelantan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	133	75.1	0	0.0	38	63.3	87	64.0
Kuantan	7	33.3	151	54.5	138	63.3	338	78.6	444	77.5	330	62.9	356	76.2	386	86.4	743	81.0	651	61.7	667	54.9
Bintulu	-	-	22	88.0	106	99.1	230	100.0	303	100.0	356	100.0	342	99.4	341	100.0	314	99.1	126	70.0	122	53.7
Batu Pahat	511	99.2	534	99.4	537	94.5	269	70.6	152	29.4	157	27.8	163	40.2	285	64.9	334	64.7	491	79.3	305	51.6
Kluang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	102	47.4
Temerloh	371	90.5	410	83.5	402	68.4	401	96.6	587	94.1	555	69.7	382	47.2	478	48.3	360	45.1	353	38.2	353	41.1
Serdang	485	89.2	358	57.0	380	70.5	354	80.6	407	71.3	389	61.1	324	36.5	345	30.7	234	25.8	226	49.5	171	34.0
Pusat Perubatan UKM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	362	33.7
Kemaman	-	-	-	-	-	-	-	-	-	-	-	-	8	18.2	21	31.8	1	33.3	9	34.6	49	32.9
Kuala Krai	111	96.5	132	86.8	163	98.8	188	95.4	208	94.5	231	99.6	369	100.0	239	68.7	83	22.4	56	18.0	91	27.7
Tawau	169	100.0	275	98.2	258	99.6	334	99.7	500	100.0	561	99.1	338	78.1	377	77.4	136	25.8	94	15.2	73	26.8
Sultanah Aminah JB	1025	72.9	724	59.5	846	74.7	427	35.1	403	41.3	468	45.1	478	40.2	254	20.0	338	23.1	420	29.6	191	25.6
Kuala Pilah	197	98.5	251	98.0	240	89.6	228	79.7	355	79.2	292	72.5	195	43.1	294	65.5	293	70.3	254	45.0	153	24.8
Segamat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	21.1	91	24.3
KK-KKM Pahang	-	-	-	-	-	-	-	-	-	-	-	-	48	80.0	-	-	104	57.5	48	40.7	60	20.9
Selayang	132	10.6	165	13.5	178	14.4	227	15.1	191	11.8	300	18.5	244	20.2	116	16.1	151	14.6	96	9.6	193	19.6
Sandakan	-	-	0	0.0	80	58.8	110	61.5	134	55.8	107	46.1	23	6.2	6	2.8	21	4.7	41	13.0	56	16.6
Kuala Terengganu	390	82.5	557	84.7	392	59.7	251	40.1	261	38.1	273	40.6	198	22.0	197	24.8	292	33.9	252	22.2	186	14.9
Queen Elizabeth KK	181	39.2	73	23.7	74	20.2	108	22.3	85	13.9	132	19.9	193	22.2	235	25.8	232	24.3	267	22.3	202	13.5
KK-KKM Kedah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1.0	13	4.0	37	12.7
Sungai Buloh	91	70.5	207	90.4	306	99.4	346	91.1	294	78.8	280	67.1	356	77.9	146	26.4	86	13.1	71	10.5	71	11.8
Taiping	148	58.3	158	53.6	117	22.5	313	41.3	385	48.7	349	36.8	367	33.1	182	17.3	338	29.0	272	20.3	166	11.1
Alor Setar	33	8.8	103	11.9	228	25.8	263	21.0	309	19.0	418	27.0	586	41.2	373	21.6	270	13.6	211	9.2	234	10.7
Miri	1	6.3	330	89.7	176	46.2	85	15.7	151	24.5	56	6.6	22	2.5	348	38.4	301	35.2	143	14.5	119	10.7

KK-KKM Neg. Sembilan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	75.0	97	44.7	44	10.1		
Seremban	199	22.7	272	34.6	336	30.7	529	37.9	562	38.2	392	28.4	258	18.5	234	16.0	192	12.0	142	8.5	179	10.0
KK-KKM Terengganu	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	28.6	9	25.0	3	6.5	26	10.0
Sungei Petani	444	96.3	551	98.2	612	99.2	225	45.5	172	23.4	231	30.1	221	26.3	212	25.4	100	11.5	132	13.2	118	9.8
Putrajaya	178	95.2	226	99.6	231	99.1	255	100.0	224	80.3	116	36.4	95	26.5	74	21.8	44	10.6	54	13.4	40	8.8
Ampang	2	66.7	150	77.7	103	26.8	66	11.3	27	4.0	56	6.7	114	12.7	121	13.8	127	15.6	121	17.5	81	7.8
Klang	442	47.4	271	26.7	169	24.1	312	39.2	63	7.3	58	5.0	43	3.3	54	4.5	161	9.8	228	11.9	137	6.6
Muar	158	48.2	308	98.4	507	99.2	429	77.7	100	15.9	51	8.0	36	5.6	51	7.6	35	4.0	41	4.0	60	6.1
Sibu	32	9.3	89	39.0	145	40.6	23	5.5	33	7.1	10	1.4	10	1.2	21	2.6	21	3.9	28	3.8	45	6.1
Kuala Lumpur	-	-	27	77.1	594	50.8	759	56.6	796	61.3	581	47.4	298	31.0	737	44.2	323	23.9	370	27.7	65	5.3
Kulim	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	5.6	40	10.2	61	11.3	28	4.9
KK-KKM Sabah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	14.2	13	4.9	21	4.8
Ipoh	663	46.0	881	55.9	838	43.4	550	27.6	378	23.6	500	19.7	430	16.8	192	8.9	275	13.5	213	7.9	130	4.2
Shah Alam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	5.9	21	3.5
Pulau Pinang	929	91.5	668	54.6	462	37.4	320	18.7	74	3.6	53	4.2	153	9.6	113	6.7	122	6.0	109	4.5	46	3.0
Bukit Mertajam	402	65.2	279	64.1	224	32.4	372	50.7	408	54.9	358	42.2	265	31.5	269	29.0	271	23.2	232	18.5	33	2.8
KK-KKM Pulau Pinang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3.8	2	2.3
MAIWP	-	-	-	-	-	-	-	-	-	-	-	-	159	10.5	112	5.2	83	4.8	82	2.9	73	2.2
Sultan Ismail	4	4.1	0	0.0	0	0.0	0	0.0	0	0.0	1	0.6	15	5.5	153	32.8	165	23.9	42	5.6	13	1.8
KK-KKM Sarawak	-	-	-	-	-	-	-	-	-	-	-	-	1	1.4	5	0.6	13	1.2	12	1.3	15	1.7
Melaka	428	30.6	455	30.0	363	29.2	303	20.0	210	14.0	125	9.2	216	14.0	118	5.9	61	2.7	43	1.8	35	1.5
Umum Sarawak	379	42.6	227	25.6	129	16.2	135	12.6	50	4.9	76	5.1	49	3.2	52	2.8	24	1.3	18	1.1	15	0.9
Sri Manjung	128	90.1	123	38.9	27	8.7	34	9.2	44	11.2	31	7.2	9	1.2	4	0.7	5	0.8	5	0.8	5	0.6
Keningau	-	-	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	7.1	20	16.0	1	1.3	1	0.3	0	0.0
Likas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0
Sarikei	-	-	-	-	-	-	-	-	-	-	-	-	2	0.7	5	0.9	6	1.0	0	0.0	0	0.0
KK-KKM Johor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	24.4	0	0.0
Langkawi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	18.9	6	10.2	-	-
Tanah Merah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	100.0	18	100.0	-	-

Table 1.3.8-11: Topical Anaesthesia by SDP, CSR 2007-2017

Year	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
All Centres	4853	28.3	6680	33.1	8382	36.8	13112	49.6	16825	58.8	18461	61.1	22220	64.2	25068	66.6	28458	68.7	34825	73.5	39624	78.6	
Likas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	1	100.0		
Sri Manjung	11	7.5	201	58.4	298	92.0	353	92.9	365	88.8	418	93.9	781	98.9	587	98.3	634	99.1	639	99.2	806	99.9	
Melaka	1075	73.1	1233	76.9	1014	76.9	1572	98.7	1549	98.6	1415	99.3	1541	94.8	2008	97.5	2251	97.7	2419	98.7	2336	99.3	
Kulim	-	-	-	-	-	-	-	-	-	-	-	-	-	-	189	72.4	404	98.8	541	96.8	581	99.1	
Sibu	0	0.0	0	0.0	173	45.1	347	77.1	450	89.6	736	99.3	889	99.6	843	98.8	567	99.6	781	99.7	770	99.0	
Keningau	-	-	28	93.3	21	91.3	2	2.8	0	0.0	0	0.0	0	0.0	74	57.4	76	95.0	350	95.4	252	98.8	
KK-KKM Sabah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	122.0	97.6	231.0	84.9	449.0	98.2		
KK-KKM Sarawak	-	-	-	-	-	-	-	-	-	-	-	-	74	98.7	818	99.3	1107	98.1	908	99.0	868	98.1	
Sarikei	-	-	-	-	-	-	-	-	-	-	-	-	280	98.6	546	98.9	641	99.8	215	31.5	420	97.9	
Muar	160	47.9	4	1.2	1	0.2	130	22.0	547	83.1	584	89.3	580	84.8	644	92.7	891	98.2	1055	99.4	998	97.8	
Ummum Sarawak	528	55.8	733	75.9	714	84.0	1000	88.3	1061	96.5	1530	95.6	1592	97.8	1855	93.9	1838	96.7	1735	97.9	1660	97.6	
Ipoh	573	38.5	594	36.2	1137	56.7	1521	73.3	1348	81.7	2167	82.1	2417	90.8	2163	97.2	1531	73.4	2496	89.3	3106	97.1	
KK-KKM Neg. Sembilan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	100.0	184	83.6	425	96.8		
KK-KKM Pulau Pinang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	58.0	69.0	87.0	96.7		
Pulau Pinang	8	0.8	560	44.4	814	64.1	1387	78.4	2002	92.4	1185	92.2	1525	92.6	1573	89.8	1884	90.2	2366	93.8	1527	95.3	
Shah Alam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	314	96.0	596	94.9		
Queen Elizabeth KK	242	48.7	221	65.8	265	65.8	416	79.7	582	89.4	624	87.4	791	85.7	796	83.1	928	90.9	1180	94.3	1479	94.4	
KK-KKM Johor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	42	45.7	31	93.9		
Miri	0	0.0	12	3.1	211	52.9	483	84.3	478	73.9	823	92.9	882	97.5	627	66.2	661	74.8	905	87.9	1082	93.2	
Klang	210	25.6	566	52.1	427	57.7	480	56.7	751	81.0	981	79.4	1298	94.8	1138	91.0	1482	86.9	1743	87.3	2011	93.1	
KK-KKM Terengganu	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	80.0	28	75.7	45	93.8	250	92.6
Sungei Petani	0	0.0	0	0.0	0	0.0	240	45.9	640	82.9	633	78.6	711	81.1	756	85.7	841	93.2	898	86.5	1116	89.9	
Seremban	1	0.1	102	12.3	273	23.5	632	43.0	1059	69.0	999	68.9	980	67.8	1156	76.0	1382	83.5	1377	79.5	1655	89.8	
Taiping	63	28.8	102	33.3	213	39.4	466	58.8	431	51.9	626	64.1	776	67.7	906	83.7	866	72.7	1095	80.0	1365	89.0	
Tawau	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	94	19.5	112	21.3	437	72.7	559	84.3	256	88.3	
Kuala Terengganu	75	15.2	99	14.2	274	39.3	402	59.9	445	61.8	434	60.5	765	80.6	650	77.6	597	66.0	950	80.2	1141	87.8	

Kuala Pilah	0	0.0	1	0.4	0	0.0	9	3.0	38	8.2	51	12.2	236	50.0	103	22.4	225	52.3	398	69.1	544	86.8
KK-KKM Kedah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	209	100.0	325	97.0	257	86.0
MAIWP	-	-	-	-	-	-	-	-	-	-	-	-	1351	85.3	2171	95.8	1607	88.1	2668	92.0	2981	85.0
Ampang	3	75.0	64	30.9	248	61.1	500	81.8	674	95.9	807	92.7	908	96.3	827	91.1	707	83.8	554	77.5	880	82.6
Kemaman	-	-	-	-	-	-	-	-	-	-	-	-	29	63.0	52	73.2	3	100.0	14	53.8	125	79.1
Sandakan	NA	NA	12	9.2	34	22.8	86	45.5	83	32.9	92	36.7	367	91.5	225	96.6	450	95.1	280	81.4	286	77.9
Kuala Lumpur	NA	NA	2	5.4	208	17.0	237	16.8	202	14.8	163	12.7	352	35.2	509	29.4	651	45.7	1056	74.7	995	77.1
Selayang	983	71.5	981	71.7	989	72.2	1142	69.4	1255	70.1	1262	71.9	969	74.1	600	76.8	830	71.1	645	58.9	818	75.7
Kuala Krai	0	0.0	9	5.5	1	0.6	14	6.6	93	39.7	0	0.0	0	0.0	161	45.0	332	86.2	268	81.0	260	75.6
Pusat Perubatan UKM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	833	75.4
Sultanah Aminah JB	359	24.1	501	37.6	159	12.6	488	37.1	1034	97.5	1114	97.7	289	22.4	440	32.7	953	60.9	748	50.1	567	69.8
Alor Setar	1	0.3	95	10.6	124	13.1	676	51.2	876	51.0	922	57.4	547	37.2	1107	61.7	1371	66.7	1913	81.1	1525	67.1
Kluang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	149	66.5
KK-KKM Pahang	-	-	-	-	-	-	-	-	-	-	-	-	16	25.0	-	-	79.0	43.2	87.0	73.1	182.0	62.1
Kota Bharu	0	0.0	1	0.1	12	1.4	22	2.4	7	0.8	8	1.6	0	0.0	0	0.0	59	6.8	166	15.7	802	60.4
Bintulu	-	-	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	60	31.3	137	55.0
Temerloh	27	6.5	103	20.0	234	37.3	21	5.0	39	6.0	226	27.0	337	39.7	243	23.8	220	26.5	520	54.5	472	53.5
Sultan Ismail	0	0.0	0	0.0	1	0.8	10	5.7	58	32.0	87	46.8	212	75.4	95	19.6	46	6.5	276	35.8	387	52.5
Sungai Buloh	27	22.1	15	6.1	6	1.8	33	8.0	76	18.9	105	24.2	62	12.9	193	32.6	271	39.2	329	45.6	338	52.5
Serdang	33	5.8	247	37.5	151	27.0	88	18.9	164	26.8	264	38.7	533	56.8	752	64.4	561	59.6	231	49.6	269	52.2
Bukit Mertajam	0	0.0	2	0.4	62	8.5	0	0.0	1	0.1	8	0.9	0	0.0	2	0.2	16	1.3	178	13.8	613	49.1
KK-KKM Kelantan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33	18.0	0	0.0	23	37.1	61	44.2
Kuantan	4	21.1	40	13.6	2	0.9	9	2.0	7	1.2	0	0.0	0	0.0	49	10.6	290	30.5	611	55.7	479	38.3
Kangar	0	0.0	0	0.0	3	0.8	3	0.8	0	0.0	0	0.0	0	0.0	0	0.0	1	0.2	1	0.2	208	28.5
Putrajaya	0	0.0	0	0.0	0	0.0	0	0.0	3	1.0	1	0.3	4	1.1	4	1.1	356	81.1	115	28.0	62	13.1
Teluk Intan	469	70.6	152	27.0	287	48.0	258	38.9	152	23.6	12	2.0	17	1.6	33	3.3	0	0.0	204	15.6	100	8.5
Segamat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	4.3	25	6.4
Batu Pahat	1	0.2	0	0.0	25	4.2	85	21.1	355	66.2	184	31.3	15	3.6	0	0.0	9	1.7	11	1.7	1	0.2
Langkawi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40	71.4	53	88.3	-	-	
Tanah Merah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	-	-	

Table 1.3.8-12: Topical Anaesthesia by SDP (50 years and above), CSR 2007-2017

Year	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
All Centres	4510	27.0	6274	33.1	7952	37.0	12473	49.9	16003	59.0	17557	61.2	21203	64.3	24071	66.7	27349	69.0	33542	73.7	38196	78.7
Sri Manjung	10	7.0	184	58.2	284	91.6	341	92.7	350	89.1	406	94.0	761	98.8	581	98.3	620	99.5	616	99.4	784	99.9
Melaka	991	70.8	1151	75.9	951	76.5	1495	98.7	1483	98.5	1350	99.3	1464	94.8	1940	97.5	2178	97.7	2339	98.7	2257	99.3
Kulim	-	-	-	-	-	-	-	-	-	-	-	-	-	-	179	71.6	387	98.7	521	96.7	563	99.1
Sibu	0	0.0	0	0.0	163	45.7	328	77.9	419	89.5	695	99.3	833	99.6	801	98.8	538	99.6	735	99.7	726	98.9
Keningau	-	-	23	92.0	19	90.5	2	3.0	0	0.0	0	0.0	0	0.0	73	58.4	75	94.9	334	95.7	234	98.7
KK-KKM Sabah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	118	98.3	222	84.4	432	98.6
Sarikei	-	-	-	-	-	-	-	-	-	-	-	-	267	98.9	536	98.9	625	99.8	209	32.0	394	98.5
KK-KKM Sarawak	-	-	-	-	-	-	-	-	-	-	-	-	73	98.6	794	99.4	1087	98.0	884	99.0	845	98.0
Muar	155	47.3	4	1.3	1	0.2	121	21.9	521	83.0	568	89.4	543	84.3	618	92.7	864	98.3	1017	99.5	962	97.9
Umum Sarawak	489	55.0	681	76.8	675	84.7	945	88.2	992	96.4	1429	95.6	1514	98.2	1770	94.4	1760	97.2	1656	98.0	1602	97.9
Ipoh	534	37.1	575	36.5	1090	56.5	1455	73.0	1309	81.8	2090	82.3	2333	91.1	2104	97.3	1500	73.6	2435	89.8	3030	97.2
KK-KKM Neg. Sembilan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	100.0	181	83.4	420	96.8
KK-KKM Pulau Pinang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56	71.8	84	96.6
Pulau Pinang	7	0.7	543	44.4	789	63.9	1346	78.6	1931	92.8	1153	92.4	1473	92.9	1518	90.2	1841	91.1	2286	94.5	1491	95.8
Shah Alam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	292	95.7	575	95.2
Queen Elizabeth KK	210	45.5	204	66.2	241	65.8	390	80.4	546	89.5	583	87.8	745	85.8	754	82.7	869	91.2	1130	94.5	1415	94.8
Miri	0	0.0	12	3.3	204	53.5	457	84.3	457	74.2	791	93.1	842	97.6	600	66.2	643	75.2	869	88.2	1038	93.5
KK-KKM Johor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	42	46.7	29	93.5
Klang	196	21.0	531	52.3	408	58.2	446	56.0	695	81.0	922	79.3	1230	94.6	1084	90.9	1421	86.8	1678	87.3	1944	93.3
KK-KKM Terengganu	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	80.0	27	75.0	43	93.5
Sungei Petani	0	0.0	0	0.0	0	0.0	225	45.5	607	82.7	596	77.7	678	80.8	712	85.3	808	93.3	868	86.6	1089	90.1
Seremban	1	0.1	97	12.3	255	23.3	602	43.1	1015	69.0	962	69.7	947	67.9	1103	75.5	1338	83.7	1332	79.7	1601	89.8
Taiping	61	24.0	102	34.6	205	39.3	447	59.0	409	51.7	605	63.8	744	67.1	879	83.7	844	72.4	1069	80.0	1330	89.1
Tawau	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	88	20.3	102	20.9	383	72.7	526	84.8	241	88.6
Kuala Terengganu	68	14.4	94	14.3	259	39.4	373	59.6	423	61.8	408	60.6	732	81.2	615	77.4	570	66.2	910	80.2	1095	87.9
Kuala Pilah	0	0.0	0	0.0	0	0.0	9	3.1	38	8.5	49	12.2	229	50.7	101	22.5	215	51.6	392	69.5	534	86.5

KK-KKM Kedah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	206	100.0	315	96.9	250	85.6	
MAIWP	-	-	-	-	-	-	-	-	-	-	-	1301	85.6	2080	95.9	1535	88.3	2564	92.0	2862	84.8
Ampang	2	66.7	62	32.1	236	61.3	475	81.6	653	96.3	777	92.5	867	96.2	801	91.1	682	83.9	534	77.4	
Kemaman	-	-	-	-	-	-	-	-	-	-	-	27	61.4	49	74.2	3	100.0	14	53.8	118	79.2
Sandakan	-	-	11	8.9	31	22.8	83	46.4	79	32.9	84	36.2	339	91.6	207	96.3	424	95.3	257	81.3	
Selayang	927	74.5	906	73.9	921	74.3	1080	71.7	1192	73.4	1185	72.9	907	75.0	568	78.8	763	73.6	624	62.6	
Kuala Lumpur	-	-	1	2.9	198	16.9	223	16.6	189	14.6	157	12.8	338	35.2	494	29.6	619	45.7	994	74.4	
Pusat Perubatan UKM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	814	75.9	
Kuala Krai	0	0.0	9	5.9	1	0.6	14	7.1	86	39.1	0	0.0	0	0.0	157	45.1	319	86.2	250	80.4	
Sultanah Aminah JB	339	24.1	464	38.2	151	13.3	458	37.6	951	97.5	1016	98.0	271	22.8	414	32.6	891	60.8	703	49.6	
Alor Setar	1	0.3	88	10.1	115	13.0	652	52.0	839	51.5	888	57.4	523	36.8	1064	61.6	1322	66.6	1872	81.4	
Kluang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	144	67.0	
KK-KKM Pahang	-	-	-	-	-	-	-	-	-	-	-	16	26.7	-	-	78	43.1	87	73.7	178	62.0
Kota Bharu	0	0.0	1	0.2	10	1.3	22	2.6	6	0.7	8	1.7	0	0.0	0	0.0	56	6.9	157	15.6	
Bintulu	-	-	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	56	31.1	
Temerloh	24	5.9	97	19.8	217	36.9	21	5.1	37	5.9	216	27.1	314	38.8	238	24.1	213	26.7	509	55.1	
Sungai Buloh	24	18.6	14	6.1	6	1.9	31	8.2	73	19.6	102	24.5	59	12.9	181	32.8	255	38.9	314	46.4	
Sultan Ismail	0	0.0	0	0.0	1	0.9	10	5.8	58	32.2	82	45.3	207	75.5	89	19.1	46	6.7	269	36.1	
Serdang	26	4.8	235	37.4	149	27.6	82	18.7	149	26.1	243	38.1	504	56.8	723	64.4	542	59.8	226	49.5	
Bukit Mertajam	0	0.0	2	0.5	62	9.0	0	0.0	1	0.1	8	0.9	0	0.0	1	0.1	16	1.4	170	13.6	
KK-KKM Kelantan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33	18.6	0	0.0	22	36.7	
Kuantan	4	19.0	37	13.4	2	0.9	9	2.1	5	0.9	0	0.0	0	0.0	45	10.1	277	30.2	589	55.8	
Kangar	0	0.0	0	0.0	3	0.8	3	0.8	0	0.0	0	0.0	0	0.0	0	0.0	1	0.2	0	0.0	
Putrajaya	0	0.0	0	0.0	0	0.0	0	0.0	2	0.7	1	0.3	4	1.1	4	1.2	340	81.9	112	27.8	
Teluk Intan	440	70.5	146	27.2	279	48.8	248	38.9	148	23.6	11	1.9	16	1.5	31	3.2	0	0.0	193	15.2	
Segamat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	4.6	24	
Batu Pahat	1	0.2	0	0.0	25	4.4	80	21.0	340	65.8	172	30.5	14	3.5	0	0.0	9	1.7	11	1.8	
Likas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	
Langkawi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37	69.8	53	89.8	-	
Tanah Merah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	-	

Table 1.3.8-13: Types of Sedation in Eyes Given Local Anaesthesia by SDP, CSR 2017

	Types of sedation									
	All Local Anaesthesia	No Sedation		Oral Alone		Intravenous Alone		Intramuscular Alone		
		N	n	%	n	%	n	%	n	%
All Centres	50,435	28,151	55.8		866	1.7	198	0.4	8	0.0
Sungei Petani	1242	1242	100.0		0	0.0	0	0.0	0	0.0
Taiping	1,534	1,534	100.0		0	0.0	0	0.0	0	0.0
Sri Manjung	807	801	99.3		0	0.0	1	0.1	0	0.0
Miri	1161	1145	98.6		0	0.0	0	0.0	0	0.0
Muar	1020	1001	98.1		0	0.0	0	0.0	0	0.0
Keningau	255	249	97.6		0	0.0	0	0.0	0	0.0
Sarikei	429	408	95.1		0	0.0	0	0.0	0	0.0
MAIWP	3,507	3,295	94.0		0	0.0	0	0.0	1	0.0
Kuala Pilah	627	568	90.6		0	0.0	0	0.0	0	0.0
KK-KKM Kedah	299	250	83.6		0	0.0	0	0.0	0	0.0
Sibu	778	641	82.4		0	0.0	0	0.0	0	0.0
Alor Setar	2,272	1,856	81.7		5	0.2	2	0.1	0	0.0
KK-KKM Pulau Pinang	90	73	81.1		1	1.1	0	0.0	0	0.0
Sultan Ismail	737	586	79.5		0	0.0	0	0.0	0	0.0
Pulau Pinang	1,603	1,233	76.9		93	5.8	1	0.1	0	0.0
Putrajaya	475	357	75.2		6	1.3	0	0.0	0	0.0
Kuala Terengganu	1,300	974	74.9		0	0.0	16	1.2	0	0.0
KK-KKM Terengganu	270	189	70.0		1	0.4	2	0.7	0	0.0
KK-KKM Sarawak	885	592	66.9		0	0.0	0	0.0	0	0.0
KK-KKM Pahang	293	195	66.6		0	0.0	2	0.7	1	0.3
Kemaman	158	101	63.9		2	1.3	6	3.8	0	0.0
Ipoh	3,198	1,955	61.1		2	0.1	143	4.5	2	0.1
Temerloh	883	500	56.6		0	0.0	11	1.2	0	0.0
Batu Pahat	604	338	56.0		0	0.0	0	0.0	1	0.2
Queen Elizabeth KK	1,567	847	54.1		1	0.1	0	0.0	0	0.0
Seremban	1,844	937	50.8		3	0.2	0	0.0	0	0.0
Ummum Sarawak	1,701	862	50.7		0	0.0	0	0.0	0	0.0
Kluang	224	112	50.0		1	0.4	0	0.0	0	0.0
Tawau	290	142	49.0		0	0.0	1	0.3	0	0.0
Shah Alam	628	278	44.3		0	0.0	0	0.0	0	0.0
Sultanah Aminah JB	812	333	41.0		1	0.1	1	0.1	0	0.0
Selayang	1,080	441	40.8		0	0.0	2	0.2	0	0.0
KK-KKM Neg. Sembilan	439	171	39.0		0	0.0	0	0.0	0	0.0
Pusat Perubatan UKM	1,105	415	37.6		19	1.7	2	0.2	0	0.0
Bintulu	249	87	34.9		0	0.0	0	0.0	0	0.0
Bukit Mertajam	1,249	426	34.1		84	6.7	2	0.2	1	0.1
Kuantan	1,250	391	31.3		0	0.0	3	0.2	0	0.0
Kuala Lumpur	1,290	389	30.2		0	0.0	0	0.0	0	0.0
Kulim	586	173	29.5		0	0.0	0	0.0	0	0.0

Teluk Intan	1,170	322	27.5	645	55.1	0	0.0	0	0.0
Kota Bharu	1328	364	27.4	1	0.1	1	0.1	0	0.0
Melaka	2,353	631	26.8	0	0.0	0	0.0	0	0.0
KK-KKM Sabah	457	120	26.3	0	0.0	0	0.0	0	0.0
KK-KKM Kelantan	138	36	26.1	0	0.0	0	0.0	0	0.0
Kangar	731	136	18.6	0	0.0	1	0.1	0	0.0
Ampang	1066	135	12.7	1	0.1	1	0.1	1	0.1
Serdang	515	53	10.3	0	0.0	0	0.0	0	0.0
Klang	2,159	207	9.6	0	0.0	0	0.0	0	0.0
Kuala Krai	344	16	4.7	0	0.0	0	0.0	0	0.0
Sandakan	367	17	4.6	0	0.0	0	0.0	0	0.0
Sungai Buloh	644	26	4.0	0	0.0	0	0.0	0	0.0
KK-KKM Johor	33	1	3.0	0	0.0	0	0.0	0	0.0
Likas	1	0	0.0	0	0.0	0	0.0	0	0.0
Segamat	388	0	0.0	0	0.0	0	0.0	1	0.3

Number or percentage may be more than total or 100% as patient might have more than one type of local Anaesthesia

Table 1.3.8-14: Types of Sedation in Eyes Given Local Anaesthesia by SDP (50 years and above), CSR 2017

	All Local Anaesthesia N	Types of sedation							
		No Sedation		Oral Alone		Intravenous Alone		Intramuscular Alone	
		n	%	n	%	n	%	n	%
All Centres	48,534	27,150	55.9	834	1.7	186	0.4	8	0.0
Sungei Petani	1208	1208	100.0	0	0.0	0	0.0	0	0.0
Taiping	1,492	1,492	100.0	0	0.0	0	0.0	0	0.0
Sri Manjung	785	780	99.4	0	0.0	1	0.1	0	0.0
Miri	1110	1,095	98.6	0	0.0	0	0.0	0	0.0
Muar	983	964	98.1	0	0.0	0	0.0	0	0.0
Keningau	237	232	97.9	0	0.0	0	0.0	0	0.0
Sarikei	400	382	95.5	0	0.0	0	0.0	0	0.0
MAIWP	3,375	3,172	94.0	0	0.0	0	0.0	1	0.0
Kuala Pilah	617	558	90.4	0	0.0	0	0.0	0	0.0
KK-KKM Kedah	292	246	84.2	0	0.0	0	0.0	0	0.0
Sibu	734	609	83.0	0	0.0	0	0.0	0	0.0
Alor Setar	2,197	1,800	81.9	5	0.2	2	0.1	0	0.0
KK-KKM Pulau Pinang	87	71	81.6	1	1.1	0	0.0	0	0.0
Sultan Ismail	712	563	79.1	0	0.0	0	0.0	0	0.0
Pulau Pinang	1,556	1,197	76.9	90	5.8	0	0.0	0	0.0
Putrajaya	452	338	74.8	5	1.1	0	0.0	0	0.0
Kuala Terengganu	1246	929	74.6	0	0.0	14	1.1	0	0.0
KK-KKM Terengganu	259	181	69.9	1	0.4	2	0.8	0	0.0
KK-KKM Sarawak	862	578	67.1	0	0.0	0	0.0	0	0.0
KK-KKM Pahang	287	190	66.2	0	0.0	2	0.7	1	0.3
Kemaman	149	93	62.4	2	1.3	6	4.0	0	0.0
Ipoh	3,117	1908	61.2	2	0.1	136	4.4	2	0.1

Temerloh	859	485	56.5	0	0.0	10	1.2	0	0.0
Batu Pahat	591	332	56.2	0	0.0	0	0.0	1	0.2
Queen Elizabeth KK	1493	805	53.9	1	0.1	0	0.0	0	0.0
Umum Sarawak	1,637	833	50.9	0	0.0	0	0.0	0	0.0
Seremban	1,782	901	50.6	3	0.2	0	0.0	0	0.0
Tawau	272	136	50.0	0	0.0	1	0.4	0	0.0
Kluang	215	107	49.8	1	0.5	0	0.0	0	0.0
Shah Alam	604	269	44.5	0	0.0	0	0.0	0	0.0
Selayang	984	417	42.4	0	0.0	2	0.2	0	0.0
Sultanah Aminah JB	745	303	40.7	1	0.1	1	0.1	0	0.0
KK-KKM Neg. Sembilan	434	170	39.2	0	0.0	0	0.0	0	0.0
Pusat Perubatan Klinikal	1,073	404	37.7	19	1.8	2	0.2	0	0.0
Bukit Mertajam	1,194	407	34.1	80	6.7	1	0.1	1	0.1
Bintulu	227	77	33.9	0	0.0	0	0.0	0	0.0
Kuantan	1216	383	31.5	0	0.0	3	0.2	0	0.0
Kuala Lumpur	1225	377	30.8	0	0.0	0	0.0	0	0.0
Kulim	568	164	28.9	0	0.0	0	0.0	0	0.0
Teluk Intan	1,134	314	27.7	621	54.8	0	0.0	0	0.0
Kota Bharu	1,270	345	27.2	1	0.1	1	0.1	0	0.0
Melaka	2,274	610	26.8	0	0.0	0	0.0	0	0.0
KK-KKM Kelantan	136	36	26.5	0	0.0	0	0.0	0	0.0
KK-KKM Sabah	438	116	26.5	0	0.0	0	0.0	0	0.0
Kangar	705	134	19.0	0	0.0	1	0.1	0	0.0
Ampang	1040	131	12.6	1	0.1	1	0.1	1	0.1
Serdang	503	52	10.3	0	0.0	0	0.0	0	0.0
Klang	2,083	197	9.5	0	0.0	0	0.0	0	0.0
Kuala Krai	329	16	4.9	0	0.0	0	0.0	0	0.0
Sandakan	338	16	4.7	0	0.0	0	0.0	0	0.0
Sungai Buloh	603	26	4.3	0	0.0	0	0.0	0	0.0
KK-KKM Johor	31	1	3.2	0	0.0	0	0.0	0	0.0
Likas	0	0	0.0	0	0.0	0	0.0	0	0.0
Segamat	374	0	0.0	0	0.0	0	0.0	1	0.3

Table 1.3.8-15: Oral Sedation Alone by SDP, CSR 2007-2017

Year	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
All Centres	2387	13.9	2923	14.5	3532	15.5	3171	12.0	2852	10.0	1810	6.0	1391	4.0	1823	4.8	2879	7.0	3218	6.8	866	1.7
Teluk Intan	0	0.0	158	28.0	366	61.2	356	53.7	95	14.7	353	59.7	247	23.0	408	41.0	794	87.3	1140	87.4	645	55.1
Bukit Mertajam	204	33.6	356	77.6	466	63.8	308	39.2	185	23.7	107	12.0	66	7.4	108	11.3	349	28.7	379	29.5	84	6.7
Pulau Pinang	847	85.5	1124	89.2	1018	80.2	1339	75.6	1382	63.8	662	51.6	818	49.7	1227	70.1	1539	73.9	1517	60.2	93	5.8
Pusat Perubatan UKM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	1.7
Kemaman	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0	0	0.0	2	1.3
Putrajaya	0	0.0	1	0.4	0	0.0	0	0.0	0	0.0	4	1.2	6	1.6	6	1.7	3	0.7	0	0.0	6	1.3
KK-KKM Pulau Pinang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33	39.3	1	1.1
Kluang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0.4
KK-KKM Terengganu	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0	0	0.0	1	0.4
Alor Setar	4	1.1	9	1.0	23	2.4	4	0.3	0	0.0	1	0.1	1	0.1	0	0.0	2	0.1	4	0.2	5	0.2
Seremban	3	0.3	5	0.6	14	1.2	2	0.1	4	0.3	2	0.1	1	0.1	1	0.1	1	0.1	4	0.2	3	0.2
Ampang	0	0.0	0	0.0	1	0.2	3	0.5	0	0.0	3	0.3	2	0.2	0	0.0	0	0.0	0	0.0	1	0.1
Ipoh	7	0.5	6	0.4	9	0.4	13	0.6	11	0.7	2	0.1	7	0.3	3	0.1	4	0.2	7	0.3	2	0.1
Kota Bharu	5	0.7	5	0.7	15	1.8	5	0.6	1	0.1	0	0.0	0	0.0	0	0.0	12	1.4	2	0.2	1	0.1
Queen Elizabeth KK	0	0.0	0	0.0	0	0.0	0	0.0	5	0.8	0	0.0	1	0.1	2	0.2	2	0.2	5	0.4	1	0.1
Sultanah Aminah JB	188	12.6	212	15.9	57	4.5	4	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
Batu Pahat	0	0.0	1	0.2	3	0.5	1	0.2	1	0.2	1	0.2	4	1.0	4	0.9	0	0.0	0	0.0	0	0.0
Bintulu	-	-	7	24.1	29	24.4	32	12.5	4	1.2	0	0.0	1	0.3	0	0.0	0	0.0	0	0.0	0	0.0
Kangar	4	1.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Keningau	-	-	1	3.3	0	0.0	1	1.4	2	4.5	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3	0	0.0
Klang	1	0.1	2	0.2	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0
Kuala Krai	3	2.6	11	6.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3	0	0.0	0	0.0	0	0.0
Kuala Lumpur	NA	NA	0	0.0	1	0.1	1	0.1	2	0.1	15	1.2	32	3.2	10	0.6	0	0.0	1	0.1	0	0.0
Kuala Pilah	99	47.4	97	35.1	205	73.0	77	25.8	211	45.3	96	23.0	22	4.7	24	5.2	2	0.5	1	0.2	0	0.0
Kuala Terengganu	16	3.3	2	0.3	72	10.3	104	15.5	15	2.1	23	3.3	2	0.2	3	0.4	1	0.1	0	0.0	0	0.0
Kuantan	0	0.0	0	0.0	0	0.0	2	0.4	5	0.8	0	0.0	1	0.2	0	0.0	10	1.1	1	0.1	0	0.0
Kulim	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	1	0.2	0	0.0	

Likas	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0		
Melaka	0	0.0	2	0.1	7	0.5	0	0.0	0	0.0	0	0.0	1	0.1	2	0.1	3	0.1	4	0.2	
Miri	0	0.0	0	0.0	0	0.0	1	0.2	3	0.5	0	0.0	0	0.0	0	0.0	2	0.2	0	0.0	
Muar	4	1.2	0	0.0	0	0.0	4	0.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	
Sandakan	-	-	0	0.0	0	0.0	1	0.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
Sarikei	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0	0	0.0	
Segamat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	
Selayang	13	0.9	2	0.1	10	0.7	13	0.8	6	0.3	1	0.1	3	0.2	0	0.0	1	0.1	2	0.2	
Serdang	2	0.4	0	0.0	0	0.0	3	0.6	0	0.0	0	0.0	5	0.5	1	0.1	0	0.0	0	0.0	
Shah Alam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0.3	0	0.0
Sibu	323	94.2	57	23.1	141	36.7	39	8.7	24	4.8	1	0.1	0	0.0	1	0.1	3	0.5	1	0.1	
Sri Manjung	3	2.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.2	1	0.1	2	0.3	0	0.0	1	0.2	
Sultan Ismail	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
Sungai Buloh	1	0.8	1	0.4	4	1.2	0	0.0	1	0.2	0	0.0	0	0.0	1	0.2	1	0.1	0	0.0	
Sungei Petani	253	53.0	487	80.9	578	88.8	443	84.7	281	36.4	11	1.4	4	0.5	1	0.1	0	0.0	0	0.0	
Taiping	7	3.2	20	6.5	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
Tawau	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	0.6	12	2.3	144	24.0	106	16.1	
Temerloh	400	96.9	357	69.2	511	81.5	414	97.6	613	94.3	526	63.1	153	18.0	4	0.4	4	0.5	3	0.3	
Umum Sarawak	0	0.0	0	0.0	2	0.2	1	0.1	0	0.0	1	0.1	0	0.0	2	0.1	0	0.0	2	0.1	
KK-KKM Johor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0
KK-KKM Kedah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	
KK-KKM Kelantan	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0		
KK-KKM Neg. Sembilan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	
KK-KKM Pahang	-	-	-	-	-	-	-	-	-	-	-	-	9	14.1	-	-	1	0.5	0	0.0	
KK-KKM Sabah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	
KK-KKM Sarawak	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0	1	0.1	
MAIWP	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0	1	0.0	
Langkawi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	
Tanah Merah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	

Table 1.3.8-16: Oral Sedation Alone by SDP (50 years and above), CSR 2007-2017

Year	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
All Centres	2264	13.5	2798	14.8	3355	15.6	3055	12.2	2731	10.1	1748	6.1	1339	4.1	1755	4.9	2776	7.0	3106	6.8	834	1.7	
Teluk Intan	0	0.0	153	28.5	346	60.5	347	54.5	92	14.7	342	59.6	242	23.2	400	41.1	757	87.5	1108	87.4	621	54.8	
Bukit Mertajam	198	32.1	340	78.2	437	63.2	284	38.7	174	23.4	102	12.0	63	7.5	104	11.3	336	28.8	368	29.4	80	6.7	
Pulau Pinang	809	79.7	1092	89.2	992	80.4	1300	75.9	1331	64.0	648	51.9	789	49.7	1177	70.0	1503	74.5	1462	60.5	90	5.8	
Pusat Perubatan UKM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	1.8	
Kemaman	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0	0	0.0	0	2	1.4
Putrajaya	0	0.0	1	0.4	0	0.0	0	0.0	0	0.0	3	0.9	4	1.1	6	1.8	3	0.7	0	0.0	5	1.1	
KK-KKM Pulau Pinang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31	39.7	1	1.1	
Kluang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0.5	
KK-KKM Terengganu	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0	0	0.0	1	0.4	
Alor Setar	4	1.1	9	1.0	23	2.6	4	0.3	0	0.0	1	0.1	1	0.1	0	0.0	2	0.1	4	0.2	5	0.2	
Seremban	2	0.2	5	0.6	13	1.2	2	0.1	3	0.2	2	0.1	1	0.1	1	0.1	1	0.1	3	0.2	3	0.2	
Ampang	0	0.0	0	0.0	1	0.3	3	0.5	0	0.0	3	0.4	2	0.2	0	0.0	0	0.0	0	0.0	1	0.1	
Ipoh	6	0.4	6	0.4	9	0.5	13	0.7	9	0.6	2	0.1	6	0.2	3	0.1	4	0.2	7	0.3	2	0.1	
Kota Bharu	5	0.7	4	0.6	14	1.8	5	0.6	1	0.1	0	0.0	0	0.0	0	0.0	7	0.9	1	0.1	1	0.1	
Queen Elizabeth KK	0	0.0	0	0.0	0	0.0	0	0.0	5	0.8	0	0.0	1	0.1	2	0.2	2	0.2	5	0.4	1	0.1	
Sultanah Aminah JB	173	12.3	200	16.4	52	4.6	4	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	
Batu Pahat	0	0.0	0	0.0	2	0.4	1	0.3	1	0.2	0	0.0	4	1.0	3	0.7	0	0.0	0	0.0	0	0.0	
Bintulu	-	-	7	28.0	25	23.4	31	13.5	4	1.3	0	0.0	1	0.3	0	0.0	0	0.0	0	0.0	0	0.0	
Kangar	3	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
Keningau	-	-	1	4.0	0	0.0	1	1.5	2	4.9	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3	0	0.0	
Klang	1	0.1	2	0.2	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	
Kuala Krai	3	2.6	11	7.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3	0	0.0	0	0.0	0	0.0	
Kuala Lumpur	-	-	0	0.0	1	0.1	1	0.1	2	0.2	14	1.1	31	3.2	9	0.5	0	0.0	1	0.1	0	0.0	
Kuala Pilah	95	47.5	92	35.9	194	72.4	75	26.2	200	44.6	92	22.8	21	4.6	20	4.5	2	0.5	1	0.2	0	0.0	
Kuala Terengganu	16	3.4	2	0.3	65	9.9	98	15.7	14	2.0	21	3.1	2	0.2	3	0.4	1	0.1	0	0.0	0	0.0	
Kuantan	0	0.0	0	0.0	0	0.0	2	0.5	5	0.9	0	0.0	1	0.2	0	0.0	10	1.1	1	0.1	0	0.0	
Kulim	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	1	0.3	0	0.0	0	0.0	

Likas	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0	
Melaka	0	0.0	2	0.1	7	0.6	0	0.0	0	0.0	0	0.0	1	0.1	2	0.1	3	0.1	4	0.2
Miri	0	0.0	0	0.0	0	0.0	1	0.2	3	0.5	0	0.0	0	0.0	0	0.0	2	0.2	0	0.0
Muar	4	1.2	0	0.0	0	0.0	4	0.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
Sandakan	-	-	0	0.0	0	0.0	1	0.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Sarikei	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0	0	0.0
Segamat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0
Selayang	9	0.7	2	0.2	9	0.7	12	0.8	5	0.3	1	0.1	2	0.2	0	0.0	1	0.1	2	0.2
Serdang	2	0.4	0	0.0	0	0.0	3	0.7	0	0.0	0	0.0	5	0.6	1	0.1	0	0.0	0	0.0
Shah Alam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0
Sibu	307	89.0	53	23.2	131	36.7	36	8.6	23	4.9	1	0.1	0	0.0	1	0.1	3	0.6	0	0.0
Sri Manjung	3	2.1	0	0.0	0	0.0	0	0.0	0	0.0	1	0.2	1	0.1	2	0.3	0	0.0	1	0.2
Sultan Ismail	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Sungai Buloh	1	0.8	1	0.4	4	1.3	0	0.0	1	0.3	0	0.0	0	0.0	1	0.2	1	0.2	0	0.0
Sungei Petani	237	51.4	456	81.3	546	88.5	421	85.1	265	36.1	11	1.4	3	0.4	1	0.1	0	0.0	0	0.0
Taiping	7	2.8	19	6.4	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Tawau	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	0.7	12	2.5	133	25.2	101	16.4
Temerloh	379	92.4	340	69.2	482	82.0	405	97.6	590	94.6	503	63.2	145	17.9	4	0.4	3	0.4	2	0.2
Umum Sarawak	0	0.0	0	0.0	2	0.3	1	0.1	0	0.0	1	0.1	0	0.0	2	0.1	0	0.0	1	0.1
KK-KKM Johor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0
KK-KKM Kedah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0
KK-KKM Kelantan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0
KK-KKM Neg. Sembilan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0
KK-KKM Pahang	-	-	-	-	-	-	-	-	-	-	-	-	9	15.0	-	-	1	0.6	0	0.0
KK-KKM Sabah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0
KK-KKM Sarawak	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0	1	0.1
MAIWP	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0	0	0.0
Langkawi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0
Tanah Merah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	-	-

Table 1.3.8-17: Intravenous Sedation Alone by SDP, CSR 2007-2017

Year	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
All Centres	72	0.4	37	0.2	35	0.2	22	0.1	27	0.1	36	0.1	31	0.1	36	0.1	66	0.2	124	0.3	198	0.4
Ipoh	6	0.4	8	0.5	6	0.3	1	0.0	4	0.2	3	0.1	2	0.1	3	0.1	21	1.0	82	2.9	143	4.5
Kemaman	-	-	-	-	-	-	-	-	-	-	-	-	1	2.2	0	0.0	0	0.0	1	3.8	6	3.8
Kuala Terengganu	7	1.4	14	2.0	7	1.0	5	0.7	13	1.8	12	1.7	7	0.7	7	0.8	7	0.8	11	0.9	16	1.2
Temerloh	0	0.0	2	0.4	1	0.2	0	0.0	1	0.2	2	0.6	7	0.8	9	0.9	13	1.6	1	0.1	11	1.2
KK-KKM Pahang	-	-	-	-	-	-	-	-	-	-	-	-	1	1.6	-	-	1	0.5	0	0.0	2	0.7
KK-KKM Terengganu	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0	2	0.7
Tawau	0	0.0	1	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	0.5	1	0.3
Bukit Mertajam	2	0.3	0	0.0	2	0.3	3	0.4	0	0.0	10	1.3	3	0.3	7	0.8	0	0.0	0	0.0	2	0.2
Kuantan	0	0.0	0	0.0	0	0.0	2	0.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	3	0.2
Selayang	33	2.4	0	0.0	3	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	7	0.6	0	0.0	2	0.2
Pusat Perubatan UKM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	0.2
Alor Setar	1	0.3	1	0.1	0	0.0	1	0.1	0	0.0	5	0.3	1	0.1	1	0.1	3	0.1	2	0.1	2	0.1
Ampang	0	0.0	0	0.0	0	0.0	1	0.2	0	0.0	0	0.0	0	0.0	0	0.0	2	0.2	0	0.0	1	0.1
Kangar	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
Kota Bharu	5	0.7	2	0.3	6	0.7	2	0.2	0	0.0	0	0.0	1	0.2	0	0.0	1	0.1	4	0.4	1	0.1
Pulau Pinang	3	0.3	4	0.3	0	0.0	0	0.0	0	0.0	2	0.3	1	0.1	1	0.2	5	0.9	2	0.2	1	0.1
Sri Manjung	0	0.0	0	0.0	0	0.0	0	0.0	1	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
Sultanah Aminah JB	0	0.0	0	0.0	4	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
Batu Pahat	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Bintulu	-	-	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Keningau	-	-	0	0.0	0	0.0	3	4.2	6	13.6	0	0.0	0	0.0	1	0.8	0	0.0	0	0.0	0	0.0
Klang	11	1.3	3	0.3	2	0.3	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0
Kluang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
Kuala Krai	0	0.0	0	0.0	0	0.0	0	0.0	1	0.4	0	0.0	0	0.0	0	0.0	0	0.0	4	1.2	0	0.0
Kuala Lumpur	-	-	0	0.0	1	0.1	0	0.0	1	0.1	0	0.0	1	0.1	1	0.1	0	0.0	2	0.1	0	0.0
Kuala Pilah	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Kulim	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0	0	0.0

Likas	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0		
Melaka	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0			
Miri	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0			
Muar	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0			
Putrajaya	0	0.0	0	0.0	2	0.8	0	0.0	0	0.0	0	0.0	1	0.3	1	0.3	0	0.0			
Queen Elizabeth KK	0	0.0	0	0.0	0	0.0	1	0.2	0	0.0	0	0.0	0	0.1	0	0.0	1	0.1			
Sandakan	-	-	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0			
Sarikei	-	-	-	-	-	-	-	-	-	-	-	2	0.7	0	0.0	0	0.0	0	0.0		
Segamat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	
Serdang	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.2	1	0.1	4	0.4	2	0.4	
Seremban	1	0.1	1	0.1	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
Shah Alam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	
Sibu	1	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
Sultan Ismail	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	
Sungai Buloh	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	
Sungei Petani	1	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
Taiping	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
Teluk Intan	0	0.0	1	0.2	0	0.0	2	0.3	0	0.0	0	0.0	0	0.0	0	0.0	1	0.9	0	0.0	
Umum Sarawak	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
KK-KKM Johor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	
KK-KKM Kedah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	
KK-KKM Kelantan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	1	1.6	
KK-KKM Neg. Sembilan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	
KK-KKM Pulau Pinang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0
KK-KKM Sabah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	
KK-KKM Sarawak	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0	0	0.0		
MAIWP	-	-	-	-	-	-	-	-	-	-	-	1	0.1	0	0.0	0	0.0	4	0.1	0	0.0
Langkawi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	-	-
Tanah Merah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	1	5.6	-	-

Table 1.3.8-18: Intravenous Sedation Alone by SDP (50 years and above), CSR 2007-2017

Year	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
All Centres	55	0.3	37	0.2	29	0.1	18	0.1	23	0.1	34	0.1	28	0.1	26	0.1	62	0.2	114	0.3	186	0.4
Ipoh	4	0.3	8	0.5	6	0.3	1	0.1	3	0.2	3	0.1	2	0.1	2	0.1	20	1.0	74	2.7	136	4.4
Kemaman	-	-	-	-	-	-	-	-	-	-	-	-	1	2.3	0	0.0	0	0.0	1	3.8	6	4.1
Temerloh	0	0.0	2	0.4	0	0.0	0	0.0	1	0.2	2	0.3	7	0.9	8	0.8	12	1.5	1	0.1	10	1.2
Kuala Terengganu	5	1.1	14	2.1	4	0.6	5	0.8	12	1.8	11	1.6	6	0.7	2	0.3	7	0.8	11	1.0	14	1.1
KK-KKM Terengganu	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0	0	0.0	
KK-KKM Pahang	-	-	-	-	-	-	-	-	-	-	-	-	1	1.7	-	-	1	0.6	0	0.0	2	0.7
Tawau	0	0.0	1	0.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.4	1	0.4
Kuantan	0	0.0	0	0.0	0	0.0	2	0.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
Selayang	23	1.8	0	0.0	3	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	7	0.7	0	0.0	2	0.2
Pusat Perubatan UKM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	0.2
Alor Setar	0	0.0	1	0.1	0	0.0	1	0.1	0	0.0	4	0.3	1	0.1	1	0.1	3	0.2	2	0.1	2	0.1
Ampang	0	0.0	0	0.0	0	0.0	1	0.2	0	0.0	0	0.0	0	0.0	0	0.0	2	0.2	0	0.0	1	0.1
Bukit Mertajam	2	0.3	0	0.0	2	0.3	2	0.3	0	0.0	10	1.2	3	0.4	6	0.7	0	0.0	0	0.0	1	0.1
Kangar	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
Kota Bharu	5	0.7	2	0.3	5	0.6	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	4	0.4
Sri Manjung	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
Sultanah Aminah JB	0	0.0	0	0.0	3	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
Batu Pahat	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Bintulu	-	-	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Keningau	-	-	0	0.0	0	0.0	3	4.5	5	12.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Klang	9	1.0	3	0.3	2	0.3	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0
Kluang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
Kuala Krai	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	1.3	0	0.0
Kuala Lumpur	-	-	0	0.0	1	0.1	0	0.0	1	0.1	0	0.0	0	0.0	1	0.1	0	0.0	2	0.1	0	0.0
Kuala Pilah	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Kulim	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0
Likas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0

Melaka	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0			
Miri	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0			
Muar	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.1	0	0.0	0	0.0	0	0.0			
Pulau Pinang	3	0.3	4	0.3	0	0.0	0	0.0	0	0.0	2	0.2	1	0.1	1	0.2	4	0.8	2	0.2			
Putrajaya	0	0.0	0	0.0	2	0.9	0	0.0	0	0.0	0	0.0	1	0.3	1	0.3	0	0.0	0	0.0			
Queen Elizabeth KK	0	0.0	0	0.0	0	0.0	1	0.2	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	1	0.1			
Sandakan	-	-	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0			
Sarikei	-	-	-	-	-	-	-	-	-	-	-	2	0.7	0	0.0	0	0.0	0	0.0	0	0.0		
Segamat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0		
Serdang	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.2	1	0.1	3	0.3	1	0.2	0	0.0			
Seremban	1	0.1	1	0.1	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0			
Shah Alam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0		
Sibu	1	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0			
Sultan Ismail	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	
Sungai Buloh	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.2	0	0.0	0	0.0	
Sungei Petani	1	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
Taiping	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
Teluk Intan	0	0.0	1	0.2	0	0.0	1	0.2	0	0.0	0	0.0	0	0.0	0	0.0	1	0.9	0	0.0	0	0.0	
Umum Sarawak	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
KK-KKM Johor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0
KK-KKM Kedah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0	
KK-KKM Kelantan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	1	1.7	0	0.0	
KK-KKM Neg. Sembilan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0	
KK-KKM Pulau Pinang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0
KK-KKM Sabah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0	
KK-KKM Sarawak	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
MAIWP	-	-	-	-	-	-	-	-	-	-	-	-	1	0.1	0	0.0	0	0.0	4	0.1	0	0.0	
Langkawi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	-	-		
Tanah Merah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0	1	5.6	-	-		

1.3.9. Intraocular Lens (IOL)

Table 1.3.9-1: IOL Implantation, CSR 2007-2017

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
No of patients (N)	18426	21496	24438	28506	30611	32473	37150	40532	44534	50625	54242
	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %
With IOL	17873 97.0	21115 98.2	23982 98.1	27980 98.1	30061 98.2	31991 98.5	36545 98.4	40006 98.7	43869 98.5	49890 98.5	53403 98.5
Without IOL	553 3.0	375 1.7	423 1.7	502 1.8	487 1.6	419 1.3	431 1.2	495 1.2	651 1.5	721 1.4	831 1.5
Not Available	- -	6 0.0	33 0.1	24 0.1	63 0.2	63 0.2	174 0.5	31 0.1	14 0.0	14 0.0	8 0.0
IOL Placement											
No of IOL	17873	21115	23982	27980	30061	31991	36545	40006	43869	49890	53403
PCIOL	17350 97.1	20342 96.3	23032 96	26932 96.3	28963 96.3	30683 95.9	35194 96.3	38453 96.1	42365 96.6	48371 97.0	51688 96.8
ACIOL	482 2.7	454 2.2	570 2.4	543 1.9	573 1.9	575 1.8	595 1.6	633 1.6	739 1.7	781 1.6	790 1.5
Scleral Fixedated IOL	35 0.2	36 0.2	21 0.1	20 0.1	21 0.1	15 0.0	25 0.1	29 0.1	23 0.1	24 0.0	36 0.1
Others	6 0.0	14 0.1	22 0.1	21 0.1	44 0.1	53 0.2	59 0.2	94 0.2	95 0.2	74 0.1	122 0.2
Not Available /missing	- -	269 1.3	337 1.4	464 1.7	460 1.5	665 2.1	672 1.8	797 2.0	647 1.5	640 1.3	767 1.4
Materials of IOL											
No of IOL	17873	21115	23982	27980	30061	31991	36545	40006	43869	49890	53403
1. Acrylic	11955 66.9	15382 72.8	19160 79.9	24270 86.7	26917 89.5	28861 90.2	32798 89.7	37056 92.6	40466 92.2	46764 93.7	49918 93.5
2. PMMA	5547 31.0	5300 25.1	4313 18.0	3259 11.6	2603 8.7	2295 7.2	2083 5.7	1736 4.3	1952 4.4	1714 3.4	2097 3.9
3. Silicone	97 0.5	113 0.5	137 0.6	75 0.3	110 0.4	117 0.4	347 0.9	143 0.4	211 0.5	72 0.1	138 0.3
4. Others	74 0.4	19 0.1	58 0.2	32 0.1	37 0.1	84 0.3	75 0.2	115 0.3	180 0.4	522 1.0	196 0.4
Not Available/ missing	200 1.1	301 1.4	314 1.3	344 1.2	394 1.3	634 2.0	1242 3.4	956 2.4	1060 2.4	818 1.6	1054 2.0
Types of IOL											
No of IOL	17873	21115	23982	27980	30061	31991	36545	40006	43869	49890	53403
1. Foldable	11972 67.0	15320 72.6	19093 79.6	24036 85.9	26553 88.3	29107 91.0	33987 93.0	37536 93.8	41575 94.8	48331 96.9	52078 97.5
2. Non-foldable	5590 31.3	5316 25.2	4280 17.8	3231 11.5	2694 9.0	2345 7.3	1929 5.3	1820 4.5	1868 4.3	1436 2.9	1104 2.1
Not Available/ missing	311 1.7	479 2.3	609 2.5	713 2.5	814 2.7	539 1.7	629 1.7	650 1.6	426 1.0	123 0.2	221 0.4

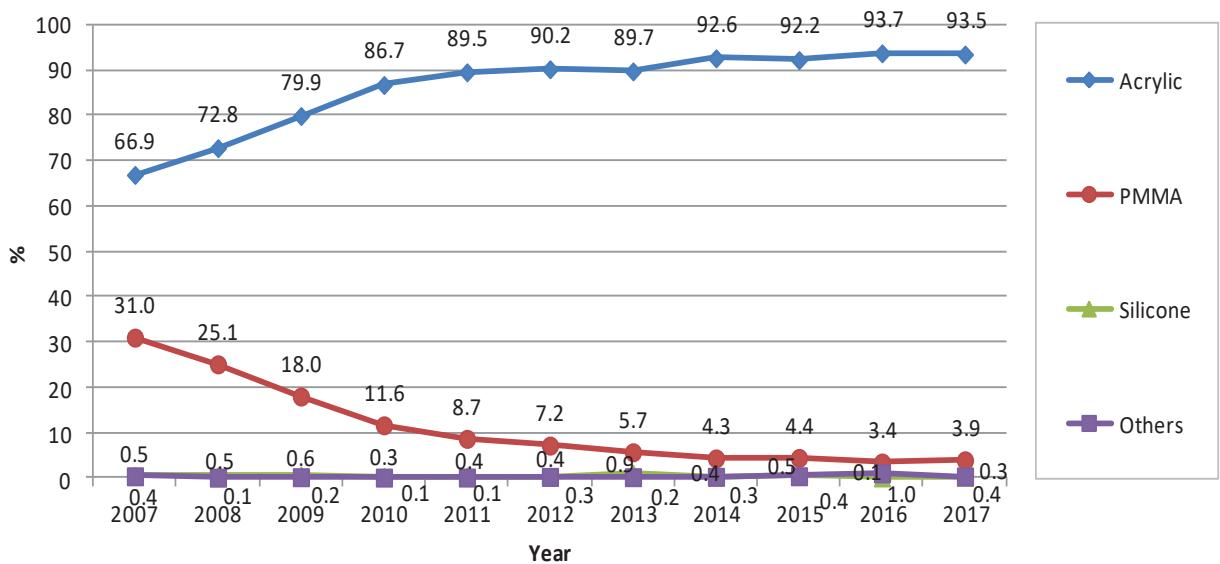


Figure 1.3.9-1: Intraocular Lens Implantation, CSR 2002-2017

Table 1.3.9-2: Distribution of IOL Placement by SDP, CSR 2017

Cataract Surgery With IOL							
	N	Posterior Chamber IOL		Anterior Chamber IOL		Scleral Fixed IOL	
		n	%	n	%	n	%
All Centres	53403	51688	96.8	790	1.5	36	0.1
Alor Setar	2492	2435	97.7	25	1.0	0	0.0
Ampang	1120	1061	94.7	31	2.8	2	0.2
Batu Pahat	645	615	95.3	12	1.9	0	0.0
Bintulu	253	248	98.0	3	1.2	0	0.0
Bukit Mertajam	1417	1373	96.9	19	1.3	2	0.1
Ipoh	3412	3317	97.2	58	1.7	2	0.1
Kangar	729	704	96.6	12	1.6	0	0.0
Kemaman	150	121	80.7	21	14.0	0	0.0
Keningau	324	316	97.5	5	1.5	0	0.0
Klang	2311	2226	96.3	34	1.5	1	0.0
Kluang	223	215	96.4	7	3.1	0	0.0
Kota Bharu	1371	1349	98.4	19	1.4	2	0.1
Kuala Krai	339	330	97.3	9	2.7	0	0.0
Kuala Lumpur	1433	1367	95.4	11	0.8	0	0.0
Kuala Pilah	638	617	96.7	12	1.9	1	0.2
Kuala Terengganu	1344	1300	96.7	18	1.3	1	0.1
Kuantan	1385	1310	94.6	28	2.0	0	0.0
Kulim	597	583	97.7	6	1.0	0	0.0
Likas	19	17	89.5	2	10.5	0	0.0
Melaka	2366	2329	98.4	23	1.0	0	0.0
Miri	1165	1158	99.4	6	0.5	1	0.1
Muar	1030	1016	98.6	9	0.9	5	0.5

Pulau Pinang	1625	1594	98.1	20	1.2	1	0.1
Putrajaya	497	468	94.2	21	4.2	0	0.0
Queen Elizabeth KK	1685	1613	95.7	26	1.5	2	0.1
Sandakan	503	359	71.4	14	2.8	0	0.0
Sarikei	430	429	99.8	1	0.2	0	0.0
Segamat	398	372	93.5	14	3.5	0	0.0
Selayang	1107	1049	94.8	34	3.1	1	0.1
Serdang	876	840	95.9	12	1.4	1	0.1
Seremban	1929	1863	96.6	25	1.3	1	0.1
Shah Alam	664	623	93.8	8	1.2	1	0.2
Sibu	780	739	94.7	33	4.2	0	0.0
Sri Manjung	861	856	99.4	3	0.3	0	0.0
Sultan Ismail	809	788	97.4	12	1.5	0	0.0
Sultanah Aminah JB	910	868	95.4	28	3.1	1	0.1
Sungai Buloh	718	701	97.6	8	1.1	0	0.0
Sungei Petani	1324	1319	99.6	4	0.3	0	0.0
Taiping	1763	1743	98.9	20	1.1	0	0.0
Tawau	278	264	95.0	6	2.2	0	0.0
Teluk Intan	1201	1171	97.5	24	2.0	0	0.0
Temerloh	909	897	98.7	5	0.6	3	0.3
Umum Sarawak	1777	1759	99.0	17	1.0	1	0.1
Pusat Perubatan UKM	1167	1093	93.7	12	1.0	0	0.0
KK-KKM Johor	33	28	84.8	0	0.0	0	0.0
KK-KKM Kedah	347	341	98.3	5	1.4	0	0.0
KK-KKM Kelantan	136	127	93.4	2	1.5	0	0.0
KK-KKM Neg. Sembilan	437	397	90.8	10	2.3	5	1.1
KK-KKM Pahang	291	278	95.5	6	2.1	0	0.0
KK-KKM Pulau Pinang	88	86	97.7	2	2.3	0	0.0
KK-KKM Terengganu	275	266	96.7	5	1.8	0	0.0
KK-KKM Sabah	467	436	93.4	11	2.4	1	0.2
KK-KKM Sarawak	873	867	99.3	3	0.3	0	0.0
MAIWP	3482	3447	99.0	29	0.8	1	0.0

1.4. Intraoperative Complication

1.4.1. Intra-operative Complications

Table 1.4.1-1: Distribution of Type of Intra-operative Complications, CSR 2007-2017

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
No. of patients (N)	18380	21496	24438	28506	30611	32473	37150	40532	44534	50625	54242
	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %
Patient with intra-op complication	1999 10.9	1636 7.6	1645 6.7	1610 5.6	178 7 5.8	1702 5.2	199 8 5.4	2159 5.3	222 4 5.0	233 4 4.6	264 9 4.9
Types of complications:											
PCR	764 4.2	798 3.7	858 3.5	840 2.9	936 3.1	870 2.7	101 7 2.7	1100 2.7	114 5 2.6	118 3 2.3	132 1 2.4
Vitreous loss	569 3.1	608 2.8	642 2.6	639 2.2	611 2.0	529 1.6	644 1.7	661 1.6	793 1.8	855 1.7	889 1.6
Zonular dehiscence	275 1.5	322 1.5	372 1.5	377 1.3	362 1.2	359 1.1	391 1.0	467 1.2	602 1.4	696 1.4	856 1.6
Drop nucleus	21 0.1	33 0.2	40 0.2	38 0.1	58 0.2	56 0.2	63 0.2	87 0.2	90 0.2	75 0.1	118 0.2
Central corneal oedema	58 0.3	27 0.1	22 0.1	26 0.1	36 0.1	30 0.1	23 0.1	36 0.1	15 0.0	26 0.1	35 0.1
Suprachoroidal haemorrhage	9 0.0	10 0.0	13 0.1	9 0.0	8 0.0	8 0.0	8 0.0	4 0.0	4 0.0	4 0.0	11 0.0
Others	350 1.9	361 1.7	373 1.5	338 1.2	449 1.5	439 1.3	572 1.5	550 1.4	546 1.2	541 1.1	596 1.1

Table 1.4.1-2: Distribution of Type of Intra-operative Complications (Posterior Capsular Rupture) CSR 2007-2017

Year	2007*	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
No. of patients (N)	18380	21496	24438	28506	30611	32473	37150	40532	44534	50625	54242
	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %
Patient with intra-op complication	1999 10.9	1636 7.6	1645 6.7	1610 5.6	1787 5.8	1702 5.2	1998 5.4	2159 5.3	2224 5.0	2334 4.6	2649 4.9
Types of complications:											
PCR and Others**	764 4.2	798 3.7	858 3.5	840 2.9	936 3.1	870 2.7	1017 2.7	1100 2.7	1145 2.6	1183 2.3	1321 2.4
PCR Only	347 1.6	403 1.6	402 1.4	485 1.6	481 1.5	547 1.5	588 1.4	555 1.2	561 1.1	654 1.2	

*Data from 2007 could not be analyzed due to improperly organized old data.

**PCR and Others = including PCR only, and PCR+Others

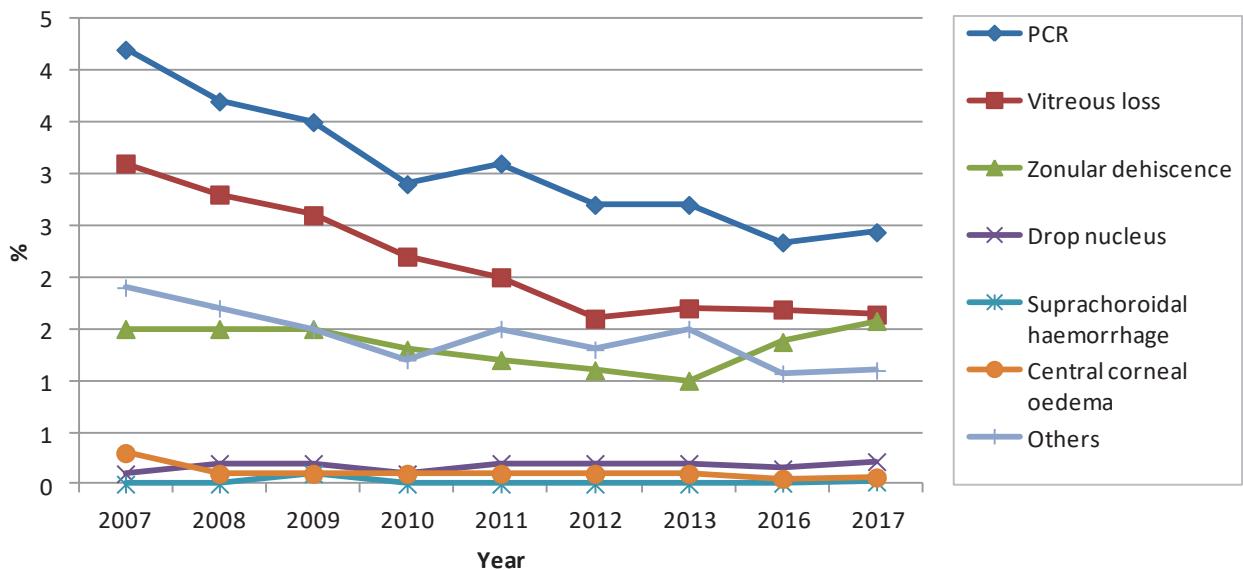


Figure 1.4.1-1: Distribution of Specific Type of Intra-operative Complications, CSR 2007-2017

1.4.2. Intra-operative Complication by Type of Cataract Surgery

Table 1.4.2-1: Intra-operative Complications by Types of Cataract Surgery, CSR 2007-2017

Year	2007			2008			2009			2010			2011			2012			
	n	%	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
Phaco	969	8.1	753	5.1	177	17	4.4	218	10	3.7	238	72	3.9	263	45	3.5	930	3	3.5
Lens Aspiration	51	15.8	31	9.1	400	38	9.5	451	34	7.5	460	29	6.3	444	26	5.9			
ECCE	691	12.5	532	9.5	545	7	460	8.4	536	3	442	8.2	529	1	404	7.6	478	4	7.5
ICCE	63	44.7	60	46.5	134	64	47.8	143	64	44.8	123	53	43.1	136	58	42.6			
Phaco → ECCE	225	52.1	240	45.8	573	276	48.2	586	249	42.5	652	316	48.5	621	300	48.3			
Others	-	-	16	25.8	74	8	10.8	104	20	19.2	132	21	15.9	110	27	24.5			
Missing	9	20.0	4	12.1	83	12	14.5	49	3	6.1	81	37	45.7	33	2	6.1			

Year	2013			2014			2015			2016			2017		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
Phaco	31625	1112	3.5	35429	1282	3.6	39131	1194	3.1	45346	1260	2.8	49543	1489	3.0
Lens Aspiration	364	31	8.5	370	23	6.2	521	35	6.7	527	23	4.4	572	43	7.5
ECCE	4086	373	9.1	3613	340	9.4	3677	405	11.0	3439	370	10.8	3656	889	24.3
ICCE	173	68	39.3	176	70	39.8	223	104	46.6	275	137	49.8	284	145	51.1
Phaco → ECCE	769	383	49.8	805	402	49.9	833	444	53.3	870	493	56.7	-	-	-
SICS	-	-	-	-	-	-	-	-	-	-	-	-	2	0	0.0
Others	84	20	23.8	118	37	31.4	144	40	27.8	168	51	30.4	185	83	44.9
Missing	49	11	22.4	21	5	23.8	5	2	40.0	0	0	0.0	0	0	0.0

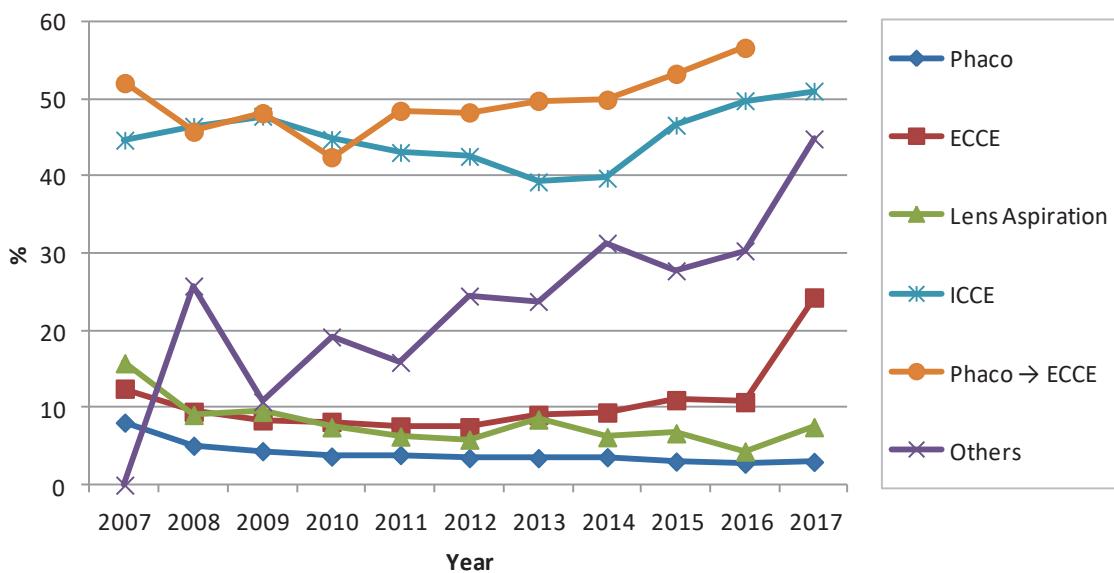


Figure 1.4.2-1: Intra-operative Complications by Type of Cataract Surgery, CSR 2007-2017

Table 1.4.2-2: Types Intra-operative Complications by Types of Cataract Surgery, CSR 2017

		All Surgeries		Phaco		ECCE		Lens Aspiration		ICCE		SICS		Others	
Number of patients (N)		54242	n %	49543	n %	3656	n %	572	n %	284	n %	2	n %	185	n %
Any intra-op complication	2649	4.9		1489	3.0	889	24.3	43	7.5	145	51.1	0	0.0	83	44.9
Types of complications:															
Posterior capsule rupture	1321	2.4		850	1.7	402	11.0	27	4.7	25	8.8	0	0.0	17	9.2
Vitreous loss	889	1.6		358	0.7	382	10.4	13	2.3	93	32.7	0	0.0	43	23.2
Zonular dehiscence	856	1.6		332	0.7	346	9.5	5	0.9	111	39.1	0	0.0	62	33.5
Dropped nucleus	118	0.2		89	0.2	26	0.7	0	0.0	0	0.0	0	0.0	3	1.6
Suprachoroidal haemorrhage	11	0.0		3	0.0	3	0.1	1	0.2	4	1.4	0	0.0	0	0.0
Central corneal oedema	35	0.1		24	0.0	9	0.2	0	0.0	1	0.4	0	0.0	1	0.5
Others	596	1.1		352	0.7	198	5.4	16	2.8	16	5.6	0	0.0	14	7.6

Table 1.4.2-3: Distribution of Types Intra-operative Complications by SDP (All Surgeries), CSR 2017

Hospital	N	Any intra-op complication		PCR		Vitreous loss		Zonular Dehiscence		Dropped Nucleus		Suprachoroidal Haemorrhage		Central Corneal Edema		Others	
		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
All centre	54242	2649	4.9	1321	2.4	889	1.6	856	1.6	118	0.2	11	0.0	35	0.1	596	1.1
Kemaman	161	59	36.6	27	16.8	10	6.2	14	8.7	2	1.2	0	0.0	0	0.0	24	14.9
Kuala Pilah	646	57	8.8	36	5.6	30	4.6	16	2.5	2	0.3	1	0.2	1	0.2	12	1.9
Tawau	299	29	9.7	15	5.0	13	4.3	12	4.0	2	0.7	0	0.0	0	0.0	1	0.3
KK-KKM Neg. Sembilan	444	44	9.9	21	4.7	7	1.6	13	2.9	1	0.2	0	0.0	2	0.5	12	2.7
Kuala Krai	347	23	6.6	16	4.6	3	0.9	4	1.2	1	0.3	0	0.0	0	0.0	3	0.9
Queen Elizabeth KK	1739	119	6.8	76	4.4	48	2.8	38	2.2	5	0.3	0	0.0	7	0.4	7	0.4

KK-KKM Terengganu	277	26	9.4	12	4.3	4	1.4	4	1.4	0	0.0	0	0.0	0	0.0	10	3.6
KK-KKM Pahang	294	21	7.1	12	4.1	5	1.7	4	1.4	1	0.3	0	0.0	0	0.0	6	2.0
Kota Bharu	1396	103	7.4	55	3.9	46	3.3	31	2.2	8	0.6	0	0.0	0	0.0	22	1.6
Sandakan	513	34	6.6	19	3.7	15	2.9	17	3.3	0	0.0	0	0.0	0	0.0	6	1.2
KK-KKM Sabah	480	35	7.3	17	3.5	9	1.9	8	1.7	0	0.0	0	0.0	0	0.0	15	3.1
Kuantan	1401	90	6.4	46	3.3	28	2.0	20	1.4	2	0.1	0	0.0	3	0.2	27	1.9
Kuala Terengganu	1393	112	8.0	46	3.3	22	1.6	22	1.6	4	0.3	0	0.0	1	0.1	49	3.5
Umum Sarawak	1822	83	4.6	58	3.2	18	1.0	18	1.0	6	0.3	0	0.0	1	0.1	9	0.5
Keningau	324	18	5.6	10	3.1	10	3.1	5	1.5	0	0.0	0	0.0	0	0.0	4	1.2
Ampang	1128	82	7.3	35	3.1	32	2.8	34	3.0	3	0.3	2	0.2	2	0.2	15	1.3
Likas	33	2	6.1	1	3.0	1	3.0	0	0.0	0	0.0	0	0.0	0	0.0	2	6.1
Sibu	800	62	7.8	24	3.0	17	2.1	26	3.3	2	0.3	2	0.3	1	0.1	10	1.3
KK-KKM Kelantan	138	7	5.1	4	2.9	3	2.2	1	0.7	0	0.0	0	0.0	0	0.0	2	1.4
Sungei Petani	1375	93	6.8	39	2.8	40	2.9	31	2.3	2	0.1	0	0.0	2	0.1	25	1.8
Teluk Intan	1206	54	4.5	34	2.8	30	2.5	17	1.4	2	0.2	0	0.0	1	0.1	6	0.5
Kangar	743	40	5.4	20	2.7	17	2.3	19	2.6	1	0.1	0	0.0	0	0.0	3	0.4
Sultanah Aminah JB	921	59	6.4	24	2.6	26	2.8	34	3.7	3	0.3	0	0.0	1	0.1	6	0.7
Selayang	1137	69	6.1	30	2.6	16	1.4	22	1.9	8	0.7	0	0.0	0	0.0	16	1.4
Sultan Ismail	814	34	4.2	21	2.6	8	1.0	4	0.5	1	0.1	0	0.0	0	0.0	11	1.4
Batu Pahat	649	33	5.1	16	2.5	15	2.3	15	2.3	0	0.0	0	0.0	0	0.0	4	0.6
Melaka	2394	102	4.3	60	2.5	44	1.8	35	1.5	5	0.2	0	0.0	1	0.0	17	0.7
Pusat Perubatan UKM	1182	64	5.4	30	2.5	17	1.4	14	1.2	2	0.2	0	0.0	1	0.1	23	1.9
KK-KKM Kedah	352	16	4.5	8	2.3	9	2.6	8	2.3	1	0.3	0	0.0	0	0.0	1	0.3
Sungai Buloh	731	40	5.5	17	2.3	9	1.2	9	1.2	0	0.0	0	0.0	0	0.0	17	2.3
Kuala Lumpur	1464	55	3.8	33	2.3	18	1.2	13	0.9	4	0.3	0	0.0	0	0.0	13	0.9
KK-KKM Pulau Pinang	90	6	6.7	2	2.2	3	3.3	3	3.3	0	0.0	0	0.0	0	0.0	1	1.1
Putrajaya	498	22	4.4	11	2.2	15	3.0	14	2.8	1	0.2	0	0.0	0	0.0	0	0.0
Pulau Pinang	1649	89	5.4	36	2.2	25	1.5	32	1.9	4	0.2	0	0.0	4	0.2	23	1.4
Alor Setar	2563	87	3.4	53	2.1	25	1.0	25	1.0	9	0.4	0	0.0	0	0.0	9	0.4
Sri Manjung	868	27	3.1	18	2.1	8	0.9	6	0.7	4	0.5	1	0.1	0	0.0	2	0.2
Ipoh	3466	143	4.1	71	2.0	57	1.6	58	1.7	14	0.4	1	0.0	3	0.1	25	0.7
Miri	1184	36	3.0	24	2.0	12	1.0	9	0.8	1	0.1	0	0.0	0	0.0	5	0.4
KK-KKM Sarawak	885	31	3.5	18	2.0	5	0.6	7	0.8	2	0.2	0	0.0	0	0.0	9	1.0
Serdang	882	35	4.0	17	1.9	12	1.4	15	1.7	2	0.2	0	0.0	0	0.0	7	0.8
Klang	2321	84	3.6	43	1.9	30	1.3	33	1.4	1	0.0	0	0.0	0	0.0	13	0.6
Seremban	1942	65	3.3	34	1.8	25	1.3	26	1.3	2	0.1	0	0.0	0	0.0	8	0.4
Bukit Mertajam	1426	56	3.9	25	1.8	18	1.3	16	1.1	0	0.0	0	0.0	0	0.0	19	1.3
Temerloh	927	68	7.3	17	1.8	7	0.8	13	1.4	1	0.1	0	0.0	0	0.0	38	4.1
Kluang	227	11	4.8	3	1.3	0	0.0	6	2.6	0	0.0	0	0.0	0	0.0	3	1.3
MAIWP	3507	92	2.6	43	1.2	31	0.9	35	1.0	6	0.2	2	0.1	0	0.0	20	0.6
Kulim	609	23	3.8	7	1.1	8	1.3	7	1.1	0	0.0	0	0.0	0	0.0	12	2.0
Muar	1039	24	2.3	9	0.9	6	0.6	11	1.1	1	0.1	1	0.1	1	0.1	2	0.2
Sarikei	431	5	1.2	4	0.9	0	0.0	1	0.2	0	0.0	0	0.0	0	0.0	0	0.0
Segamat	398	18	4.5	3	0.8	5	1.3	6	1.5	0	0.0	0	0.0	1	0.3	8	2.0
Taiping	1765	31	1.8	15	0.8	20	1.1	16	0.9	0	0.0	0	0.0	0	0.0	0	0.0
Bintulu	261	7	2.7	2	0.8	2	0.8	2	0.8	0	0.0	1	0.4	0	0.0	3	1.1
Shah Alam	668	24	3.6	4	0.6	5	0.7	7	1.0	2	0.3	0	0.0	2	0.3	11	1.6
KK-KKM Johor	33	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

1.4.3. Intra-operative Complications by Combined Surgery

Table 1.4.3-1: Distribution of Intra-operative Complications by Any Combined Surgery, CSR 2007-2017

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
No. of combined surgery (N)	891	664	871	1082	1194	1221	1026	1028	1458	1490	1495	
	n	%	n	%	n	%	n	%	n	%	n	%
Any intra-operative complication	131	14.7	89	10.0	113	13.0	121	11.2	222	18.6	240	19.7
Types of complications:												
Suprachoroidal haemorrhage	0	0.0	0.0	0.0	4	0.5	1	0.1	2	0.2	2	0.2
Central corneal oedema	7	0.8	3	0.3	1	0.1	2	0.2	0	0.0	2	0.2
Dropped nucleus	4	0.4	3	0.3	8	0.9	10	0.9	20	1.7	16	1.3
Zonular dehiscence	21	2.4	15	1.7	21	2.4	28	2.6	49	4.1	61	5.0
Vitreous loss	41	4.6	40	4.5	51	5.9	53	4.9	101	8.5	123	10.1
PCR	56	6.3	54	6.1	62	7.1	61	5.6	140	11.7	146	12.0
Others	30	3.4	14	1.6	21	2.4	24	2.2	29	2.4	38	3.1

Table 1.4.3-2: Distribution of Intra-operative Complications by Specific Combined Surgery, CSR 2017

	All Surgeries	Any Combined Surgery	Vitreo-Retinal Surgery	Pterygium Surgery	Filtering Surgery	Penetrating Keratoplasty	Others
No. of patients (N)	54242 n %	1495 n %	893 n %	124 n %	63 n %	3 n %	452 n %
Any intra-op complication	2649 4.9	212 14.2	58 6.5	8 6.5	2 3.2	0 0.0	150 33.2
Types of complications:							
Suprachoroidal haemorrhage	11 0.0	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0
Central corneal oedema	35 0.1	2 0.1	1 0.1	0 0.0	0 0.0	0 0.0	1 0.2
Dropped nucleus	118 0.2	22 1.5	14 1.6	0 0.0	0 0.0	0 0.0	8 1.8
Zonular dehiscence	856 1.6	70 4.7	15 1.7	2 1.6	2 3.2	0 0.0	52 11.5
Vitreous loss	889 1.6	111 7.4	17 1.9	3 2.4	0 0.0	0 0.0	96 21.2
PCR	1321 2.4	132 8.8	36 4.0	5 4.0	0 0.0	0 0.0	96 21.2
Others	596 1.1	29 1.9	9 1.0	1 0.8	0 0.0	0 0.0	19 4.2

Table 1.4.3-3: Distribution of Intra-operative Complications when Combined with Filtering Surgery, CSR 2007-2017

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
N	n	n %	n	n %	n	n %	n	n %	n	n %	n	n %
Any intra-op complication	24	18.3	9	6.3	16	12.1	8	6.6	5	7.8	3	4.2
Types of complications:												
Dropped nucleus	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Suprachoroidal haemorrhage	0	0.0	0	0.0	2	1.5	0	0.0	0	0.0	0	0.0
Central corneal oedema	3	2.3	2	1.4	0	0.0	0	0.0	0	0.0	0	0.0
Posterior capsule rupture	9	6.9	3	2.1	4	3.0	3	2.5	1	1.6	2	2.8
Vitreous loss	7	5.3	5	3.5	7	5.3	2	1.7	3	4.7	1	1.4
Zonular dehiscence	4	3.1	3	2.1	5	3.8	1	0.8	3	4.7	0	0.0
Others	5	3.8	1	0.7	3	2.3	3	2.5	0	0.0	0	0.0

Table 1.4.3-4: Distribution of Intra-operative Complications when Combined with Vitreoretinal Surgery, CSR 2007-2017

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
N	n	n %	n	n %	n	n %	n	n %	n	n %	n	n %
Any intra-op complication	45	10.3	21	8.9	32	8.0	35	5.8	69	10.3	45	7.7
Types of complications:												
Suprachoroidal haemorrhage	0	0.0	0	0.0	2	0.5	0	0.0	2	0.3	1	0.2
Central corneal oedema	3	0.7	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
Dropped nucleus	3	0.7	2	0.8	6	1.5	6	1.0	15	2.2	7	1.2
Zonular dehiscence	6	1.4	1	0.4	2	0.5	5	0.8	13	1.9	6	1.0
Vitreous loss	11	2.5	6	2.5	5	1.2	9	1.5	10	1.5	8	1.4
Posterior capsule rupture	18	4.1	17	7.2	18	4.5	22	3.7	41	6.1	23	3.9
Others	12	2.8	3	1.3	5	1.2	4	0.7	10	1.5	15	2.6

1.4.4. Intra-operative Complications by Types of Local Anaesthesia

Table 1.4.4-1: Intra-operative Complications by Types of Local Anaesthesia, CSR 2017

	All local anaesthesia	Facial Block		Peribulbar		Retrobulbar		Sub-Conjunctival		Subtenon		Intracameral		Topical	
N	50435	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Any intra-op complication	2425 4.8	2	14.3	11	6.5	25	4.4	65	8	992	12.6	656	4	1685	4.3
Types of complications:															
Posterior capsule rupture	1209 2.4	0	0	4	2.4	14	2.5	30	3.7	443	5.6	332	2	874	2.2
Zonular dehiscence	787 1.6	1	7.1	3	1.8	6	1.1	23	2.8	379	4.8	222	1.4	527	1.3
Vitreous loss	812 1.6	0	0	4	2.4	6	1.1	26	3.2	423	5.4	225	1.4	532	1.3
Dropped nucleus	110 0.2	0	0	1	0.6	3	0.5	3	0.4	42	0.5	33	0.2	81	0.2
Central corneal oedema	33 0.1	0	0	1	0.6	0	0	1	0.1	9	0.1	15	0.1	26	0.1
Suprachoroidal haemorrhage	10 0	0	0	0	0	0	0	0	0	4	0.1	5	0	8	0
Other	540 1.1	1	7.1	5	2.9	3	0.5	16	2	225	2.9	135	0.8	357	0.9

Number or percentage may be more than total or 100% as patient might have more than one intra-operative complication.

1.4.5. Intra-operative Complications by Surgeon Status

Table 1.4.5-1: Intra-operative Complications by Specialist (All Surgery), CSR 2007-2017

Year	2007	2008*	2009	2010	2011	2012	2013	2014	2015	2016	2017
N	n	n	n	n	n	n	n	n	n	n	n
Any intra-operative complication	1485 10.4	1144 6.8	1218 6.3	1248 5.2	1368 5.3	1323 4.8	1649 5.0	1758 4.9	1791 4.5	1866 4.1	2095 4.4
Type of complications:											
PCR	546 3.8	538 3.2	610 3.1	649 2.7	706 2.8	642 2.3	803 2.4	864 2.4	864 2.2	893 2.0	996 2.1
Zonular dehiscense	204 1.4	232 1.4	293 1.5	300 1.2	285 1.1	282 1.0	337 1.0	391 1.1	510 1.3	594 1.3	717 1.5
Vitreous loss	405 2.8	417 2.5	474 2.4	473 2.0	438 1.7	382 1.4	513 1.6	504 1.4	590 1.5	669 1.5	669 1.4
Dropped nucleus	20 0.1	24 0.1	30 0.2	33 0.1	49 0.2	43 0.2	52 0.2	71 0.2	77 0.2	59 0.1	92 0.2
Central corneal edema	50 0.4	19 0.1	13 0.1	19 0.1	33 0.1	23 0.1	20 0.1	29 0.1	14 0.0	22 0.0	29 0.1
Suprachoroidal hemorrhage	5 0.0	3 0.0	10 0.1	6 0.0	7 0.0	7 0.0	6 0.0	4 0.0	3 0.0	4 0.0	9 0.0
Others	261 1.8	279 1.7	289 1.5	254 1.0	347 1.4	371 1.3	499 1.5	466 1.3	468 1.2	439 1.0	484 1.0

Table 1.4.5-2: Intra-operative Complications by Gazeting Specialist (All Surgery), CSR 2007-2017

Year	2007	2008*	2009	2010	2011	2012	2013	2014	2015	2016	2017
N	1276	1399	2053	1405	2487	2411	2014	2034	2251	2282	3107
	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %
Any intra-operative complication	175 13.7	167 11.9	171 8.3	98 7.0	182 7.3	190 7.9	147 7.3	208 10.2	206 9.2	207 9.1	240 7.7
PCR	85 6.7	91 6.5	96 4.7	44 3.1	113 4.5	125 5.2	90 4.5	116 5.7	127 5.6	127 5.6	145 4.7
Vitreous loss	54 4.2	76 5.4	73 3.6	35 2.5	84 3.4	72 3.0	45 2.2	72 3.5	107 4.8	85 3.7	93 3.0
Zonular dehiscense	24 1.9	32 2.3	33 1.6	30 2.1	33 1.3	34 1.4	24 1.2	41 2.0	48 2.1	41 1.8	67 2.2
Dropped nucleus	0 0.0	3 0.2	3 0.1	2 0.1	4 0.2	8 0.3	6 0.3	5 0.2	9 0.4	9 0.4	16 0.5
Central corneal edema	5 0.4	5 0.4	7 0.3	3 0.2	0 0.0	2 0.1	2 0.1	5 0.2	1 0.0	3 0.1	3 0.1
Suprachoroidal hemorrhage	1 0.1	1 0.1	2 0.1	1 0.1	0 0.0	0 0.0	1 0.0	0 0.0	0 0.0	0 0.0	1 0.0
Others	37 2.9	37 2.9	28 1.4	27 1.9	27 1.1	31 1.3	32 1.6	49 2.4	42 1.9	56 2.5	35 1.1

Table 1.4.5-3: Intra-operative Complications by Medical Officer (All Surgery), CSR 2007-2017

Year	2007	2008*	2009	2010	2011	2012	2013	2014	2015	2016	2017
N	2690	2697	2750	2871	2478	2354	2244	2249	2558	3090	3340
	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %
Any intra-operative complication	330 12.3	264 9.8	242 8.8	263 9.2	202 8.2	189 8.0	199 8.9	189 8.4	220 8.6	254 8.2	310 9.3
Type of complications:											
PCR	126 4.7	148 5.5	139 5.1	147 5.1	116 4.7	103 4.4	124 5.5	117 5.2	150 5.9	158 5.1	178 5.3
Vitreous loss	105 3.9	105 3.9	92 3.3	131 4.6	89 3.6	75 3.2	86 3.8	82 3.6	92 3.6	100 3.2	124 3.7
Zonular dehiscense	43 1.6	46 1.7	45 1.6	47 1.6	43 1.7	43 1.8	30 1.3	35 1.6	41 1.6	60 1.9	71 2.1
Dropped nucleus	1 0.0	4 0.2	7 0.3	3 0.1	5 0.2	5 0.2	5 0.2	11 0.5	4 0.2	7 0.2	10 0.3
Central corneal edema	2 0.1	3 0.1	2 0.1	4 0.1	3 0.1	5 0.2	1 0.0	2 0.1	0 0.0	1 0.0	3 0.1
Suprachoroidal hemorrhage	3 0.1	4 0.2	1 0.0	2 0.1	1 0.0	1 0.0	1 0.0	0 0.0	1 0.0	0 0.0	1 0.0
Others	51 1.9	51 1.9	56 2.0	56 2.0	42 1.7	37 1.6	38 1.7	34 1.5	35 1.4	45 1.5	76 2.3

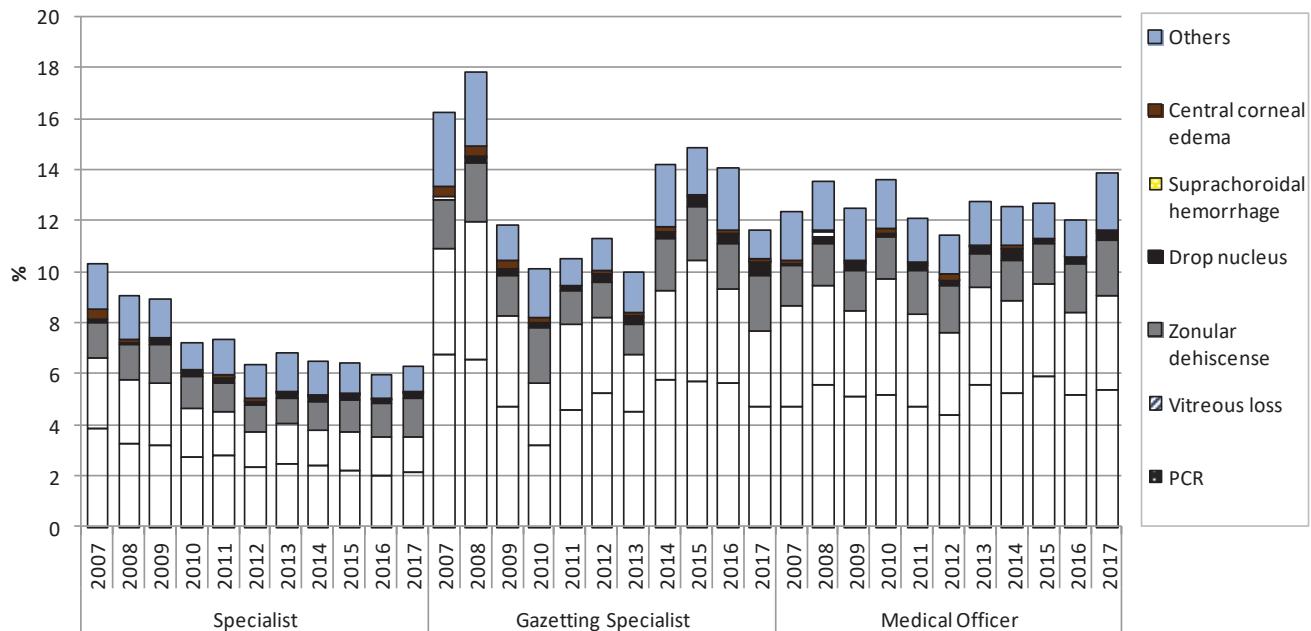


Figure 1.4.5-1: Percentage Distribution of Intra-operative Complications by Surgeon Status (All Surgery), CSR 2007-2017

Table 1.4.5-4: Intra-operative Complications by Specialist (Phaco), CSR 2009-2017

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	
	n	%	n	%	n	%	n	%	n	%
N	15206		19797		20963		23291		28774	
Type of complications:										
PCR	354	2.3	408	2.1	453	2.2	413	1.8	534	1.9
Zonular dehiscense	118	0.8	113	0.6	116	0.6	121	0.5	160	0.6
Vitreous loss	201	1.3	211	1.1	202	1.0	168	0.7	230	0.8
Dropped nucleus	24	0.2	26	0.1	37	0.2	29	0.1	42	0.1
Suprachoroidal hemorrhage	3	0.0	3	0.0	1	0.0	4	0.0	2	0.0
Central corneal edema	10	0.1	13	0.1	24	0.1	14	0.1	8	0.0
Others	153	1.0	136	0.7	195	0.9	201	0.9	284	1.0
Any intra-operative complication	627	4.1	680	3.4	780	3.7	755	3.2	977	3.4
PCR	60	4.2	23	2.5	67	3.6	72	3.9	54	3.2
Zonular dehiscense	14	1.0	13	1.5	15	1.0	16	1.0	18	1.0
Vitreous loss	20	1.4	22	2.6	21	1.4	23	1.4	25	1.4
Dropped nucleus	3	0.2	3	0.4	4	0.3	4	0.3	5	0.3
Suprachoroidal hemorrhage	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Central corneal edema	1	0.1	1	0.1	1	0.1	1	0.1	1	0.1
Others	13	0.9	12	1.5	13	0.9	14	0.9	15	0.9

Table 1.4.5-5: Intra-operative Complications by Gazeting Specialist (Phaco), CSR 2009-2017

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	
	n	%	n	%	n	%	n	%	n	%
N	1422		929		1845		1850		1694	
Type of complications:										
PCR	86	6.0	39	4.2	86	4.7	102	5.5	74	4.4
Zonular dehiscense	14	1.0	13	1.5	15	1.0	16	1.0	18	1.0
Vitreous loss	20	1.4	22	2.5	21	1.4	23	1.4	25	1.4
Dropped nucleus	3	0.2	3	0.4	4	0.3	4	0.3	5	0.3
Suprachoroidal hemorrhage	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Central corneal edema	1	0.1	1	0.1	1	0.1	1	0.1	1	0.1
Others	13	0.9	12	1.5	13	0.9	14	0.9	15	0.9

Vitreous loss	36	2.5	10	1.1	35	1.9	31	1.7	21	1.2	41	2.3	40	2.1	46	2.3	48	1.7
Zonular dehiscense	12	0.8	8	0.9	10	0.5	10	0.5	4	0.2	14	0.8	8	0.4	17	0.8	25	0.9
Dropped nucleus	2	0.1	2	0.2	1	0.1	7	0.4	4	0.2	4	0.2	7	0.4	5	0.2	12	0.4
Central corneal edema	3	0.2	2	0.2	0	0.0	2	0.1	1	0.1	3	0.2	1	0.1	2	0.1	3	0.1
Suprachoroidal hemorrhage	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Others	12	0.8	9	1.0	9	0.5	17	0.9	17	1.0	28	1.6	20	1.1	41	2.0	21	0.7

Table 1.4.5-6: Intra-operative Complications by Medical Officer (Phaco), CSR 2009-2017

Year	2009	2010		2011		2012		2013		2014		2015		2016		2017		
N	923	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
Any intra-operative complication	64	6.9	79	7.3	61	5.8	73	6.2	61	5.4	83	7.0	75	5.5	84	4.5	125	5.5
Type of complications:																		
PCR	47	5.1	58	5.4	48	4.6	53	4.5	45	4.0	65	5.5	59	4.3	68	3.7	89	3.9
Vitreous loss	27	2.9	41	3.8	33	3.1	27	2.3	28	2.5	35	2.9	22	1.6	30	1.6	41	1.8
Zonular dehiscense	7	0.8	12	1.1	4	0.4	13	1.1	9	0.8	10	0.8	9	0.7	13	0.7	10	0.4
Dropped nucleus	2	0.2	3	0.3	4	0.4	3	0.3	5	0.4	11	0.9	2	0.1	6	0.3	5	0.2
Central corneal edema	2	0.2	4	0.4	0	0.0	3	0.3	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
Suprachoroidal hemorrhage	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Others	12	1.3	8	0.7	9	0.9	5	0.4	4	0.4	7	0.6	8	0.6	6	0.3	28	1.2

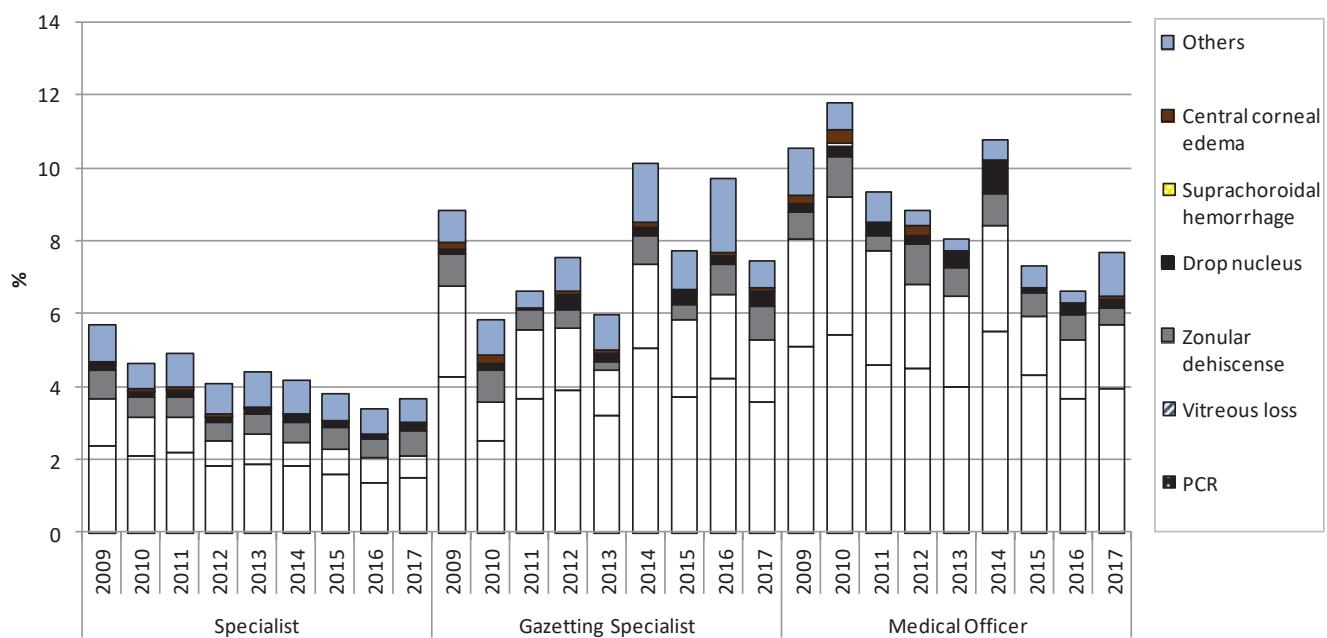


Figure 1.4.5-2: Percentage Distribution of Intra-operative Complications by Surgeon Status (Phaco), CSR 2007-2017

1.4.6. Posterior Capsular Rupture (PCR)

Table 1.4.6-1: PCR by SDP, CSR 2007-2017

Hospital	2007			2008			2009			2010			2011			2012			2013			2014			2015			2016								
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%						
Kemaman	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47	0	0.0	72	0	0.0	3	0	0.0	28	3	10.7	161	27	16.8				
Kuala Pilah	201	4	2	282	11	4	290	7	2.4	322	8	2.5	483	10	2.1	429	8	1.9	492	6	1.2	493	5	1.0	452	15	3.3	600	26	4.3	646	36	5.6			
Tawau	189	5	2.6	317	10	3	298	9	3.0	401	15	3.7	575	16	2.8	648	9	1.4	503	45	8.9	540	38	7.0	607	22	3.6	681	23	3.4	299	15	5.0			
KK-KKM Neg. Sembilan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	0	0.0	220	7	3.2	444	21	4.7		
Kuala Krai	125	2	1.6	170	7	4	175	4	2.3	217	3	1.4	240	11	4.6	247	12	4.9	397	14	3.5	365	27	7.4	389	16	4.1	344	8	2.3	347	16	4.6			
Queen Elizabeth KK	565	20	3.5	351	3	1	433	16	3.7	624	24	3.8	686	46	6.7	763	38	5.0	978	66	6.7	1040	56	5.4	1133	44	3.9	1397	66	4.7	1739	76	4.4			
KK-KKM Terengganu	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38	0	0.0	40	0	0.0	50	2	4.0	277	12	4.3				
KK-KKM Pahang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	64	2	3.1	-	-	-	187	7	3.7	119	3	2.5	294	12	4.1				
Kota Bharu	807	38	4.7	739	33	5	911	33	3.6	960	31	3.2	946	40	4.2	545	13	2.4	682	16	2.3	285	1	0.4	921	40	4.3	1113	50	4.5	1396	55	3.9			
Sandakan	0	0	0	137	3	2	158	3	1.9	208	13	6.3	271	8	3.0	265	4	1.5	411	15	3.6	237	4	1.7	499	5	1.0	414	9	2.2	513	19	3.7			
KK-KKM Sabah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	131	2	1.5	275	5	1.8	480	17	3.5			
Kuala Terengganu	525	34	6.5	726	35	5	743	35	4.7	714	28	3.9	770	34	4.4	765	20	2.6	1014	39	3.8	900	36	4.0	987	42	4.3	1321	54	4.1	1393	46	3.3			
Kuantan	25	1	4	395	20	5	293	5	1.7	615	5	0.8	680	20	2.9	684	7	1.0	619	11	1.8	576	21	3.6	1079	44	4.1	1225	36	2.9	1401	46	3.3			
Umum Sarawak	998	33	3.3	1011	38	4	893	38	4.3	1207	45	3.7	1131	35	3.1	1657	45	2.7	1721	32	1.9	2068	84	4.1	2019	63	3.1	1879	50	2.7	1822	58	3.2			
Ampang	33	0	0	208	3	1	433	14	3.2	627	32	5.1	708	27	3.8	896	40	4.5	983	31	3.2	946	37	3.9	880	45	5.1	750	32	4.3	1128	35	3.1			
Keningau	0	0	0	34	1	3	31	1	3.2	76	1	1.3	52	0	0.0	17	0	0.0	15	1	6.7	133	7	5.3	82	0	0.0	370	7	1.9	324	10	3.1			
Sibu	380	10	2.6	263	9	3	387	6	1.6	455	12	2.6	505	10	2.0	745	11	1.5	900	17	1.9	866	9	1.0	581	23	4.0	796	21	2.6	800	24	3.0			
Likas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	0	0.0	23	0	0.0	33	1	3.0			
KK-KKM Kelantan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	186	8	4.3	2	0	0.0	62	1	1.6	138	4	2.9
Teluk Intan	668	19	2.8	588	16	3	612	22	3.6	690	27	3.9	663	10	1.5	616	15	2.4	1102	20	1.8	1013	10	1.0	932	30	3.2	1327	34	2.6	1206	34	2.8			
Sungei Petani	497	23	4.6	633	14	2	684	9	1.3	558	8	1.4	811	35	4.3	845	19	2.2	930	23	2.5	1022	29	2.8	1006	27	2.7	1138	25	2.2	1375	39	2.8			
Kangar	318	8	2.5	400	3	1	399	11	2.8	400	13	3.3	403	15	3.7	454	13	2.9	466	22	4.7	426	24	5.6	576	31	5.4	652	24	3.7	743	20	2.7			
Sultanah Aminah JB	1520	28	1.8	1376	28	2	1318	57	4.3	1377	30	2.2	1127	29	2.6	1195	32	2.7	1350	42	3.1	1381	47	3.4	1643	47	2.9	1575	46	2.9	921	24	2.6			
Sultan Ismail	100	3	3	180	9	5	185	2	1.1	258	10	3.9	283	7	2.5	279	8	2.9	374	5	1.3	609	16	2.6	827	26	3.1	885	25	2.8	814	21	2.6			

Hospital	2007			2008			2009			2010			2011			2012			2013			2014			2015			2016								
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%						
Selayang	1400	47	3.4	1429	56	4	1418	42	3.0	1699	71	4.2	1859	100	5.4	1829	83	4.5	1337	51	3.8	899	38	4.2	1353	35	2.6	1287	31	2.4	1137	30	2.6			
Melaka	1518	87	5.7	1681	106	6	1387	84	6.1	1659	76	4.6	1642	61	3.7	1488	52	3.5	1719	83	4.8	2139	86	4.0	2389	72	3.0	2549	66	2.6	2394	60	2.5			
Batu Pahat	550	20	3.6	573	14	2	602	26	4.3	411	15	3.6	554	30	5.4	608	42	6.9	433	22	5.1	467	22	4.7	561	15	2.7	666	11	1.7	649	16	2.5			
Pusat Perubatan UKM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1182	30	2.5					
Sungai Buloh	165	9	5.5	319	14	4	387	19	4.9	468	22	4.7	450	13	2.9	514	14	2.7	580	22	3.8	693	11	1.6	774	12	1.6	818	16	2.0	731	17	2.3			
Kuala Lumpur	0	0	0	40	3	8	1405	35	2.5	1648	46	2.8	1622	19	1.2	1516	24	1.6	1150	15	1.3	1932	39	2.0	1609	18	1.1	1556	24	1.5	1464	33	2.3			
KK-KKM Kedah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	209	2	1.0	339	5	1.5	352	8	2.3
KK-KKM Pulau Pinang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	84	2	2.4	90	2	2.2			
Putrajaya	199	8	4	256	8	3	251	9	3.6	282	8	2.8	329	11	3.3	355	4	1.1	391	10	2.6	367	9	2.5	463	17	3.7	429	8	1.9	498	11	2.2			
Pulau Pinang	1102	92	8.3	1357	77	6	1374	46	3.3	1876	62	3.3	2186	42	1.9	1330	26	2.0	1696	46	2.7	1791	27	1.5	2240	35	1.6	2591	46	1.8	1649	36	2.2			
Sri Manjung	152	10	6.6	350	11	3	327	7	2.1	387	6	1.6	420	10	2.4	466	9	1.9	832	17	2.0	625	17	2.7	666	13	2.0	684	19	2.8	868	18	2.1			
Alor Setar	652	10	1.5	986	29	3	1110	22	2.0	1527	25	1.6	1939	46	2.4	1835	46	2.5	1758	48	2.7	2106	53	2.5	2336	50	2.1	2616	37	1.4	2563	53	2.1			
Ipoh	1556	77	4.9	1723	59	3	2137	48	2.2	2199	32	1.5	1826	56	3.1	2932	65	2.2	3032	88	2.9	2759	62	2.2	2547	87	3.4	3123	68	2.2	3466	71	2.0			
KK-KKM Sarawak	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	76	0	0.0	831	20	2.4	1131	36	3.2	917	18	2.0	885	18	2.0			
Miri	18	2	11	396	7	2	404	5	1.2	577	8	1.4	657	4	0.6	901	1	0.1	915	1	0.1	949	5	0.5	903	10	1.1	1045	13	1.2	1184	24	2.0			
Klang	1040	40	3.8	1217	34	3	904	27	3.0	1007	26	2.6	1061	20	1.9	1411	6	0.4	1612	12	0.7	1461	13	0.9	1978	39	2.0	2227	67	3.0	2321	43	1.9			
Serdang	697	43	6.2	696	36	5	598	32	5.4	520	17	3.3	666	28	4.2	709	20	2.8	1023	43	4.2	1265	51	4.0	982	17	1.7	536	11	2.1	882	17	1.9			
Temerloh	443	27	6.1	531	28	5	640	28	4.4	450	10	2.2	681	31	4.6	868	21	2.4	866	15	1.7	1047	18	1.7	851	15	1.8	1009	22	2.2	927	17	1.8			
Seremban	954	40	4.2	898	40	5	1229	79	6.4	1519	48	3.2	1605	34	2.1	1559	67	4.3	1520	46	3.0	1585	41	2.6	1726	39	2.3	1832	38	2.1	1942	34	1.8			
Bukit Mertajam	697	18	2.6	487	8	2	743	16	2.2	804	22	2.7	803	26	3.2	928	31	3.3	909	21	2.3	998	24	2.4	1265	14	1.1	1379	19	1.4	1426	25	1.8			
Kluang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	227	3	1.3					
MAIWP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1583	2	0.1	2266	29	1.3	1824	28	1.5	2900	30	1.0	3507	43	1.2			
Kulim	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	265	3	1.1	418	8	1.9	569	4	0.7	609	7	1.1						
Muar	349	4	1.1	338	14	4	542	29	5.4	617	15	2.4	692	20	2.9	665	26	3.9	717	42	5.9	729	48	6.6	928	26	2.8	1085	18	1.7	1039	9	0.9			
Sarikei	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	286	7	2.4	555	9	1.6	647	4	0.6	694	6	0.9	431	4	0.9			
Bintulu	0	0	0	30	1	3	124	10	8.1	258	7	2.7	332	8	2.4	391	7	1.8	383	1	0.3	374	0	0.0	350	5	1.4	197	9	4.6	261	2	0.8			
Segamat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	121	5	4.1	398	3	0.8			
Taiping	278	7	2.5	379	10	3	612	22	3.6	889	19	2.1	953	24	2.5	1118	32	2.9	1284	18	1.4	1233	16	1.3	1320	19	1.4	1575	23	1.5	1765	15	0.8			

Hospital	2007			2008			2009			2010			2011			2012			2013			2014			2015			2016			2017		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%			
Shah Alam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	353	6	1.7	668	4	0.6				
KK-KKM Johor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	93	0	0.0	33	0	0.0				
Langkawi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	0	0.0	89	4	4.5	-	-	-				
Tanah Merah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	0	0.0	18	0	0.0	-	-	-				

Table 1.4.6-2: PCR by Surgeon Status and SDP (Phacoemulsification), CSR 2017
 (N= total no. of phacoemulsification; n= no. of PCR cases during phacoemulsification)

Hospital	2017 Phaco			By surgeon status:								
				Specialist			Gazetting Specialist			Medical Officer		
	N	n	%	N	n	%	N	n	%	N	n	%
Kemaman	116	11	9.5	116	11	9.5	0	0	0.0	0	0	0.0
Kuala Pilah	616	26	4.2	456	17	3.7	158	9	5.7	2	0	0.0
KK-KKM Kelantan	105	4	3.8	102	4	3.9	3	0	0.0	0	0	0.0
Tawau	255	9	3.5	255	9	3.5	0	0	0.0	0	0	0.0
Queen Elizabeth KK	1531	54	3.5	1269	33	2.6	227	19	8.4	35	2	5.7
KK-KKM Terengganu	247	8	3.2	237	7	3.0	7	1	14.3	3	0	0.0
KK-KKM Neg. Sembilan	416	13	3.1	377	11	2.9	39	2	5.1	0	0	0.0
Kota Bharu	1084	32	3.0	990	25	2.5	66	3	4.5	28	4	14.3
Umum Sarawak	1752	50	2.9	1460	40	2.7	246	9	3.7	46	1	2.2
Kuala Krai	253	7	2.8	249	7	2.8	3	0	0.0	1	0	0.0
Sibu	740	20	2.7	729	20	2.7	0	0	0.0	11	0	0.0
KK-KKM Pahang	274	7	2.6	263	5	1.9	0	0	0.0	11	2	18.2
KK-KKM Kedah	311	7	2.3	295	6	2.0	15	1	6.7	1	0	0.0
Selayang	1048	24	2.3	858	16	1.9	77	3	3.9	113	5	4.4
Sandakan	432	10	2.3	338	3	0.9	80	4	5.0	14	3	21.4
Keningau	309	7	2.3	0	0	0.0	3	0	0.0	306	7	2.3
Kuantan	1157	25	2.2	1038	18	1.7	26	0	0.0	93	7	7.5
Batu Pahat	584	12	2.1	483	11	2.3	101	1	1.0	0	0	0.0
Kangar	615	13	2.1	423	9	2.1	190	3	1.6	2	1	50.0
Sri Manjung	844	17	2.0	718	14	1.9	126	3	2.4	0	0	0.0
KK-KKM Sabah	450	9	2.0	426	8	1.9	12	0	0.0	12	1	8.3
Kuala Lumpur	1329	26	2.0	1279	23	1.8	13	0	0.0	37	3	8.1
Melaka	2253	43	1.9	1899	29	1.5	214	7	3.3	140	7	5.0
Sungei Petani	1265	24	1.9	1021	10	1.0	174	10	5.7	70	4	5.7
Pulau Pinang	1589	29	1.8	1566	29	1.9	22	0	0.0	1	0	0.0
KK-KKM Sarawak	865	15	1.7	835	14	1.7	30	1	3.3	0	0	0.0
Ipoh	3281	56	1.7	3062	52	1.7	23	0	0.0	196	4	2.0
Pusat Perubatan UKM	1074	18	1.7	765	12	1.6	3	0	0.0	306	6	2.0
Alor Setar	2236	37	1.7	2125	30	1.4	57	2	3.5	54	5	9.3
Kuala Terengganu	1163	20	1.7	1070	14	1.3	62	5	8.1	31	1	3.2
Miri	1087	17	1.6	1024	15	1.5	13	0	0.0	50	2	4.0
Ampang	961	14	1.5	772	5	0.6	5	0	0.0	184	9	4.9
Temerloh	855	12	1.4	792	10	1.3	63	2	3.2	0	0	0.0
Sultanah Aminah JB	834	12	1.4	674	9	1.3	123	3	2.4	37	0	0.0
Klang	2192	29	1.3	2136	27	1.3	52	2	3.8	4	0	0.0
Seremban	1755	22	1.3	1301	16	1.2	136	1	0.7	318	5	1.6
Teluk Intan	1071	14	1.3	979	11	1.1	92	3	3.3	0	0	0.0
Sultan Ismail	761	10	1.3	626	7	1.1	135	3	2.2	0	0	0.0
Sungai Buloh	681	8	1.2	677	8	1.2	0	0	0.0	4	0	0.0
KK-KKM Pulau Pinang	88	1	1.1	88	1	1.1	0	0	0.0	0	0	0.0
Serdang	825	9	1.1	761	7	0.9	51	1	2.0	13	1	7.7
Bukit Mertajam	1368	13	1.0	1295	10	0.8	63	1	1.6	10	2	20.0
MAIWP	3419	32	0.9	3110	23	0.7	8	0	0.0	150	7	4.7
Segamat	380	3	0.8	380	3	0.8	0	0	0.0	0	0	0.0
Putrajaya	416	3	0.7	414	3	0.7	2	0	0.0	0	0	0.0
Muar	970	5	0.5	883	4	0.5	87	1	1.1	0	0	0.0

Kluang	211	1	0.5	211	1	0.5	0	0	0.0	0	0	0.0
Sarikei	425	2	0.5	425	2	0.5	0	0	0.0	0	0	0.0
Shah Alam	651	3	0.5	651	3	0.5	0	0	0.0	0	0	0.0
Kulim	557	2	0.4	557	2	0.4	0	0	0.0	0	0	0.0
Taiping	1562	5	0.3	1562	5	0.3	0	0	0.0	0	0	0.0
Bintulu	246	0	0.0	246	0	0.0	0	0	0.0	0	0	0.0
KK-KKM Johor	33	0	0.0	33	0	0.0	0	0	0.0	0	0	0.0
Likas	1	0	0.0	1	0	0.0	0	0	0.0	0	0	0.0

* Total number of phacoemulsification (N) and total no. of phaco by surgeon status does not tally as surgeon status is missing in some CSR entries.

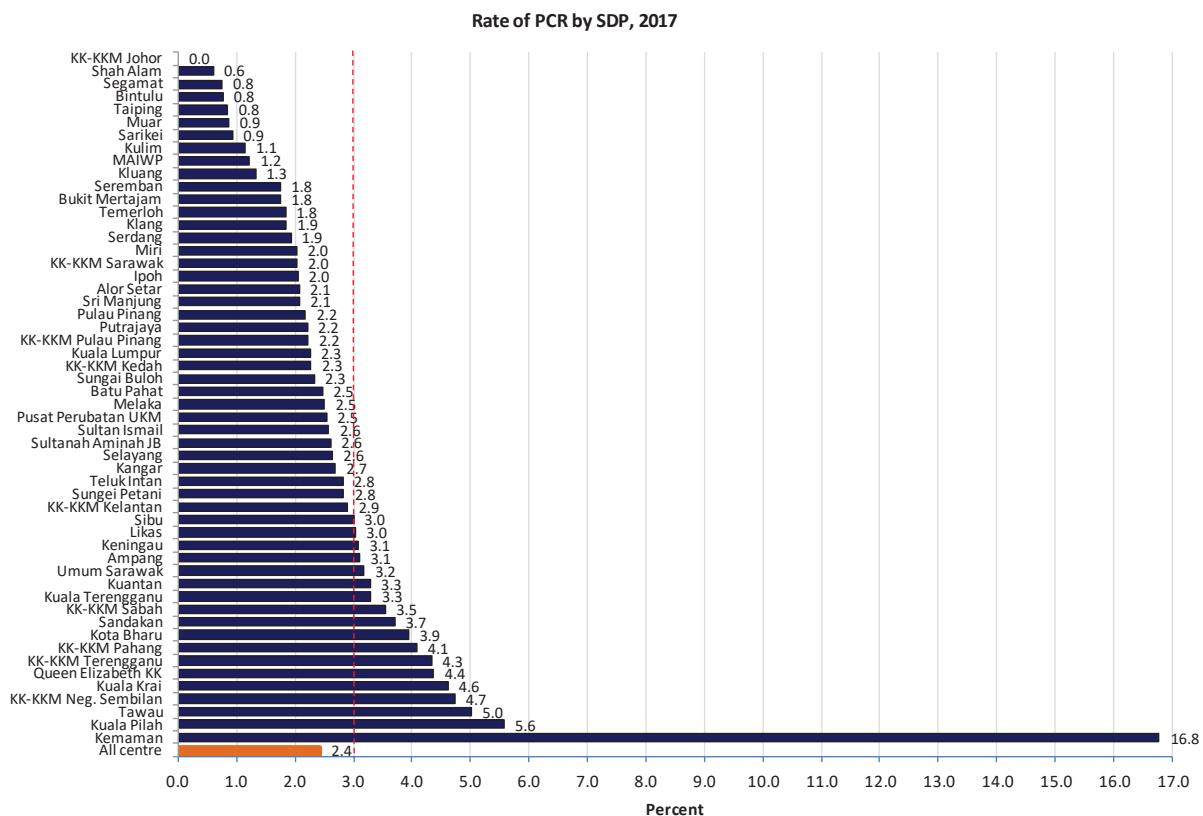


Figure 1.4.6-1: PCR by SDP, Bar Chart (All Surgery), CSR 2017

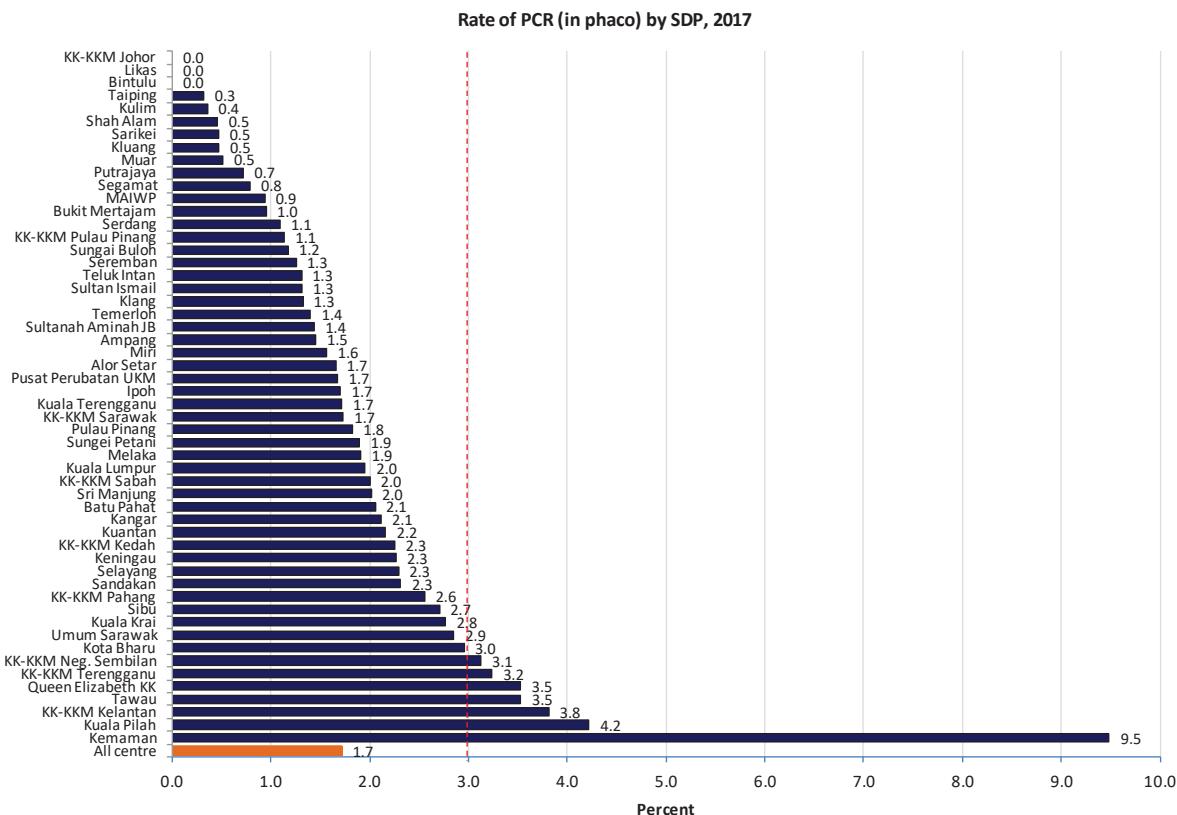


Figure 1.4.6-2: PCR by SDP, Bar Chart (Phacoemulsification), CSR 2017

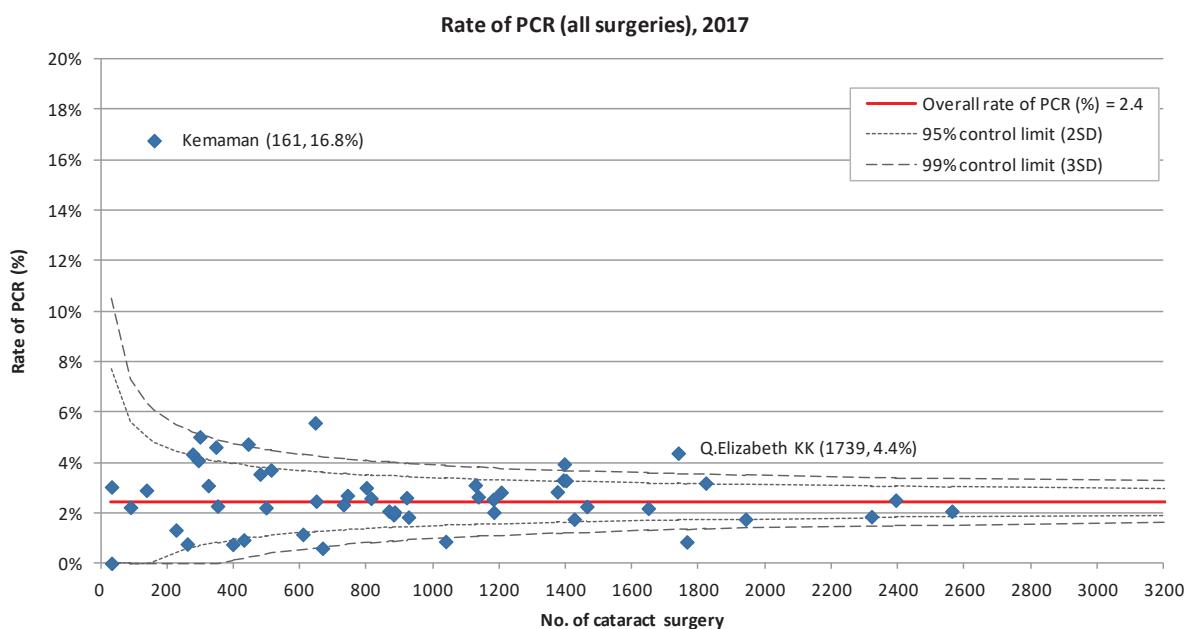


Figure 1.4.6-3: PCR by SDP, Funnel Plot (All Surgery), CSR 2017

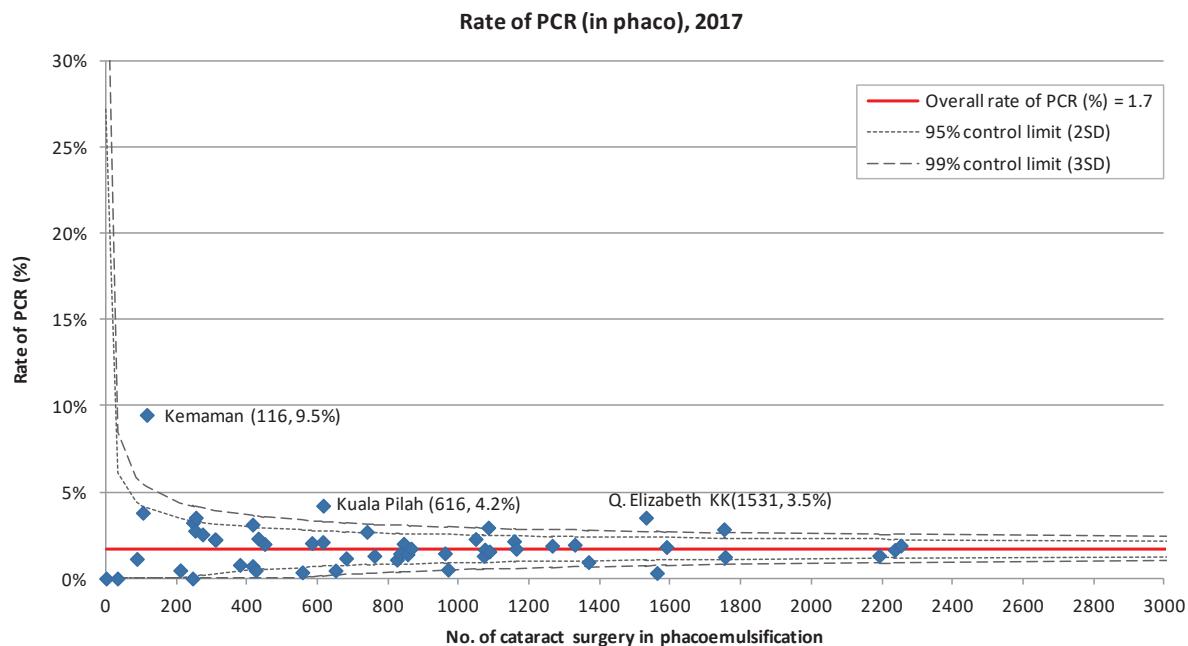


Figure 1.4.6-4: PCR by SDP, Funnel Plot (Phacoemulsification), CSR 2017

1.4.7. Posterior Capsular Rupture (PCR) by Type of Cataract Surgery

Table 1.4.7-1: PCR by Type of Cataract Surgery, CSR 2007-2017

Year	2007			2008			2009			2010			2011			2012		
No. of patients	18380			21496			24438			28506			30611			32473		
	Total PCR			764			790			858			840			936		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
Phaco	11960	393	3.3	14781	432	2.9	17717	471	2.7	21810	489	2.2	23872	568	2.4	26345	538	2.0
Lens Aspiration	323	18	5.6	340	17	5.0	400	22	5.5	451	20	4.4	460	11	2.4	444	13	2.9
ICCE	141	15	10.6	129	7	5.4	134	8	6.0	143	9	6.3	123	6	4.9	136	6	4.4
ECCE	5524	239	4.3	5627	210	3.7	5457	216	4.0	5363	195	3.6	5291	181	3.4	4784	145	3.0
Phaco converted to ECCE	432	99	22.9	524	124	23.7	573	135	23.6	586	119	20.3	652	162	24.8	621	161	25.9

Year	2013			2014			2015			2016			2017		
No. of patients	37150			40532			44564			50625			54242		
	Total PCR			1017			1100			1145			1183		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
Phaco	31625	633	2.0	35429	731	2.1	39131	690	1.8	45346	709	1.6	49543	850	1.7
Lens Aspiration	364	12	3.3	370	10	2.7	521	21	4.0	527	17	3.2	572	27	4.7
ICCE	173	8	4.6	176	9	5.1	223	21	9.4	275	37	13.5	284	25	8.8
ECCE	4086	160	3.9	3613	133	3.7	3677	173	4.7	3439	173	5.0	3656	402	11.0
Phaco converted to ECCE	769	196	25.5	805	205	25.5	833	228	27.4	870	235	27.0	-	-	-
SICS	-	-	-	-	-	-	-	-	-	-	-	-	2	0	0.0

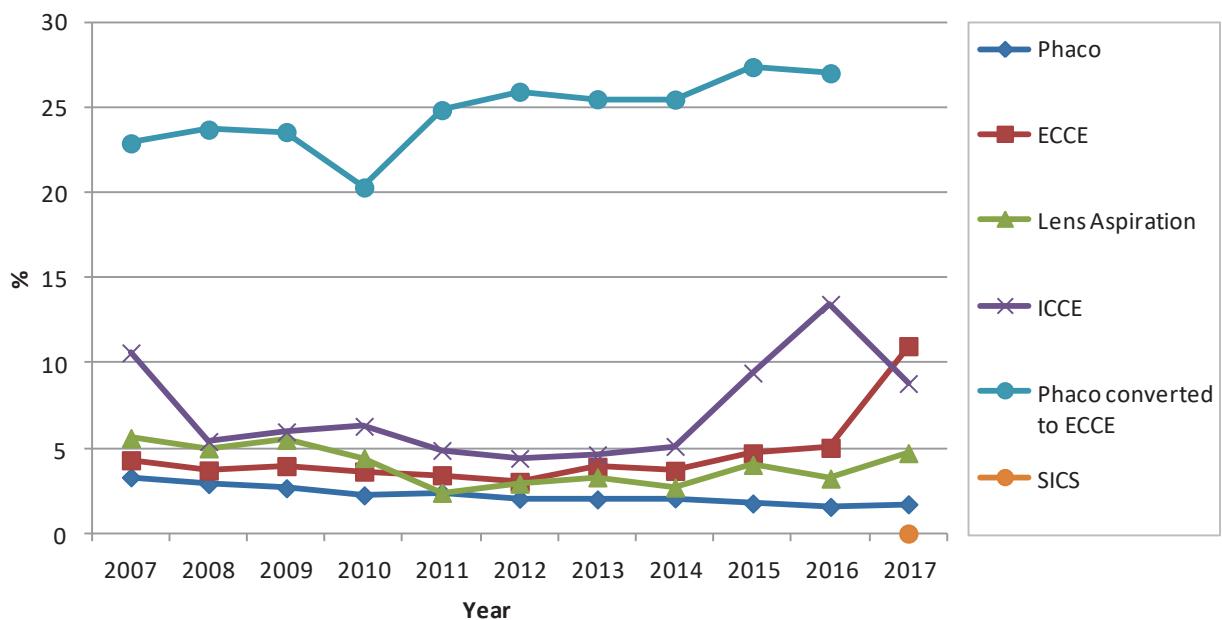


Figure 1.4.7-1: PCR by Type of Cataract Surgery, CSR 2007-2017

1.5. Cataract Surgery Outcome

1.5.1. Post-operative Complications Record and Ascertainment

Table 1.5.1-1: Distribution of Cataract Surgery with Post-operative Complication Record, CSR 2007-2017

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total number of cataract surgery registered to CSR	18426	21496	24438	28506	30611	32473	37150	40532	44534	50625	54242
Cataract surgery with post-operative complication record	15430	19274	18621	24293	28746	30011	33596	36138	40088	46011	50672
Ascertainment on post-operative complication (%)	83.7	89.7	76.2	85.2	93.9	92.4	90.4	89.2	90.0	90.9	93.4
Cataract surgery with visual outcome record	15786	19048	20590	24522	27219	28589	33067	36257	39077	44788	48090
Ascertainment on visual outcome (%)	85.7	88.6	84.3	86.0	88.9	88.0	89.0	89.5	87.7	88.5	88.7

1.5.2. Post-operative Infectious Endophthalmitis

Table 1.5.2-1: Post-operative Infectious Endophthalmitis, CSR 2007-2017

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Eyes with post-operative complication records (N)	15430	19274	18621	24293	28746	30011	33596	36138	40088	46011	50672
Eyes with post-operative infectious endophthalmitis (n)	29	22	19	24	11	13	27	19	21	16	20
Percentage of eyes with post-operative endophthalmitis (%)	0.19	0.11	0.10	0.10	0.04	0.04	0.08	0.05	0.05	0.03	0.04

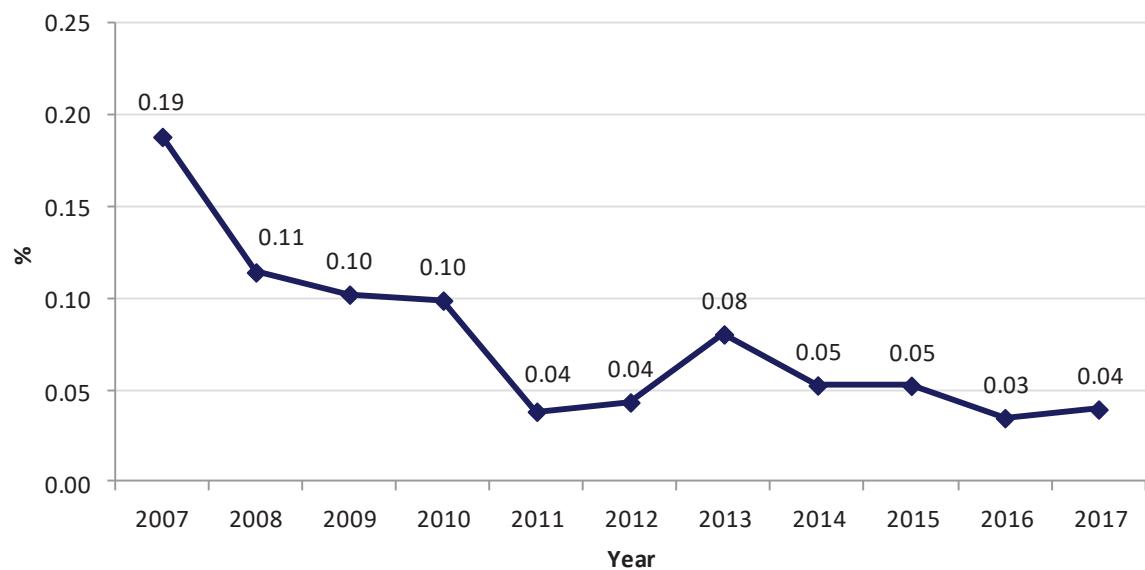


Figure 1.5.2-1: Percentage of Post-operative Infectious Endophthalmitis, CSR 2007-2017

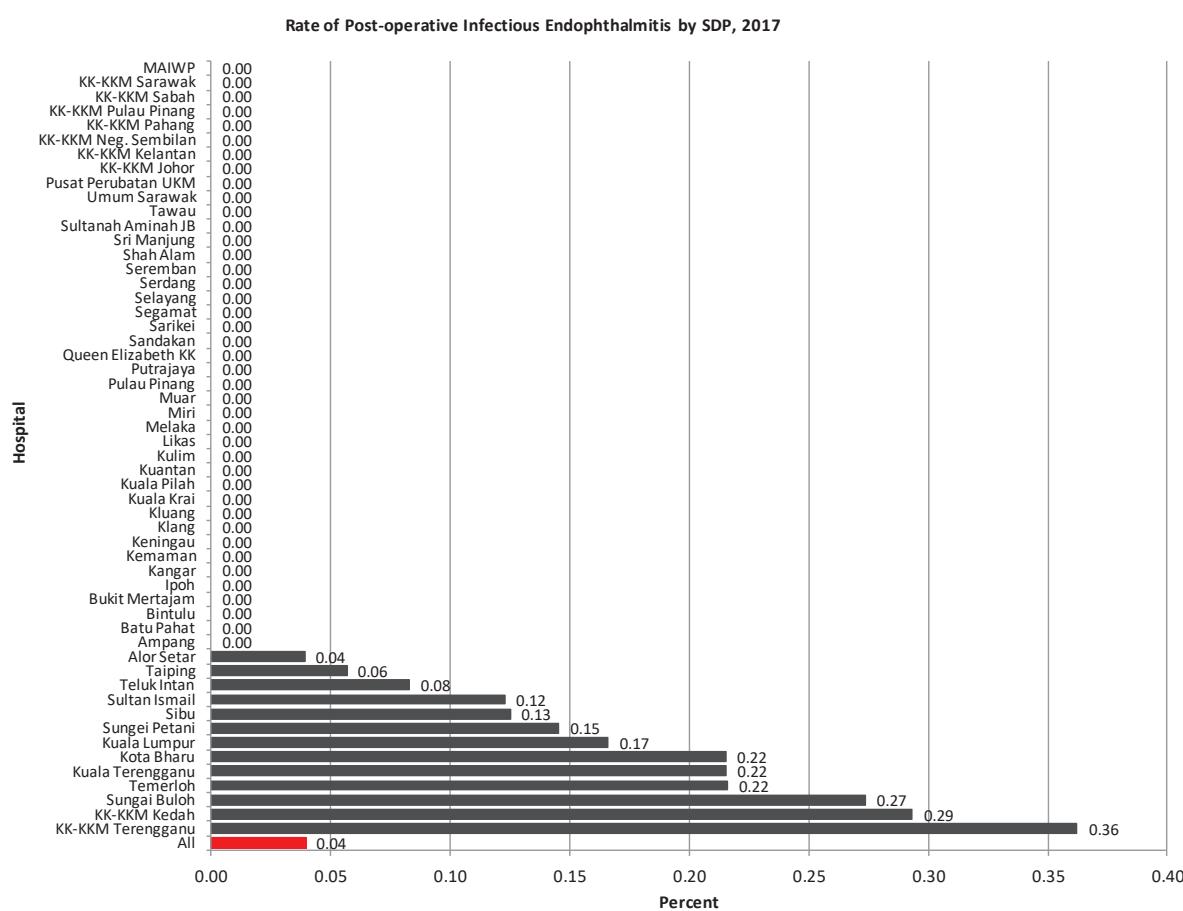


Figure 1.5.2-2: Percentage of Post-operative Infectious Endophthalmitis in Bar Chart, CSR 2017

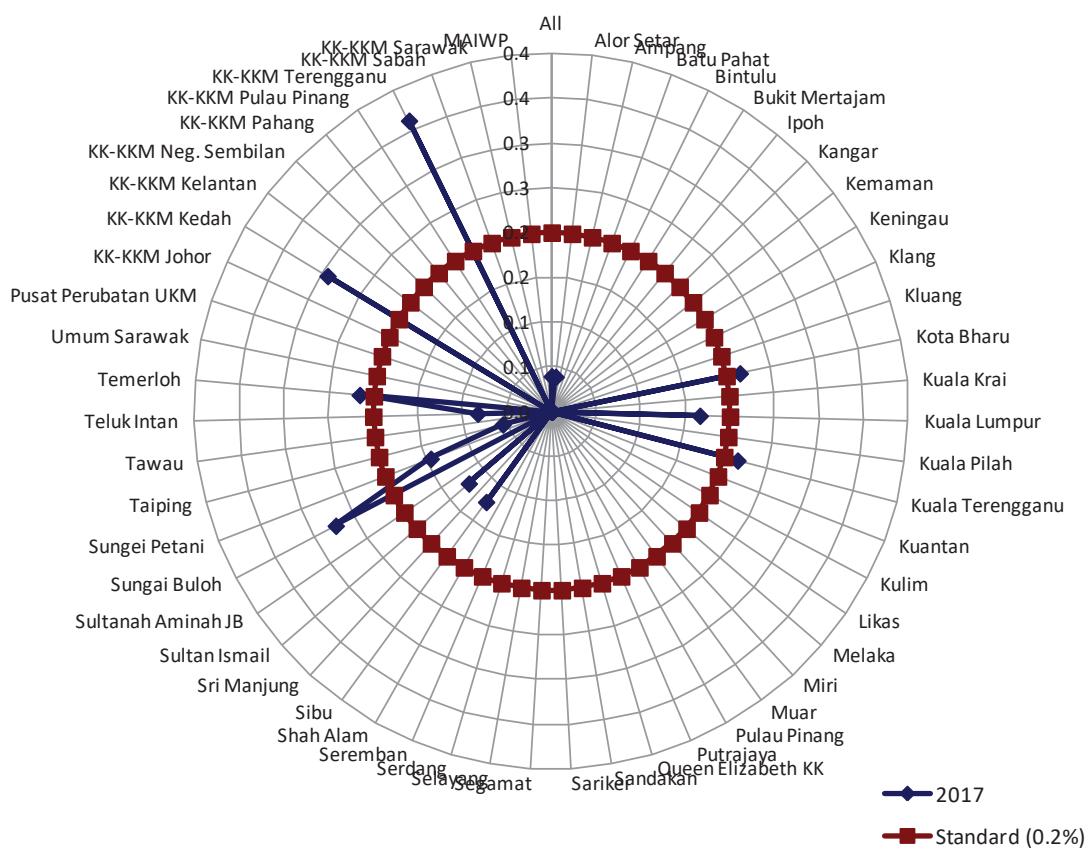


Figure 1.5.2-3: Percentage of Post-operative Infectious Endophthalmitis in Radar Chart, CSR 2017

Table 1.5.2-2: Time from Surgery to Diagnosis, CSR 2007-2016

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Number of patients with post-operative infective endophthalmitis	29	22	19	24	11	13	27	19	21	16	20
Time from surgery to diagnosis of infection (day)											
Minimum, maximum	1, 376	1, 76	1, 103	0, 141	0, 391	2, 59	1, 162	2, 90	1, 367	2, 79	0, 108
Median	14.5	12	9	8	6	13	7	7	5	17	11.5
25 th percentile–75 th percentile	7–36	3–31.5	2–21	3–35	3–14	5.5–29.5	3–20	4–28	3–22	9–46.5	2–44.5
Distribution of patients											
Number of Patients											
Less than 3 days	2	5	5	4	2	1	6	2	5	1	6
3–5 days	4	1	1	5	3	2	4	5	6	0	1
6–14 days	8	5	5	4	4	4	8	4	4	7	5
More than 14 days	14	9	7	10	2	5	8	8	6	8	8
Missing	1	2	1	1	0	1	1	0	0	0	0

1.5.3. Unplanned Return to Operating Theatre (OT)

Table 1.5.3-1: Unplanned Return to OT, CSR 2007-2017

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Patients with outcome records (N)	15430	19274	18621	24293	28746	30011	33596	36138	40088	46011	50672
	n	%	n	%	n	%	n	%	n	%	n
	87	0.56	88	0.46	116	0.62	123	0.51	122	0.42	103
	105	0.34	105	0.31	97	0.27	137	0.34	109	0.24	157
	157	0.31									

Table 1.5.3-2: Reasons for Unplanned Return to OT, CSR 2007-2017

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Patients with unplanned return to OT	87	88	116	123	122	103	105	97	137	109	157	
	n	%	n	%	n	%	n	%	n	%	n	%
IOL related	10	11.5	14	15.9	15	12.9	22	17.9	18	14.8	18	17.5
Wound dehiscence	13	14.9	7	8.0	22	19.0	20	16.3	18	14.8	19	18.4
Iris prolapse	20	23.0	12	13.6	18	15.5	20	16.3	24	19.7	11	10.7
Infective endophthalmitis	12	13.8	6	6.8	6	5.2	9	7.3	2	1.6	5	4.8
High IOP	5	5.7	2	2.3	9	7.8	3	2.4	4	3.3	6	5.8
Others	38	43.7	48	54.5	53	45.7	56	45.5	68	55.7	52	50.5
	55	52.4	53	54.6	92	67.2	73	67.0	103	65.6		

Total percentage may be more than 100% as patient might have multiple reasons for unplanned return to OT.

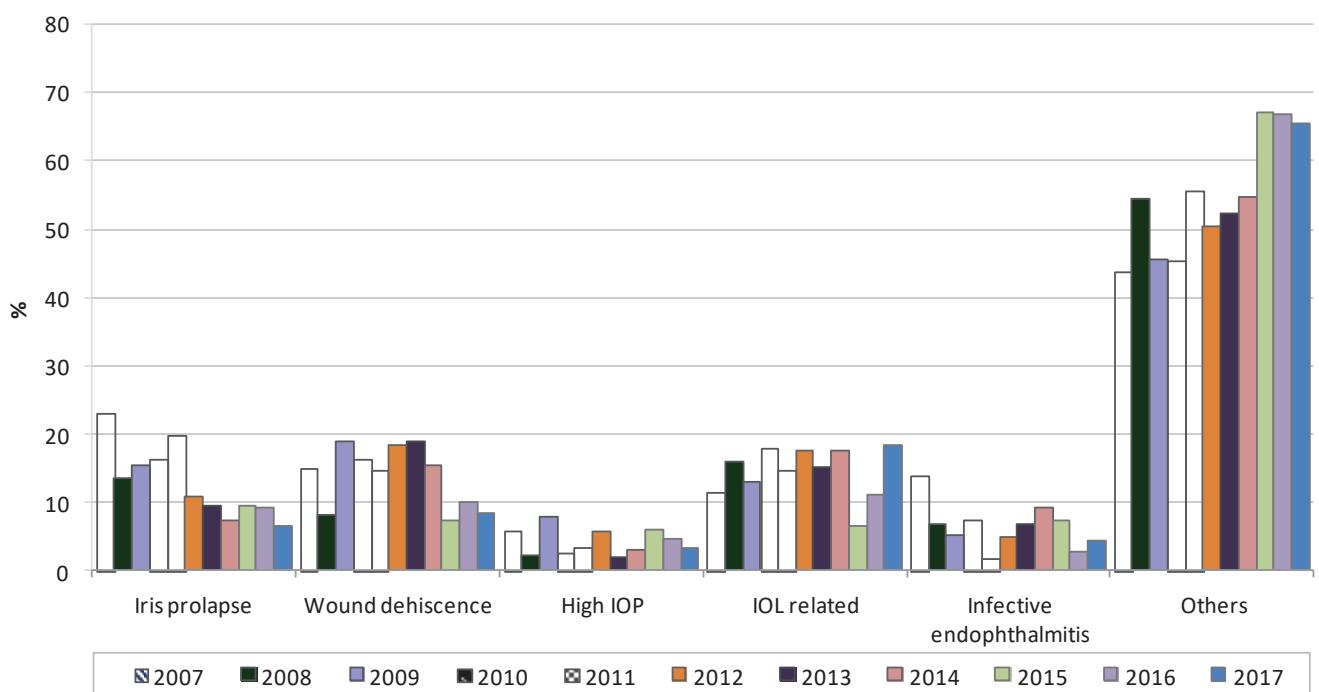


Figure 1.5.3-1: Reasons for Unplanned Return to Operating Theatre, CSR 2007-2017

Table 1.5.3-3: Time from Surgery to Unplanned Return to OT, CSR 2017

Post-operative period (day)	N	n	Median	25 th percentile–75 th percentile	Minimum, maximum
Iris prolapse	10	8	16	4.5–32.5	1, 43
Infective endophthalmitis	7	7	13	3–42	2, 49
IOL related	29	29	7	1–26	0, 47
High IOP	5	5	6	2–7	2, 43
Wound dehiscence	13	13	2	1–2	1, 42
Others	103	95	6	2–12	0, 106

n = No. of available information.

1.5.4. Post-operative Follow-up Period

Table 1.5.4-1: Median Follow-up Period by Types of Cataract Surgery (Eyes with Unaided Vision in Weeks), CSR 2017

Types of surgery	N	n	Median	25 th percentile	75 th percentile	Minimum	Maximum
All surgeries	48090	48084	7	5	9	0	60
ECCE	3160	3160	9	6	11	1	60
Phaco	44132	44126	7	5	9	0	59
Lens aspiration	420	420	7	5	9	1	12
ICCE	226	226	7	5	11	1	37
SICS	2	2	5.5	1	10	1	10

n = No. of available information.

Table 1.5.4-2: Median Follow-up Period by Types of Cataract Surgery (Eyes with Refracted Vision) in Weeks, CSR 2017

Types of surgery	N	n	Median	25 th percentile	75 th percentile	Minimum	Maximum
All surgeries	44943	44941	7	6	9	0	60
SICS	1	1	10	10	10	10	10
ECCE	2908	2908	9	7	11	1	60
ICCE	190	190	7.5	5	11	1	37
Phaco	41347	41345	7	6	9	0	59
Lens aspiration	378	378	7	5	10	1	23

n = No. of available information.

1.5.5. Post-operative Visual Acuity (All Eyes)

Table 1.5.5-1: Post-operative Visual Acuity (All Eyes), CSR 2007-2017

Year	2007 (N=18426)		2008 (N=21496)		2009 (N=24438)		2010 (N=28506)		2011 (N=30611)		2012 (N=32473)			
	VA		Unaide d	Refract ed										
		n	%	n	%	n	%	n	%	n	%	n	%	
6/5	3	0.0	35	0.2	9	0.0	51	0.3	10	0.0	46	0.2	12	0.0
6/6	878	5.6	440	30.	112	5.9	607	35.	110	5.3	655	34.	156	6.4
6/9	280	17.	496	34.	304	15.	571	33.	364	17.	655	34.	452	18.
6/12	6	8	1	3	0	9	4	1	9	7	0	7	3	4
	271	17.	210	14.	335	17.	257	14.	383	18.	276	14.	505	20.
	7	2	0	6	1	6	7	9	7	6	2	6	4	6
	640	40.	115	79.	752	39.	144	83.	859	41.	159	84.	111	45.
	4	6	4	6	6	4	14	5	6	7	13	3	57	5
	≤6/12		05	6	14	5	13	3	57	5	82	0	123	45.
											30	3	211	85.
											10	4	48	0
												11	5	
	6/18		289	18.	105	7.3	379	19.	101	5.9	405	19.	105	5.6
	3	3	5	7.3	2	9	2	9	2	7	0	7	3	1
	<6/12–		289	18.	105	7.3	379	19.	101	5.9	405	19.	105	5.6
	6/18		3	3	5	7.3	2	9	2	7	0	7	3	1
	6/24		231	14.	573	4.0	297	15.	607	3.5	295	14.	616	3.3
	5	7	7	8	6	8	4	6	8	4	8	4	323	13.
	6/36		168	10.	444	3.1	201	10.	421	2.4	209	10.	416	2.2
	7	7	7	8	6	8	6	5	2	5	2	1	221	9.0
	6/60		112	7.1	266	1.9	130	6.8	261	1.5	132	6.4	276	1.5
	6	6	0	6	0	6	8	3	3	6	4	1	145	5.9
	<6/18–		512	32.	128	9.0	629	33.	128	7.4	637	31.	130	7.0
	6/60		8	5	3	3	6	0	6	0	8	8	689	28.
												9	1	
												151	6.7	
												777	28.	
												5	6	
												162	6.6	
												790	27.	
												9	7	
												163	6.4	
	5/60		92	0.6	23	0.2	116	0.6	37	0.2	93	0.5	27	0.1
	4/60		87	0.6	35	0.2	97	0.5	30	0.2	103	0.5	31	0.2
	3/60		207	1.3	80	0.6	266	1.4	112	0.6	331	1.6	118	0.6
											378	1.5	151	0.7
	<6/60–		386	2.5	138	1.0	479	2.5	179	1.0	527	2.6	176	0.9
	3/60		2.5	1.0	2.5	1.0	2.6	0.9	0.9	0.8	0.9	0.9	609	2.5
													219	1.0
													655	2.4
													215	0.9
													718	2.5
													232	0.9
	2/60		158	1.0	73	0.5	186	1.0	70	0.4	199	1.0	77	0.4
	1/60		155	1.0	76	0.5	159	0.8	60	0.3	168	0.8	66	0.3
	CF		300	1.9	121	0.8	295	1.5	85	0.5	315	1.5	127	0.7
	HM		253	1.6	149	1.0	230	1.2	84	0.5	269	1.3	126	0.7
	PL		75	0.5	46	0.3	53	0.3	22	0.1	58	0.3	31	0.2
	NPL		34	0.2	0	0.0	32	0.2	0	0.0	30	0.1	12	0.1
													35	0.1
													18	0.1
													42	0.2
													18	0.1
													38	0.1
													17	0.1
	<3/60		975	6.2	465	3.1	955	5.0	321	1.8	103	5.0	439	2.3
													113	4.6
													0	2.4
	TOTAL		157	86	100	144	46	100	190	48	172	15	100	205
													90	100
													125	4.6
													79	2.2
													272	19
													100	247
													0	10
													89	0
													285	10
													05	100
													122	4.3
													9	1.9
													497	

WHO Classification:

Good:	929	58.	125	86.	113	59.	154	89.	126	61.	169	89.	158	64.	203	90.	175	64.	223	90.	187	65.
≥6/18	7	9	60	9	18	4	26	6	48	4	63	8	84	8	13	0	39	4	28	4	33	5
Borderline:	512	32.	128	8.9	629	33.	128	7.5	637	31.	130	6.9	689	28.	151	6.7	777	28.	162	6.6	790	27.
<6/18–	8	5	3	3	6	1	9	7.5	6	0	8	8	9	1	3	3	5	6	9	7	9	7
6/60	136	8.6	603	4.2	143	7.5	500	2.9	156	7.6	615	3.3	173	7.1	753	3.3	190	7.0	750	3.0	194	6.8
Poor:	1																					
<6/60																						

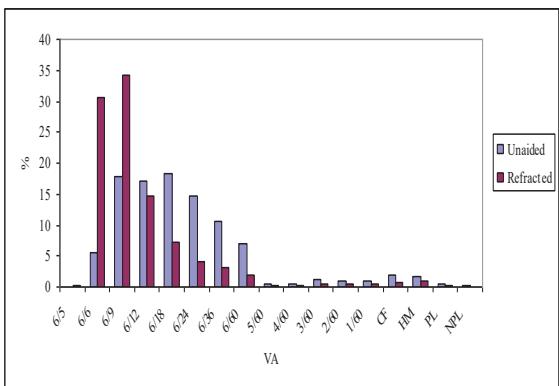
Year	2013 (N=37150)		2014 (N=40532)		2015 (N=44534)		2016 (N=50625)		2017 (N=54242)			
	VA	Unaide d	Refract ed	VA	Unaide d	Refract ed	VA	Unaide d	Refract ed	VA	Unaide d	Refract ed
	n	%	n	%	n	%	n	%	n	%	n	%
6/5	20	0.1	104	0.3	25	0.1	123	0.4	23	0.1	87	0.2
6/6	266	8.1	117	39.	316	8.7	134	40.	358	9.2	152	41.
6/9	4		43	2	5		87	2	5		44	9
1			990	33.	776	21.	109	32.	877	22.	117	32.
5			1	0	5	4	61	7	1	4	57	3
712	21.		427	14.	787	21.	470	14.	847	21.	473	13.
2			2	5	0	7	0	0	8	7	6	0
5			3		0		0		9	3	8	5
≤6/12	169	51.	260	86.	188	51.	292	87.	208	53.	318	87.
07	1		20	8	25	9	71	3	57	4	24	6
1									49	9	55	3
6/18	592	17.	138	4.6	663	18.	663	18.	731	18.	162	4.5
3			1		8		5		4		7	
9									810	18.	214	5.1
<6/12–	592	17.	138	4.6	663	18.	663	18.	731	18.	162	4.5
6/18	3		1		8		5		4		7	
6/24	406	12.	820	2.7	442	12.	938	2.8	429	11.	877	2.4
2			2		1		2		7		0	
3									463	10.	114	2.7
6/36	259	7.8	552	1.8	272	7.5	617	1.8	257	6.6	625	1.7
2			4		4		7		7		8	
7.5									311	7.0	839	2.0
6/60	160	4.9	390	1.3	170	4.7	425	1.3	175	4.5	473	1.3
6			1		1		1		0		8	
4.7									213	4.8	611	1.5
3/60	826	25.	176	5.9	884	24.	198	5.9	862	22.	197	5.4
0			2		6		4		4		5	
0			4		4		1		989	22.	259	6.2
5.9			5.9		0		5		3		1	
<6/18–	826	25.	176	5.9	884	24.	198	5.9	862	22.	197	5.4
6/60	0		2		6		4		4		5	
3/60	103	0.3	43	0.1	104	0.3	35	0.1	94	0.2	38	0.1
4/60	479	1.4	167	0.6	447	1.2	199	0.6	505	1.3	198	0.5
3/60	717	2.2	243	0.8	673	1.9	267	0.8	734	1.9	267	0.7
3/60	67		68		77		77		104	2.3	372	0.9
TOTAL	330	100	299	100	362	100	335	100	390	100	363	100
	67		68		57		32		77		48	
											88	
											98	
											90	
											0	
											43	
											0	

WHO Classification:

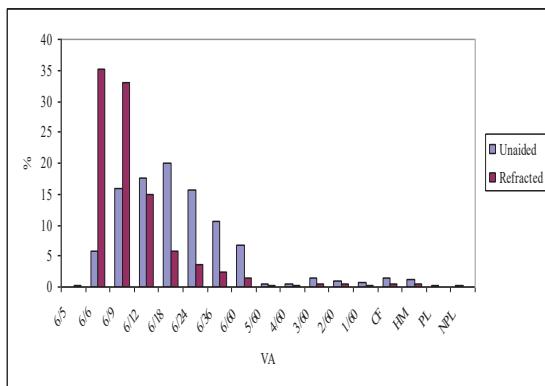
Good:	228	69.	274	91.	254	70.	307	91.	281	72.	334	92.
≥6/18	30	0	01	4	63	2	46	7	71	1	51	0
Borderline:	826	25.	176	5.9	884	24.	198	5.9	862	22.	197	5.4
<6/18–	0	0	2		6		4		4		3	
6/60	352	1.1	138	0.5	353	1.0	128	0.4	390	1.0	138	0.4
CF	279	0.8	138	0.5	291	0.8	158	0.5	362	0.9	186	0.5
HM	64	0.2	34	0.1	59	0.2	24	0.1	90	0.2	48	0.1
PL	35	0.1	17	0.1	32	0.1	12	0.0	64	0.2	152	0.3
NPL	126	3.8	562	1.9	127	3.5	539	1.6	154	4.0	655	1.8
<3/60	0		5		6		4		2		5	
									249	5.6	103	2.5
									2		6	
									341	7.1	161	3.6
									3		3	
TOTAL	330	100	299	100	362	100	335	100	390	100	363	100
	67		68		57		32		77		48	
											88	
											98	
											0	
											43	
											0	

Number and percentage (%) are based on available information.

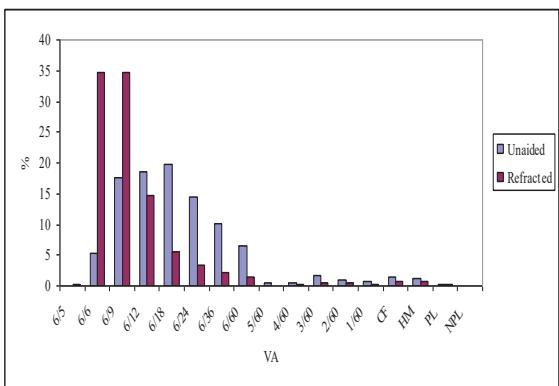
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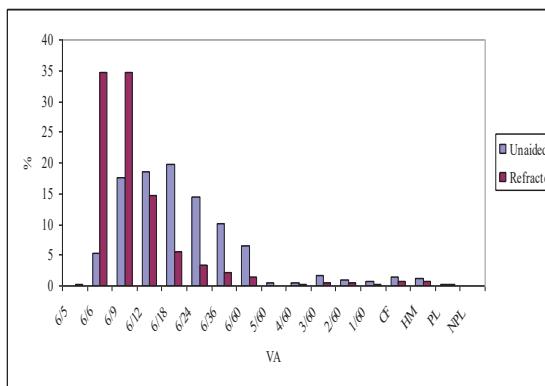
2008



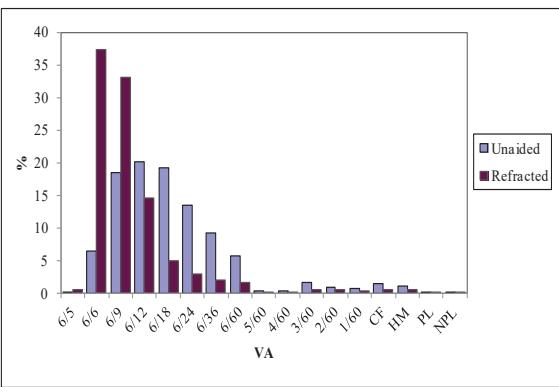
2009



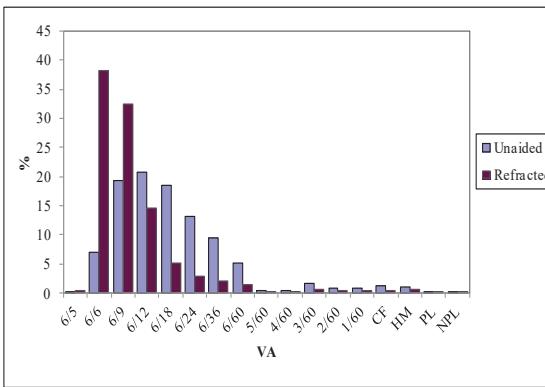
2010



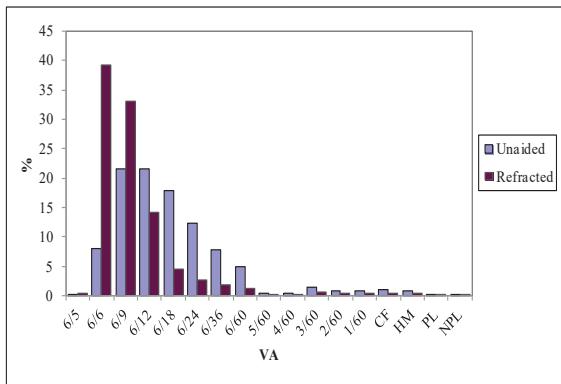
2011



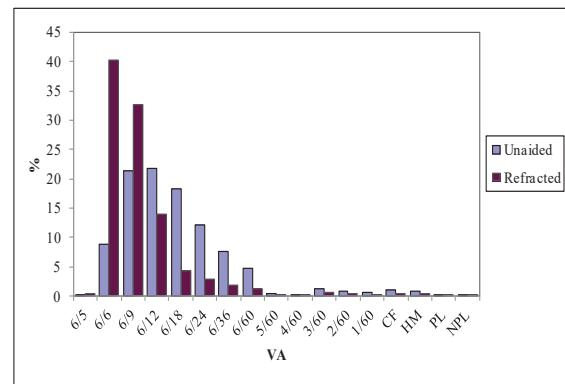
2012



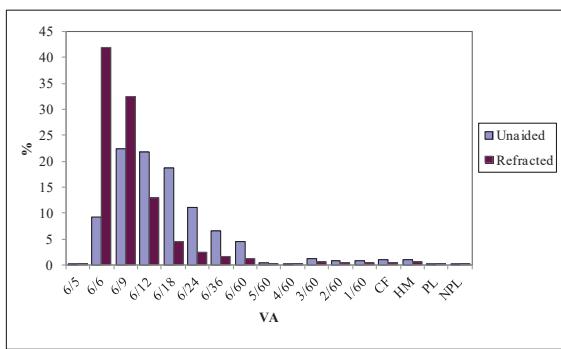
2013



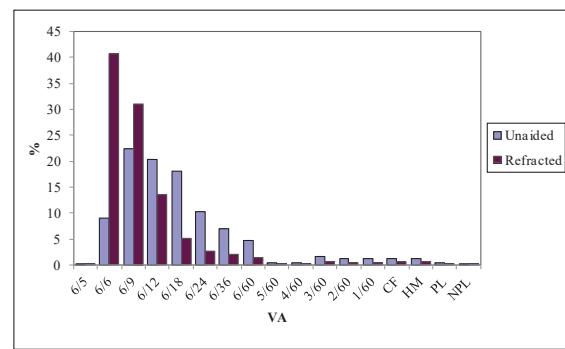
2014



2015



2016



2017

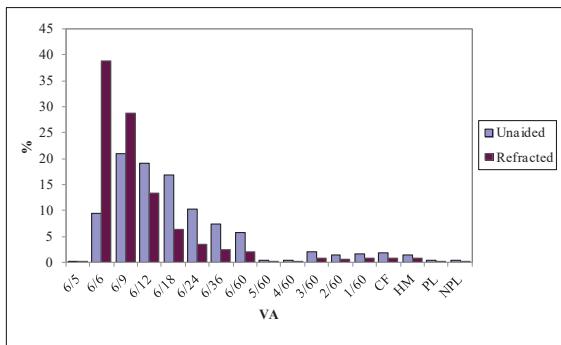


Figure 1.5.5-1: Percentage Distribution of Post-operative Unaided and Refracted Visual Acuity, CSR 2007-2017

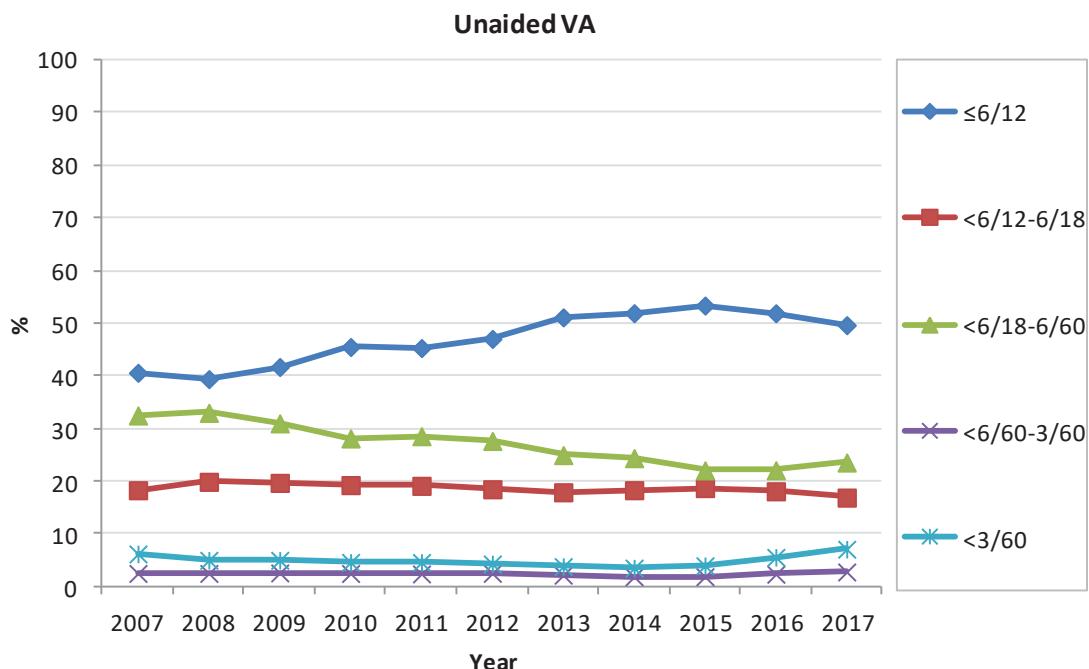


Figure 1.5.5-2: Post-operative Unaided Visual Acuity by Vision Category (All Eyes), CSR 2007-2017

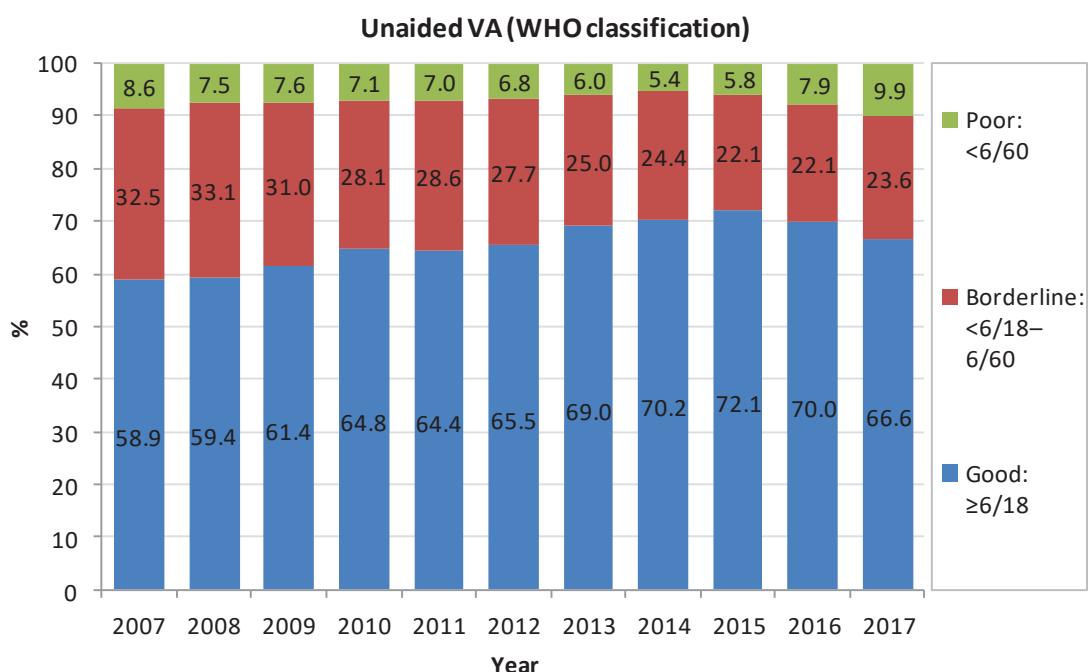


Figure 1.5.5-3: Post-operative Unaided Visual Acuity by Vision Category (All Eyes), CSR 2007-2017 (WHO Classification)

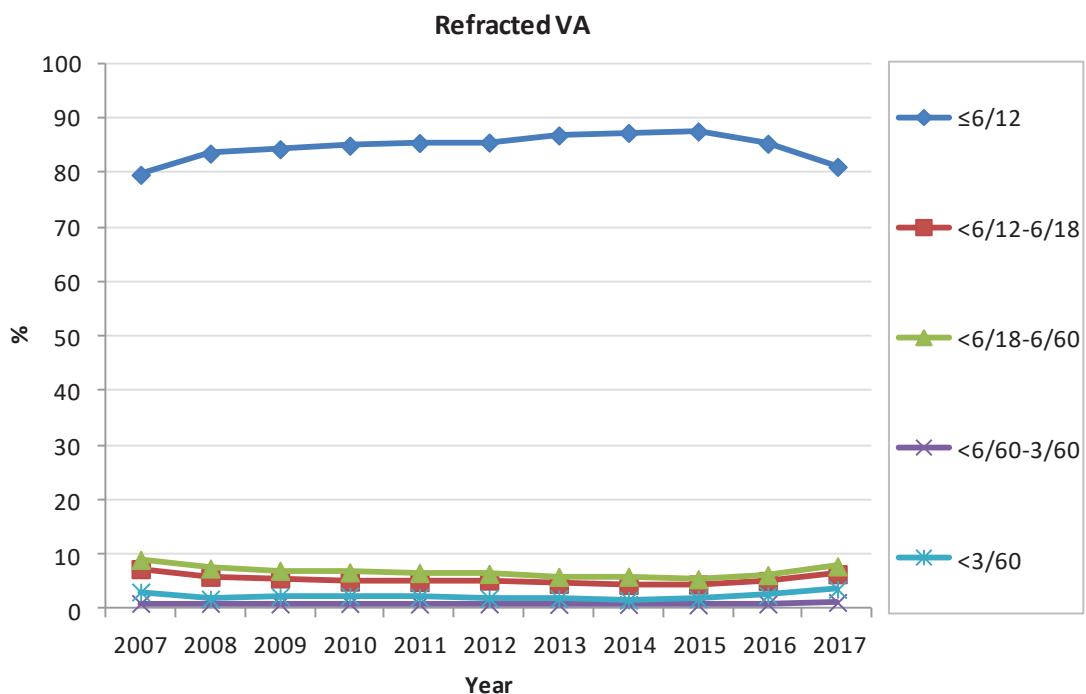


Figure 1.5.5-4: Post-operative Best Corrected Visual Acuity by Vision Category (All Eyes), CSR 2007-2017

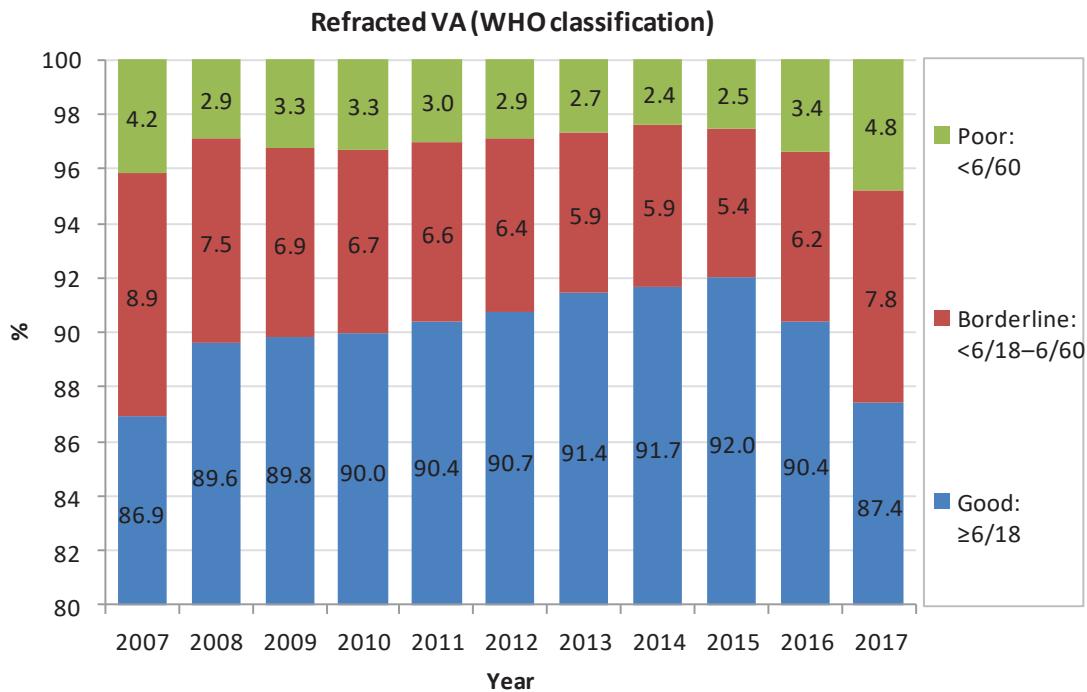


Figure 1.5.5-5: Post-operative Best Corrected Visual Acuity by Vision Category (All Eyes), CSR 2007-2017 (WHO Classification)

1.5.6. Post-operative Visual Acuity (Eyes without Ocular Co-morbidity)

Table 1.5.6-1: Post-operative Visual Acuity (Eyes without Ocular Co-morbidity), CSR 2007-2017

Year	2007		2008		2009		2010		2011		2012	
	Unaided	Refracted										
VA	n	%	n	%	n	%	n	%	n	%	n	%
6/5	3	0.0	25	0.3	2	0.0	23	0.3	8	0.1	37	0.3
6/6	667	6.2	3326	33.5	561	6.2	3061	36.4	802	6.4	4717	40.0
6/9	2061	19.3	3574	36.0	1477	16.4	2939	35.0	2595	20.6	4348	36.9
6/12	2021	18.9	1473	14.8	1683	18.7	1377	16.4	2585	20.5	1602	13.6
≤6/12	4752	44.4	8398	84.6	3723	41.3	7400	88.1	5990	47.6	10704	90.8
6/18	2037	19.1	634	6.4	1882	20.9	411	4.9	2599	20.6	479	4.1
<6/12–6/18	2037	19.1	634	6.4	1882	20.9	411	4.9	2599	20.6	479	4.1
6/24	1619	15.1	351	3.5	1518	16.9	254	3.0	1772	14.0	251	2.1
6/36	1087	10.2	234	2.4	975	10.8	151	1.8	1170	9.3	152	1.3
6/60	650	6.1	113	1.1	536	6.0	71	0.8	651	5.2	61	0.5
<6/18–6/60	3356	31.4	698	7.0	3029	33.7	476	5.6	3593	28.5	464	3.9
5/60	52	0.5	8	0.1	52	0.6	10	0.1	38	0.3	8	0.1
4/60	48	0.4	13	0.1	25	0.3	7	0.1	33	0.3	5	0.0
3/60	94	0.9	26	0.3	79	0.9	29	0.3	114	0.9	37	0.3
<6/60–3/60	194	1.8	47	0.5	156	1.8	46	0.5	185	1.5	50	0.4
2/60	62	0.6	25	0.3	54	0.6	16	0.2	60	0.5	15	0.1
1/60	68	0.6	23	0.2	33	0.4	8	0.1	46	0.4	16	0.1
CF	120	1.1	47	0.5	73	0.8	23	0.3	87	0.7	27	0.2
HM	69	0.6	42	0.4	31	0.3	12	0.1	46	0.4	20	0.2
PL	23	0.2	13	0.1	7	0.1	4	0.0	9	0.1	6	0.0
NPL	8	0.1	7	0.1	7	0.1	0	0.0	3	0.0	1	0.0
<3/60	350	3.2	157	1.6	205	2.3	63	0.7	251	2.1	85	0.7

TOTAL	10689	100	9934	100	8995	100	8396	100	12618	100	11782	100	14142	100	13171	100	15846	100	14576	100	17078	100	15413	100
WHO Classification:																								
Good: ≥6/18	6789	63.5	9032	90.9	5605	62.3	7811	93.0	8589	68.1	11183	94.9	10211	72.2	12560	95.4	11358	71.7	13948	95.7	12360	72.4	14780	95.9
Borderline: <6/18–6/60	3356	31.4	698	7.0	3029	33.7	476	5.7	3593	28.5	464	3.9	3504	24.8	464	3.5	4002	25.3	506	3.5	4213	24.7	507	3.3
Poor: <6/60	544	5.1	204	2.1	361	4.0	109	1.3	436	3.5	135	1.1	427	3.0	147	1.1	486	3.1	122	0.8	505	3.0	126	0.8

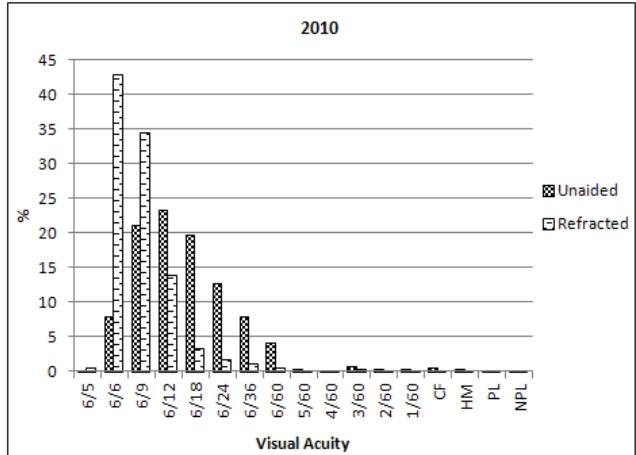
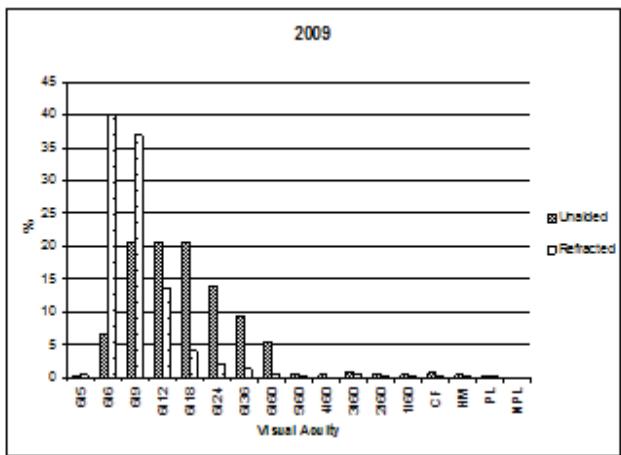
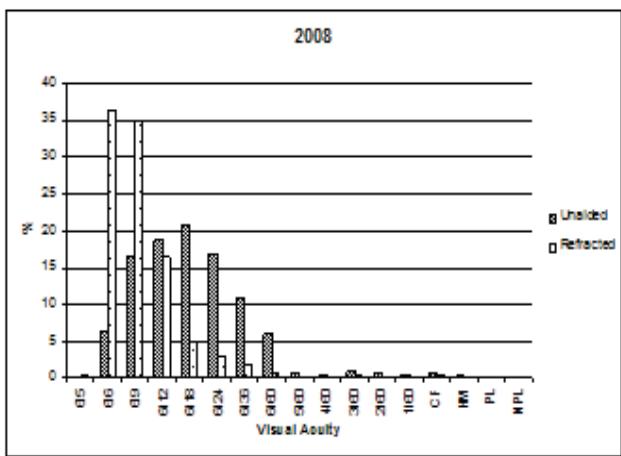
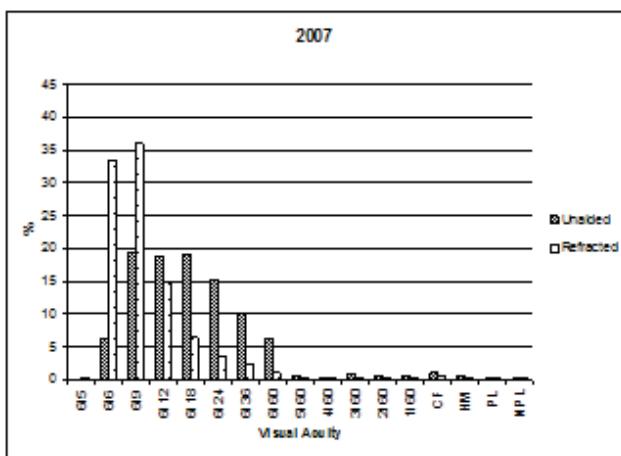
Year	2013		2014		2015		2016		2017			
	VA	Unaided	Refracted									
		n	%	n	%	n	%	n	%	n	%	
6/5	15	0.1	80	0.4	14	0.1	87	0.4	15	0.1	63	0.3
6/6	1922	9.9	8110	45.2	2214	10.3	9296	45.5	2500	10.6	10794	47.9
6/9	4846	24.9	6281	35.0	5369	24.9	7111	34.8	6124	25.9	7734	34.3
6/12	4502	23.1	2273	12.7	5036	23.3	2677	13.1	5554	23.5	2634	11.7
≤6/12	11285	58.0	16744	93.3	12633	58.5	19171	93.8	14193	59.9	21225	94.1
6/18	3508	18.0	508	2.8	4004	18.5	548	2.7	4547	19.2	578	2.6
<6/12–6/18	3508	18.0	508	2.8	4004	18.5	548	2.7	4547	19.2	578	2.6
6/24	2235	11.5	288	1.6	2482	11.5	305	1.5	2459	10.4	275	1.2
6/36	1268	6.5	160	0.9	1284	5.9	164	0.8	1213	5.1	179	0.8
6/60	683	3.5	90	0.5	685	3.2	98	0.5	704	3.0	132	0.6
<6/18–6/60	4186	21.5	538	3.0	4451	20.6	567	2.8	4376	18.5	586	2.6
5/60	41	0.2	7	0.0	38	0.2	11	0.1	45	0.2	4	0.0
4/60	34	0.2	12	0.1	25	0.1	4	0.0	27	0.1	10	0.0
3/60	139	0.7	33	0.2	152	0.7	44	0.2	156	0.7	36	0.2
<6/60–3/60	214	1.1	52	0.3	215	1.0	59	0.3	228	1.0	50	0.2
2/60	72	0.4	23	0.1	83	0.4	20	0.1	94	0.4	20	0.1
1/60	55	0.3	21	0.1	75	0.3	19	0.1	88	0.4	24	0.1
CF	93	0.5	30	0.2	84	0.4	27	0.1	73	0.3	22	0.1

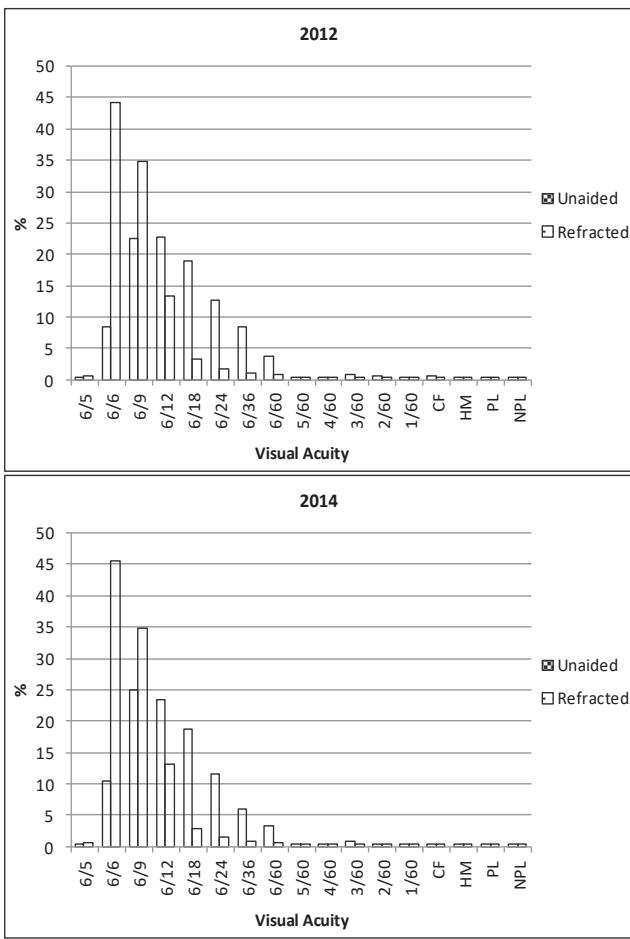
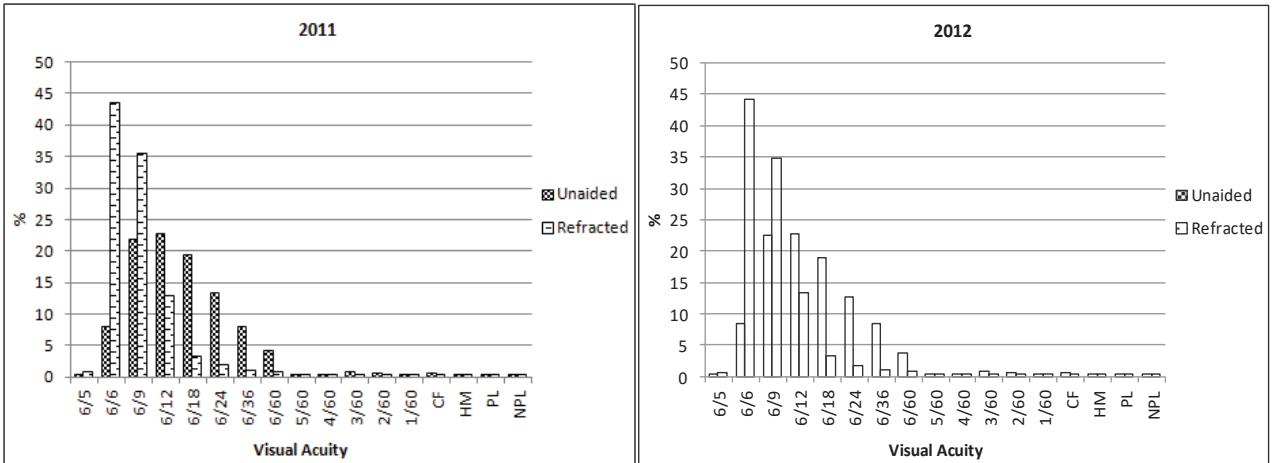
HM	46	0.2	21	0.1	43	0.2	19	0.1	51	0.2	27	0.1	134	0.5	48	0.2	252	0.8	139	0.5
PL	6	0.0	2	0.0	8	0.0	6	0.0	14	0.1	10	0.0	37	0.1	12	0.0	53	0.2	27	0.1
NPL	7	0.0	5	0.0	3	0.0	1	0.0	12	0.1	4	0.0	28	0.1	15	0.1	67	0.2	40	0.1
<3/60	279	1.4	102	0.6	296	1.4	92	0.5	332	1.4	107	0.5	863	3.0	250	0.9	1547	4.9	685	2.3
TOTAL	19472	100	17944	100	21599	100	20437	100	23676	100	22546	100	28413	100	26931	100	31480	100.0	29925	100.0

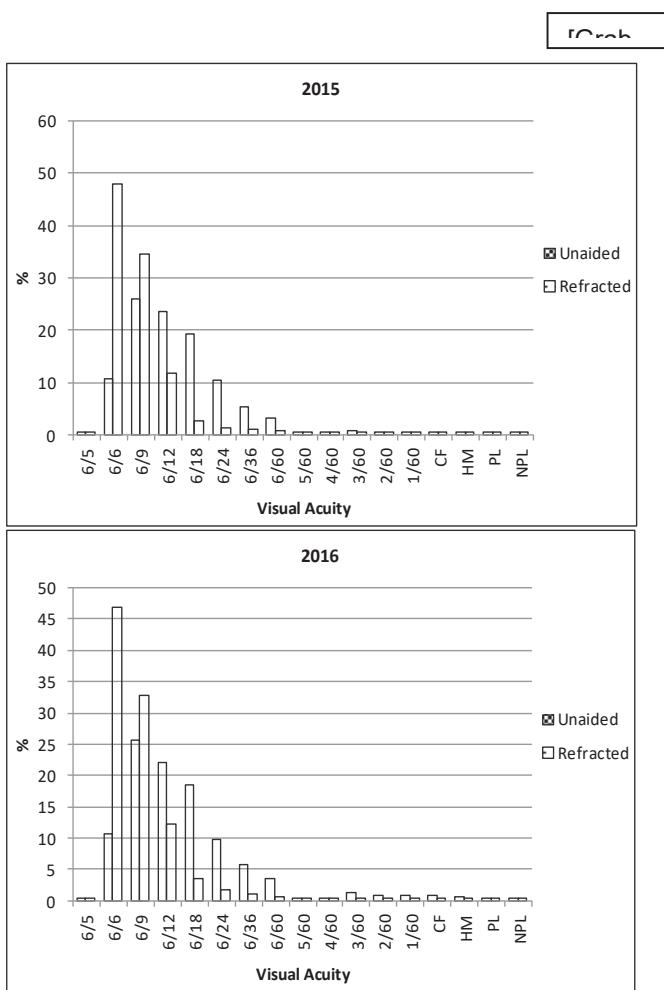
WHO Classification:

Good: ≥6/18	14793	76.0	17252	96.1	16637	77.0	19719	96.5	18740	79.2	21803	96.7	21745	76.5	25668	95.3	22630	71.9	27358	91.4
Borderline: <6/18–6/60	4186	21.5	538	3.0	4451	20.6	567	2.8	4376	18.5	586	2.6	5319	18.7	897	3.3	6631	21.1	1669	5.6
Poor: <6/60	493	2.5	154	0.9	511	2.4	151	0.7	560	2.4	157	0.7	1349	4.7	366	1.4	2219	7.0	898	3.0

Number and percentage (%) are based on available information.







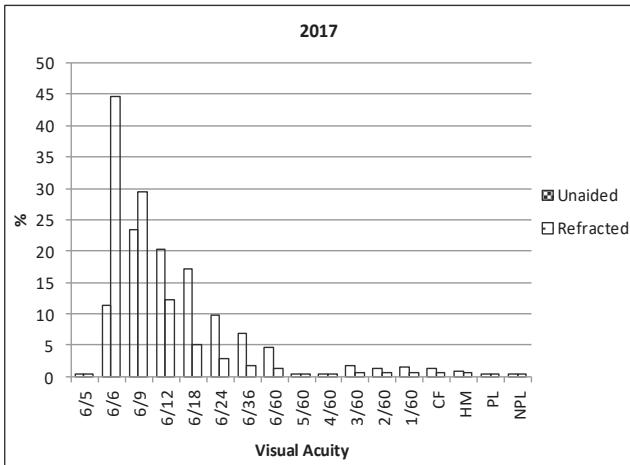


Figure 1.5.6-1: Post-operative Visual Acuity for Eyes Without Ocular Co-morbidity, CSR 2007-2017

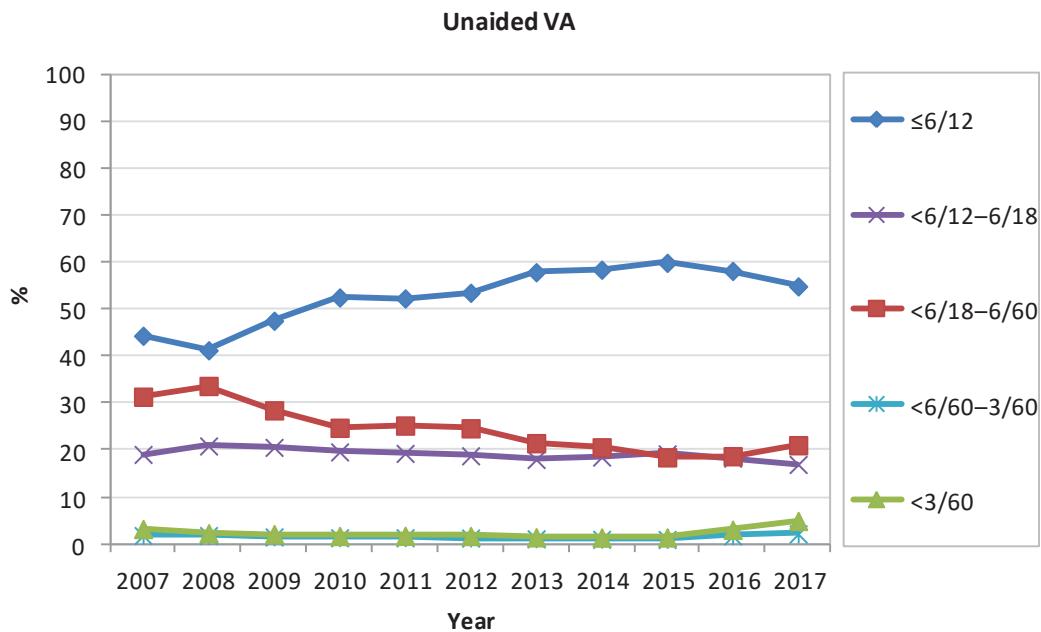


Figure 1.5.6-2: Post-operative Unaided Visual Acuity by Vision Category (No Ocular Co-morbidity), CSR 2007-2017

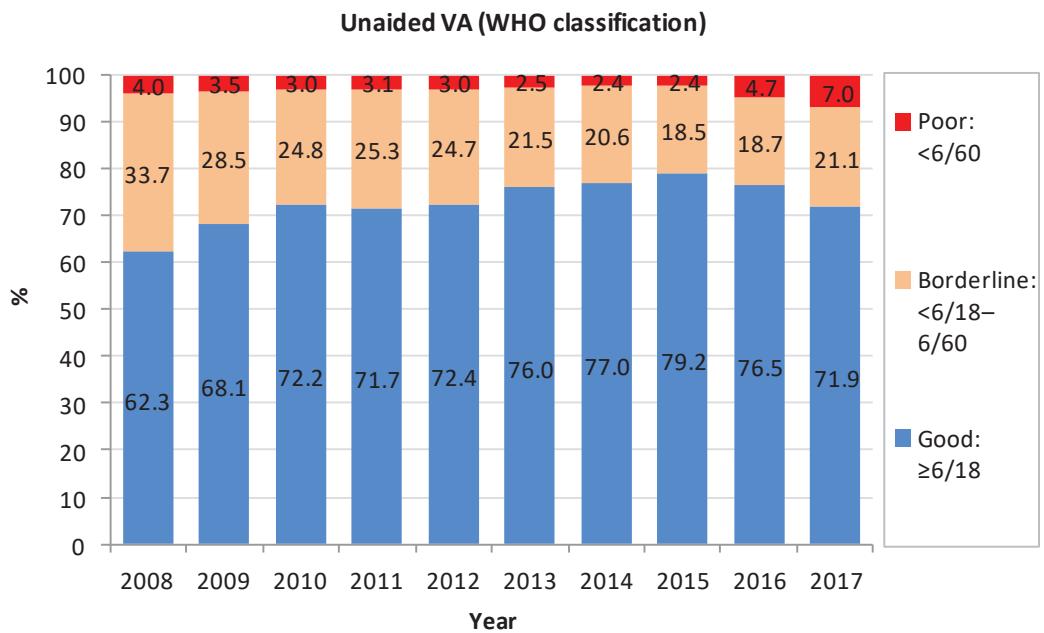


Figure 1.5.6-3: Post-operative Unaided Visual Acuity by Vision Category (No Ocular Co-morbidity), CSR 2007-2017 (WHO Classification)

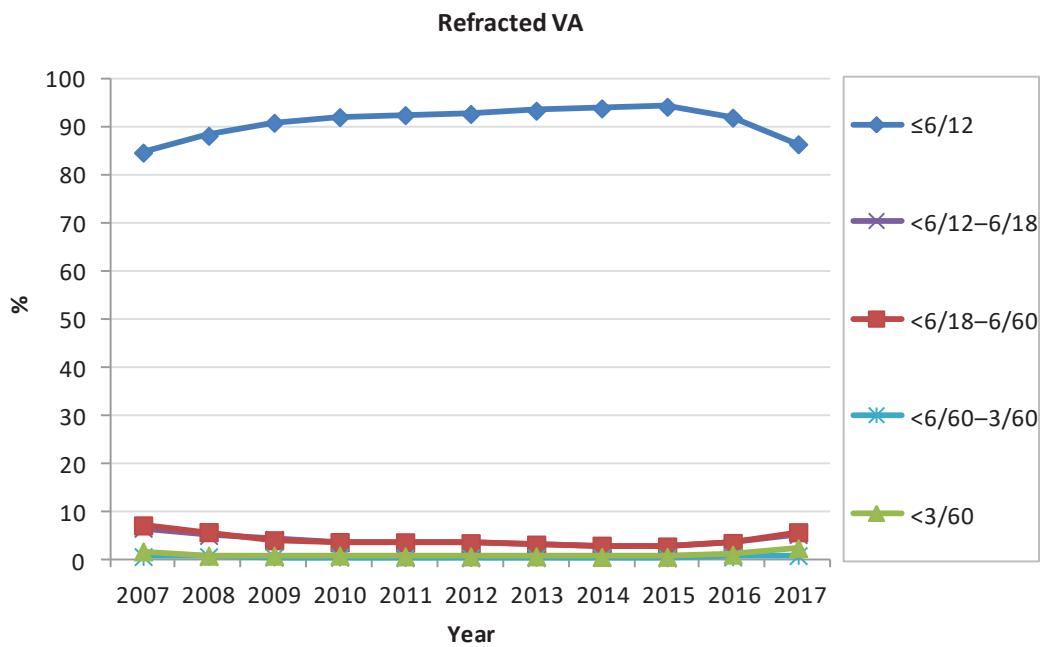


Figure 1.5.6-4: Post-operative Best Corrected Visual Acuity by Vision Category (No Ocular Co-morbidity), CSR 2007-2017

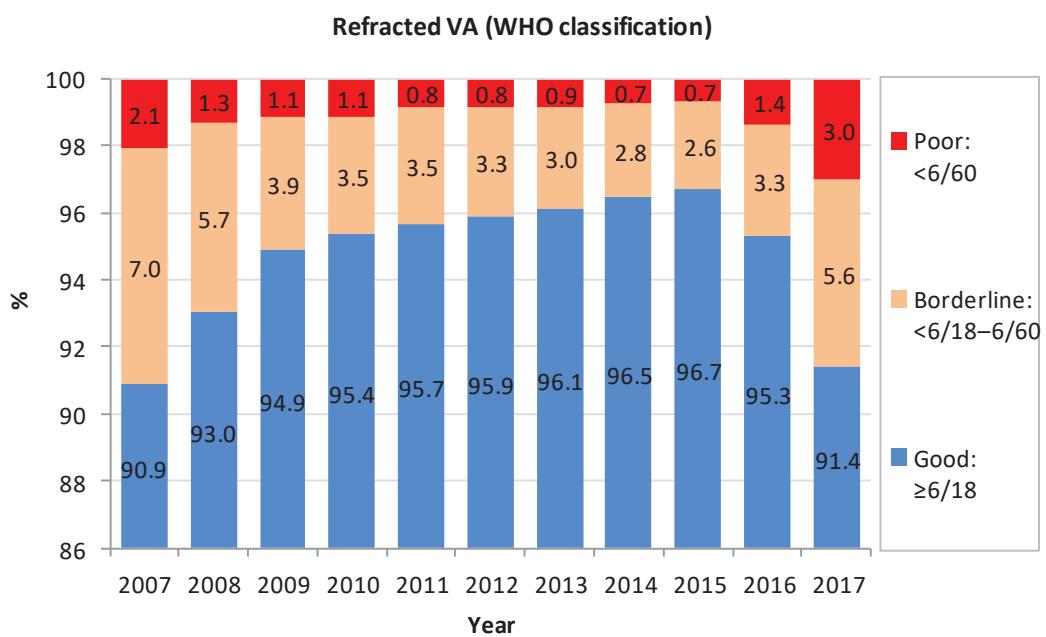


Figure 1.5.6-5: Post-operative Best Corrected Visual Acuity by Vision Category (No Ocular Co-morbidity), CSR 2007-2017

1.5.7. Post-operative Visual Acuity 6/12 or Better in Eyes without Ocular Co-morbidity

Table 1.5.7-1: Post-operative Visual Acuity in Eyes without Ocular Co-morbidity by Types of Surgery, CSR 2007-2017

Year	2007			2008			2009			2010		
	Unaided			Refracted			Unaided			Refracted		
	N	n	%	N	n	%	N	n	%	N	n	%
All Surgeries	106	474	44.5	992	839	84.6	125	543	43.2	116	102	88.2
Phaco	72	7	0	0	0	0	85	5	46	67	99	9
ECCE	726	360	49.6	672	589	87.7	904	441	48.9	835	764	91.5
Lens Aspiration	3	4	0	3	3	8	3	8	7	7	1	8
ICCE	298	102	34.2	281	224	79.7	303	879	29.0	284	230	80.9
Phaco → ECCE	9	1	8	7	4	1	4	1	7	7	7	9
	145	55	37.9	129	90	69.8	152	56	36.8	132	96	72.7
	145	55	37.9	129	90	69.8	152	56	36.8	132	96	72.7
	36	7	19.4	31	14	45.2	38	7	18.4	32	17	53.1
	239	60	25.1	222	146	65.8	297	70	23.6	267	199	74.5

Year	2011			2012			2013			2014		
	Unaided			Refracted			Unaided			Refracted		
	N	n	%	N	n	%	N	n	%	N	n	%
All Surgeries	158	829	52.4	145	134	92.4	170	914	53.6	154	142	92.6
Phaco	35	0	68	60	67	3	04	71	41	64	15	16
ECCE	130	745	57.2	121	114	94.3	145	843	58.0	133	125	94.2
	36	4	55	65	40	9	44	64	05	10	59	75
	223	689	30.8	190	162	85.6	204	570	27.9	163	137	84.1
	8	1	8	4	3	3	3	3	3	9	3	9

Lens Aspiration	200	79	39.5	175	131	74.9	163	84	51.5	141	124	87.9	164	84	51.2	151	129	85.4	145	66	45.5	125	107	85.6
ICCE	20	3	15.0	19	10	52.6	24	2	8.3	20	13	65.0	38	8	21.1	35	28	80.0	30	8	26.7	28	16	57.1
Phaco → ECCE	311	59	19.0	291	210	72.2	261	41	15.7	239	176	73.6	306	69	22.5	281	219	77.9	301	81	26.9	283	211	74.6

Year	2015			2016			2017											
	Unaided			Refracted			Unaided			Refracted			Unaided			Refracted		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
All Surgeries	236	141	59.9	225	212	94.1	284	165	58.2	269	247	91.9	314	172	54.9	299	258	86.3
Phaco	74	91		44	23		13	45		31	42		80	92		25	37	
ECCE	218	136	62.5	208	197	95.1	263	158	60.3	250	232	92.9	295	166	56.5	280	245	87.3
Lens Aspiration	1	1		18	93		42	76		30	42		21	65		91	12	
ICCE	127	382	30.1	118	101	86.2	141	443	31.4	129	105	81.4	164	475	28.8	154	110	71.9
SICS	32	5	15.6	29	19	65.5	41	12	29.3	34	19	55.9	47	11	23.4	41	21	51.2
Phaco → ECCE	-	-	-	-	-	-	-	-	-	-	-	-	1	1	100.	1	1	100.
	353	71	20.1	323	231	71.5	358	79	22.1	337	240	71.2	-	-	-	-	-	-

Number and percentage (%) are based on available information.

Table 1.5.7-2: Post-operative Visual Acuity (6/18 or Better) in Eyes without Ocular Co-morbidity by Types of Surgery, CSR 2007-2017

Year	2007			2008			2009			2010		
	Unaided		Refracted									
	N	n	%	N	n	%	N	n	%	N	n	%
All Surgeries	106	678	63.5	992	902	90.9	125	801	63.7	116	108	93.1
Phaco	72	1		0	1		85	8		46	42	
ECCE	298	161	54.0	672	625		904	631		951	703	
Lens Aspiration	145	82	56.6	281	247		303	147		284	251	
ICCE	36	14	38.9	31	18	58.1	38	14	36.8	32	23	71.9
Phaco → ECCE	239	103	43.1	222	171	77.0	297	121	40.7	267	223	83.5
	158	113	71.7	145	139	95.7	170	123	72.4	154	147	95.9
	35	49		68	40		67	53		04	72	
	130	993		121	117		145	111		133	129	
	36	3		55	75		40	80		44	08	
	223	117	52.4	190	175		204	950	46.5	163	149	
	8	3		1	1		4	9		3	8	
	200	109	54.5	175	143	81.7	163	114	69.9	141	129	91.5
	20	5	25.0	19	13	68.4	24	5	20.8	20	15	75.0
	311	122	39.2	291	237	81.4	261	93	35.6	239	199	83.3

Year	2011			2012			2013			2014		
	Unaided		Refracted									
	N	n	%	N	n	%	N	n	%	N	n	%
All Surgeries	158	113	71.7	145	139	95.7	170	123	72.4	154	147	95.9
Phaco	35	49		68	40		67	53		04	72	
ECCE	130	993		121	117		145	111		133	129	
Lens Aspiration	223	117	52.4	190	175		204	950	46.5	163	149	
ICCE	20	5	25.0	19	13	68.4	24	5	20.8	20	15	75.0
Phaco → ECCE	311	122	39.2	291	237	81.4	261	93	35.6	239	199	83.3
	158	113	71.7	145	139	95.7	170	123	72.4	154	147	95.9
	35	49		68	40		67	53		04	72	
	130	993		121	117		145	111		133	129	
	223	117	52.4	190	175		204	950	46.5	163	149	
	20	5	25.0	19	13	68.4	24	5	20.8	20	15	75.0
	311	122	39.2	291	237	81.4	261	93	35.6	239	199	83.3

Year	2015			2016			2017					
	Unaided			Refracted			Unaided			Refracted		
	N	n	%	N	n	%	N	n	%	N	n	%
All Surgeries	236	187	79.2	225	218	96.7	284	217	76.5	269	256	95.3
Phaco	74	38		44	01		13	45		31	68	
ECCE	218	178	81.8	208	202	97.3	263	207	78.7	250	240	96.0
Lens Aspiration	04	27		18	64		42	22		30	37	
ICCE	127	118	91.4	118	107	91.4	141	678	48.1	129	114	87.9
SICS	1	1	49.8	1	9		8	1		8	748	45.4
Phaco → ECCE	633	533		49.8	41		164	748	45.4	154	124	81.0
										2	9	
	184	127	69.0	168	151	89.9	231	167	72.3	206	178	86.4
	32	8	25.0	29	22	75.9	41	14	34.1	34	20	58.8
	-	-	-	-	-	-	-	-	-	1	1	100.0
	353	131	37.1	323	265	82.0	358	150	41.9	337	274	81.3
										-	-	-

Number and percentage (%) are based on available information.

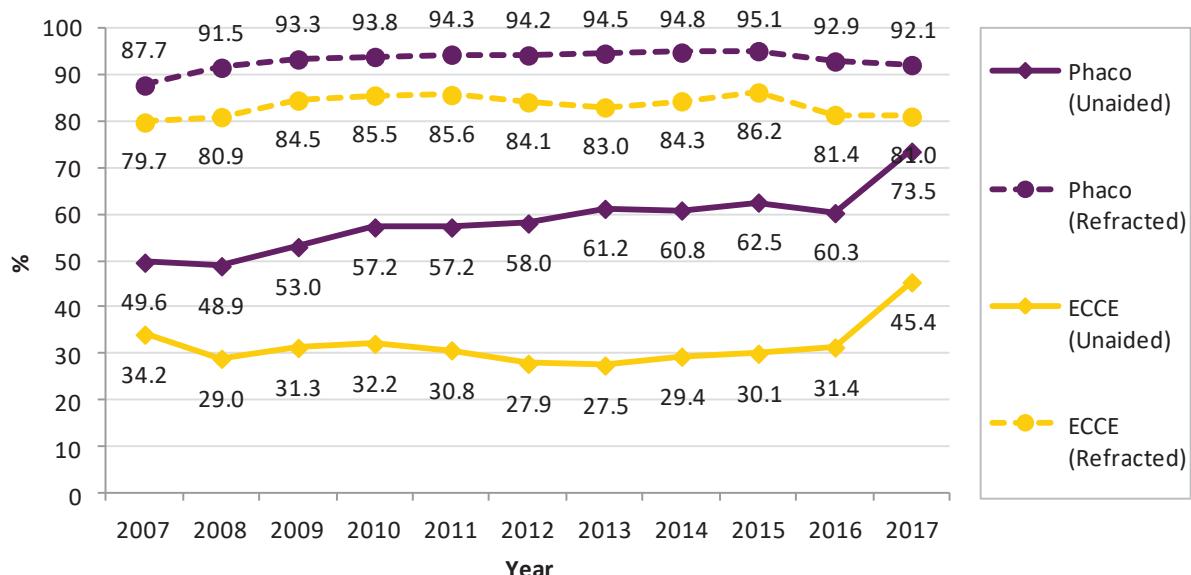


Figure 1.5.7-1: Post-operative Visual Acuity 6/12 or Better in Eyes Without Ocular Co-morbidity (ECCE and Phacoemulsification), CSR 2007-2017

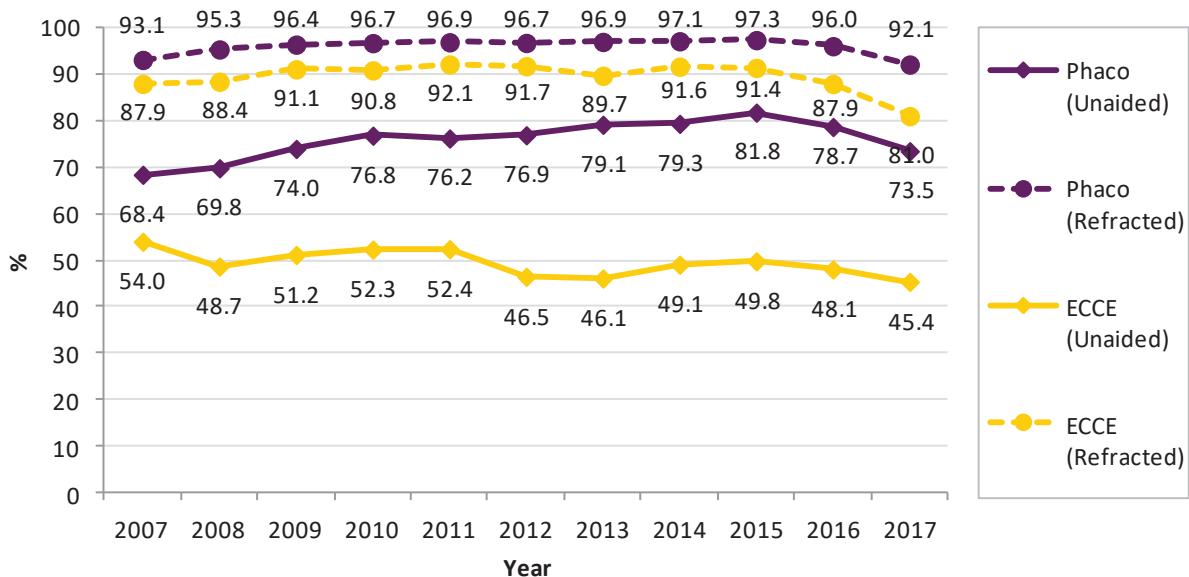


Figure 1.5.7-2: Post-operative Visual Acuity 6/18 or Better for Eyes Without Ocular Co-morbidity (ECCE and Phacoemulsification), CSR 2007-2017

Table 1.5.7-3 Post-operative Best Corrected Visual Acuity in Eyes without Ocular Co-morbidity by Intra-operative Complications and Types of Surgery, CSR 2017

	Types of Cataract Surgery																	
	All Surgeries			Lens Aspiration			ECCE			Phaco			ICCE			SICS		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
With intra-op complications	29925	25837	86.3	200	162	81.0	1542	1109	71.9	28091	24512	87.3	41	21	51.2	1	1	100.0
	1184	847	71.5	14	11	78.6	370	229	61.9	746	574	76.9	24	14	58.3	0	0	0.0
	28741	24990	86.9	186	151	81.2	1172	880	75.1	27345	23938	87.5	17	7	41.2	1	1	100.0

Number and percentage (%) are based on available information.

Table 1.5.7-4: Post-operative Best Corrected Visual Acuity (6/18 or better) in Eyes without Ocular Co-morbidity by Intra-operative Complications and Types of Surgery, CSR 2017

	Types of Cataract Surgery																	
	All Surgeries			Lens Aspiration			ECCE			Phaco			ICCE			SICS		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
With intra-op complications	29925	27358	91.4	200	173	86.5	1542	1249	81.0	28091	25868	92.1	41	28	68.3	1	1	100.0
	1184	962	81.3	14	12	85.7	370	275	74.3	746	632	84.7	24	20	83.3	0	0	0.0
	28741	26396	91.8	186	161	86.6	1172	974	83.1	27345	25236	92.3	17	8	47.1	1	1	100.0

Number and percentage (%) are based on available information.

Table 1.5.7-5: Post-operative Best Corrected Visual Acuity in Eyes without Ocular Co-morbidity by Surgeon Status and Types of Surgery, CSR 2017

	Types of Cataract Surgery																	
	All Surgeries			Lens Aspiration			ECCE			Phaco			ICCE			SICS		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
Specialist Gazetting Specialist Medical Officer	29925	25837	86.3	200	162	81.0	1542	1109	71.9	28091	24512	87.3	41	21	51.2	1	1	100.0
	26390	22853	86.6	193	156	80.8	1029	747	72.6	25084	21899	87.3	38	19	50.0	1	1	100.0
	1808	1526	84.4	6	5	83.3	106	75	70.8	1694	1445	85.3	0	0	0.0	0	0	0.0
	1599	1348	84.3	1	1	100.0	405	286	70.6	1188	1059	89.1	2	2	100.0	0	0	0.0

Number and percentage (%) are based on available information.

Table 1.5.7-6: Post-operative Best Corrected Visual Acuity (6/18 or better) in Eyes without Ocular Co-morbidity by Surgeon Status and Types of Surgery, CSR 2017

	Types of Cataract Surgery																	
	All Surgeries			Lens Aspiration			ECCE			Phaco			ICCE			SICS		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
Specialist Gazetting Specialist Medical Officer	29925	27358	91.4	200	173	86.5	1542	1249	81.0	28091	25868	92.1	41	28	68.3	1	1	100.0
	26390	24163	91.6	193	167	86.5	1029	837	81.3	25084	23095	92.1	38	26	68.4	1	1	100.0
	1808	1636	90.5	6	5	83.3	106	87	82.1	1694	1543	91.1	0	0	0.0	0	0	0.0
	1599	1443	90.2	1	1	100.0	405	324	80.0	1188	1115	93.9	2	2	100.0	0	0	0.0

Number and percentage (%) are based on available information.

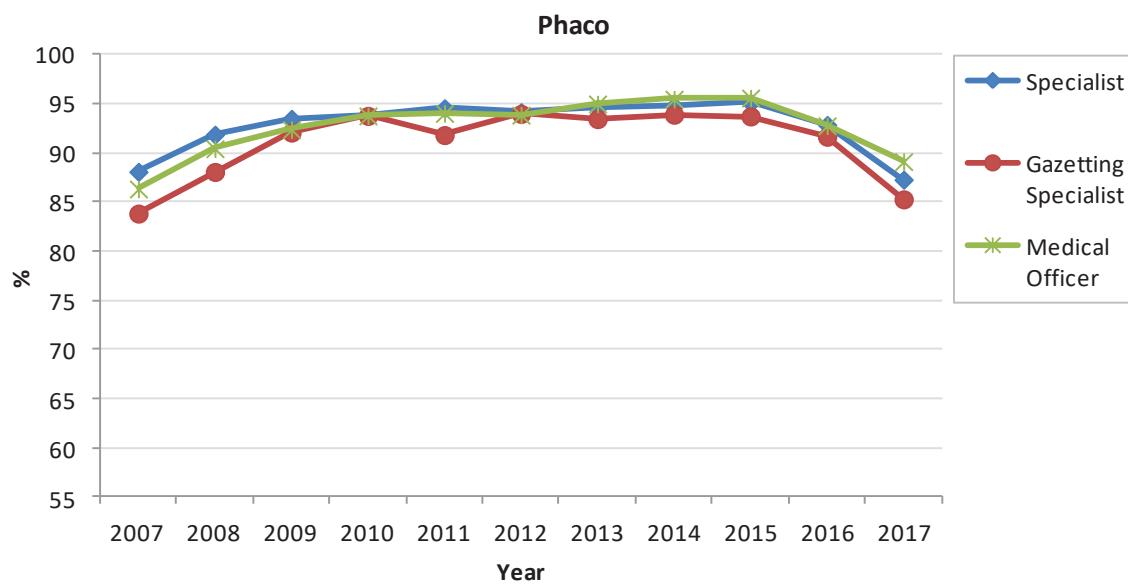


Figure 1.5.7-3: Post-operative Best Corrected Visual Acuity 6/12 or Better in Eyes Without Ocular Co-morbidity by Surgeon Status in Phacoemulsification, CSR 2007-2017

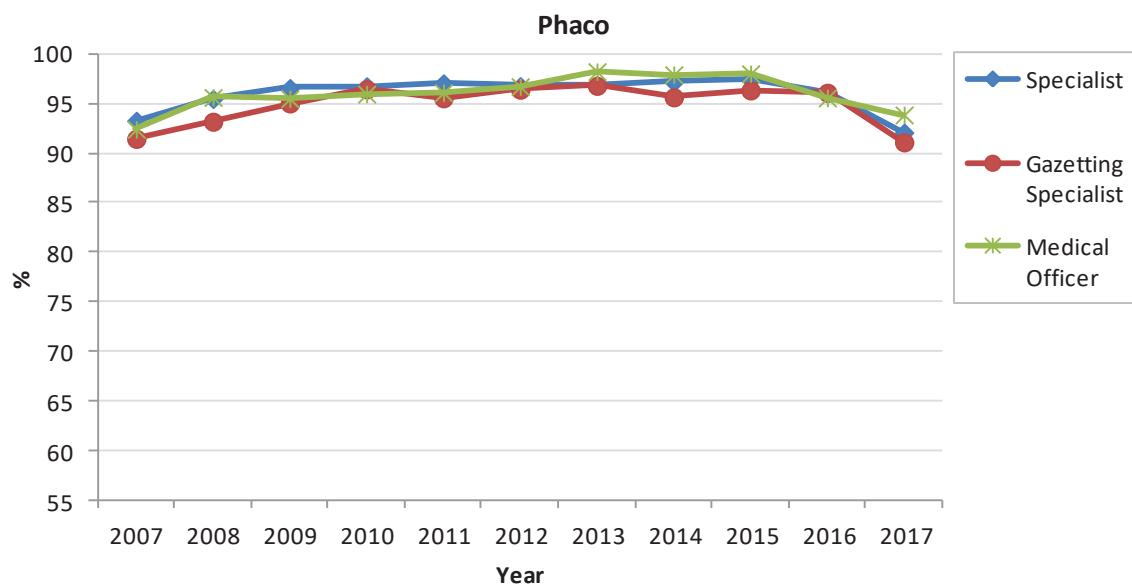


Figure 1.5.7-4: Post-operative Best Corrected Visual Acuity 6/18 or Better in Eyes Without Ocular Co-morbidity by Surgeon Status in Phacoemulsification, CSR 2007-2017

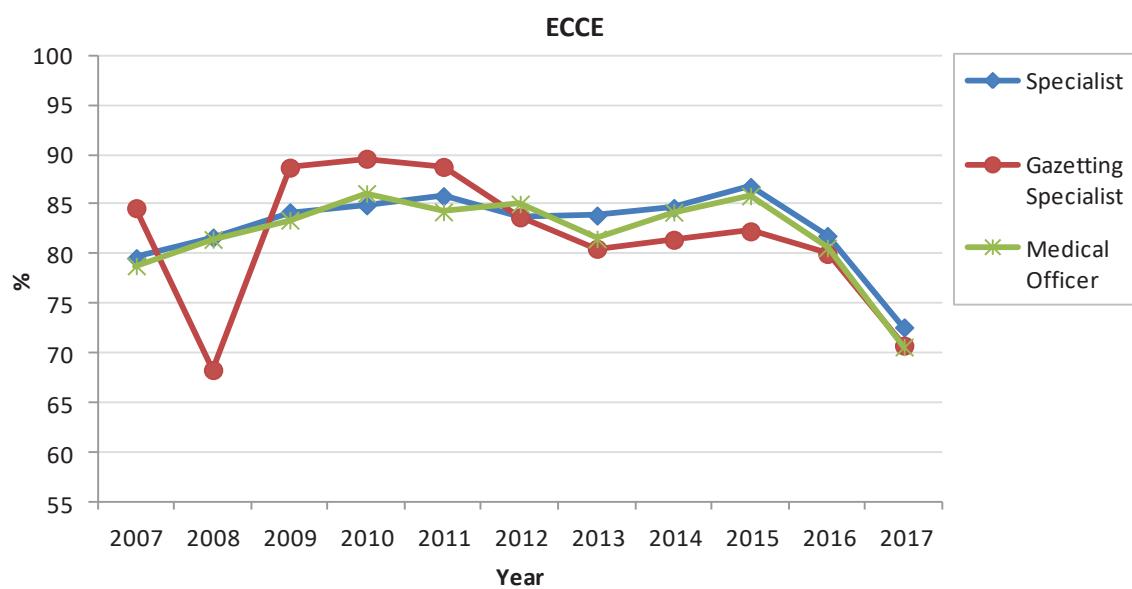


Figure 1.5.7-5: Post-operative Best Corrected Visual Acuity 6/12 or Better in Eyes Without Ocular Co-morbidity by Surgeon Status in ECCE, CSR 2007-2017

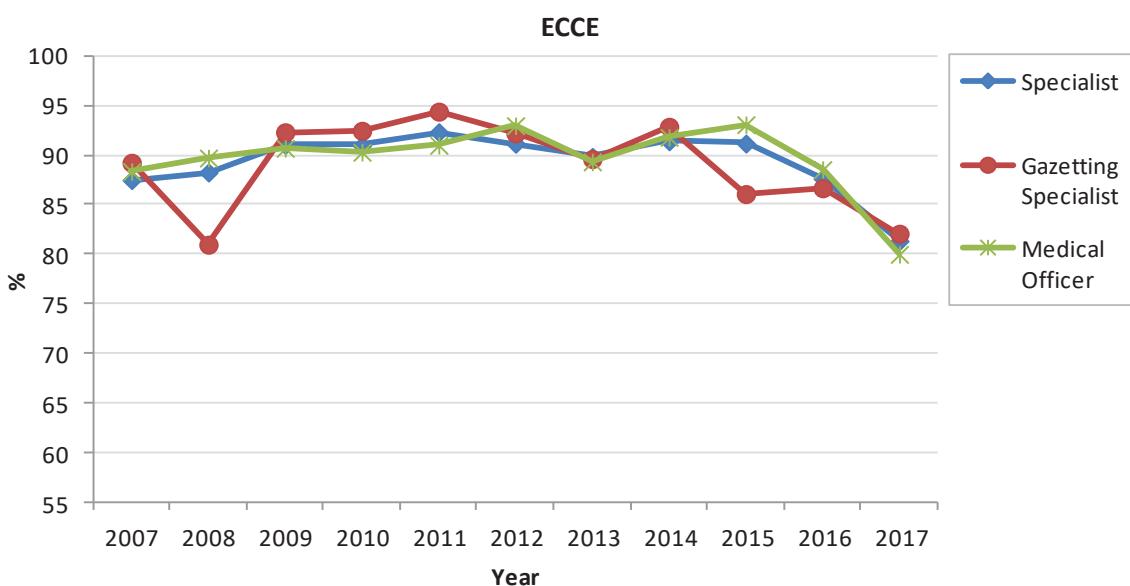


Figure 1.5.7-6: Post-operative Best Corrected Visual Acuity 6/18 or Better in Eyes Without Ocular Co-morbidity by Surgeon Status in ECCE, CSR 2007-2017

Table 1.5.7-7: Post-operative Best Corrected Visual Acuity 6/12 or Better in Eyes without Ocular Co-morbidity by SDP and Types of Surgery, CSR 2017

Hospital	All Surgeries			Type of Cataract Surgery								
				Phaco			ECCE			Lens Aspiration		
	N	n	%	N	n	%	N	n	%	N	n	%
All centre	29925	25837	86.3	28091	24512	87.3	1542	1109	71.9	200	162	81.0
Queen Elizabeth KK	701	674	96.1	675	652	96.6	17	14	82.4	6	5	83.3
Kuala Lumpur	446	428	96.0	430	415	96.5	14	13	92.9	1	0	0.0
Taiping	1397	1332	95.3	1237	1178	95.2	157	151	96.2	1	1	100.0
Bukit Mertajam	615	585	95.1	608	579	95.2	7	6	85.7	0	0	0.0
Keningau	192	180	93.8	187	176	94.1	3	3	100.0	1	1	100.0
Seremban	885	826	93.3	838	788	94.0	42	34	81.0	2	2	100.0
Sandakan	315	288	91.4	282	262	92.9	32	25	78.1	1	1	100.0
Klang	1331	1218	91.5	1285	1187	92.4	30	20	66.7	10	8	80.0
Kulim	282	254	90.1	269	244	90.7	11	8	72.7	2	2	100.0
Sarikei	161	145	90.1	161	145	90.1	0	0	0.0	0	0	0.0
Ipoh	1780	1584	89.0	1734	1560	90.0	34	19	55.9	5	4	80.0
Shah Alam	410	367	89.5	407	365	89.7	3	2	66.7	0	0	0.0
KK-KKM Pahang	200	175	87.5	190	170	89.5	10	5	50.0	0	0	0.0
Kota Bharu	972	845	86.9	763	679	89.0	197	157	79.7	8	5	62.5
MAIWP	2633	2336	88.7	2581	2298	89.0	32	21	65.6	14	14	100.0
Kuantan	882	778	88.2	780	693	88.8	89	74	83.1	8	7	87.5
Putrajaya	246	211	85.8	217	192	88.5	26	16	61.5	3	3	100.0
Serdang	543	472	86.9	513	453	88.3	27	17	63.0	1	1	100.0
Sungai Buloh	493	431	87.4	471	414	87.9	19	15	78.9	1	0	0.0
Temerloh	620	539	86.9	586	515	87.9	31	21	67.7	3	3	100.0
Segamat	301	262	87.0	291	255	87.6	6	3	50.0	3	3	100.0

Batu Pahat	284	245	86.3	270	235	87.0	12	9	75.0	1	1	100.0	0	0	0.0
KK-KKM Pulau Pinang	54	47	87.0	53	46	86.8	1	1	100.0	0	0	0.0	0	0	0.0
Melaka	1316	1135	86.2	1276	1107	86.8	31	21	67.7	7	6	85.7	0	0	0.0
Pusat Perubatan UKM	33	27	81.8	30	26	86.7	1	1	100.0	2	0	0.0	0	0	0.0
Sri Manjung	525	455	86.7	519	450	86.7	2	1	50.0	3	3	100.0	1	1	100.0
Ampang	723	608	84.1	630	543	86.2	85	58	68.2	5	5	100.0	0	0	0.0
Kluang	83	72	86.7	79	68	86.1	2	2	100.0	0	0	0.0	0	0	0.0
Kuala Pilah	226	194	85.8	221	190	86.0	5	4	80.0	0	0	0.0	0	0	0.0
Umum Sarawak	1136	969	85.3	1111	954	85.9	11	5	45.5	12	10	83.3	1	0	0.0
KK-KKM Johor	14	12	85.7	14	12	85.7	0	0	0.0	0	0	0.0	0	0	0.0
Sultanah Aminah JB	379	320	84.4	362	307	84.8	8	5	62.5	7	7	100.0	0	0	0.0
Sibu	380	314	82.6	363	307	84.6	8	5	62.5	2	1	50.0	6	1	16.7
Sungei Petani	742	610	82.2	689	581	84.3	48	26	54.2	4	3	75.0	1	0	0.0
Muar	478	401	83.9	465	391	84.1	5	2	40.0	6	6	100.0	2	2	100.0
Kuala Terengganu	650	527	81.1	568	477	84.0	65	38	58.5	14	10	71.4	1	1	100.0
KK-KKM Neg. Sembilan	262	219	83.6	251	210	83.7	9	7	77.8	1	1	100.0	0	0	0.0
KK-KKM Sabah	236	193	81.8	226	189	83.6	10	4	40.0	0	0	0.0	0	0	0.0
Pulau Pinang	1072	890	83.0	1041	868	83.4	26	19	73.1	2	2	100.0	1	1	100.0
Selayang	484	403	83.3	456	380	83.3	13	11	84.6	10	9	90.0	3	1	33.3
Alor Setar	1159	941	81.2	1060	880	83.0	84	47	56.0	11	10	90.9	0	0	0.0
Miri	670	549	81.9	635	521	82.0	32	26	81.3	3	2	66.7	0	0	0.0
KK-KKM Sarawak	686	556	81.0	679	554	81.6	5	2	40.0	0	0	0.0	1	0	0.0
Tawau	195	154	79.0	179	145	81.0	15	8	53.3	1	1	100.0	0	0	0.0
Teluk Intan	737	585	79.4	664	536	80.7	59	37	62.7	13	11	84.6	0	0	0.0
Bintulu	137	109	79.6	132	105	79.5	4	4	100.0	1	0	0.0	0	0	0.0
KK-KKM Terengganu	170	131	77.1	153	121	79.1	17	10	58.8	0	0	0.0	0	0	0.0
Kangar	494	378	76.5	418	326	78.0	72	49	68.1	2	1	50.0	1	1	100.0
KK-KKM Kedah	205	158	77.1	185	144	77.8	20	14	70.0	0	0	0.0	0	0	0.0
KK-KKM Kelantan	98	74	75.5	79	60	75.9	18	13	72.2	0	0	0.0	1	1	100.0
Kemaman	97	73	75.3	74	56	75.7	21	16	76.2	0	0	0.0	1	0	0.0
Sultan Ismail	523	376	71.9	500	362	72.4	18	9	50.0	4	4	100.0	1	1	100.0
Kuala Krai	254	174	68.5	204	141	69.1	48	31	64.6	1	1	100.0	1	1	100.0
Likas	18	8	44.4	0	0	0.0	0	0	0.0	18	8	44.4	0	0	0.0

Number and percentage (%) are based on available information.

1 case of SICS in Hospital Alor Setar.

Table 1.5.7-8: Post-operative Best Corrected Visual Acuity 6/18 or Better (WHO Classification) in Eyes without Ocular Co-morbidity by SDP and Types of Surgery, CSR 2017

Hospital	All Surgeries			Type of Cataract Surgery											
				Phaco			ECCE			Lens Aspiration			ICCE		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
All centre	29925	27358	91.4	28091	25868	92.1	1542	1249	81.0	200	173	86.5	41	28	68.3
Kuala Lumpur	446	441	98.9	430	425	98.8	14	14	100.0	1	1	100.0	0	0	0.0
Sandakan	315	304	96.5	282	275	97.5	32	28	87.5	1	1	100.0	0	0	0.0
Keningau	192	187	97.4	187	182	97.3	3	3	100.0	1	1	100.0	0	0	0.0
Queen Elizabeth KK	701	677	96.6	675	655	97.0	17	14	82.4	6	5	83.3	0	0	0.0
Taiping	1397	1352	96.8	1237	1198	96.8	157	151	96.2	1	1	100.0	1	1	100.0
Pusat Perubatan UKM	33	32	97.0	30	29	96.7	1	1	100.0	2	2	100.0	0	0	0.0
Seremban	885	851	96.2	838	810	96.7	42	37	88.1	2	2	100.0	0	0	0.0
Bukit Mertajam	615	594	96.6	608	588	96.7	7	6	85.7	0	0	0.0	0	0	0.0
Kluang	83	80	96.4	79	76	96.2	2	2	100.0	0	0	0.0	0	0	0.0
Ipoh	1780	1701	95.6	1734	1666	96.1	34	27	79.4	5	4	80.0	4	2	50.0
Klang	1331	1273	95.6	1285	1234	96.0	30	26	86.7	10	9	90.0	4	2	50.0
Kulim	282	265	94.0	269	255	94.8	11	8	72.7	2	2	100.0	0	0	0.0
Sarikei	161	152	94.4	161	152	94.4	0	0	0.0	0	0	0.0	0	0	0.0
Serdang	543	507	93.4	513	484	94.3	27	20	74.1	1	1	100.0	2	2	100.0
Temerloh	620	580	93.5	586	551	94.0	31	26	83.9	3	3	100.0	0	0	0.0
Sri Manjung	525	493	93.9	519	487	93.8	2	2	100.0	3	3	100.0	1	1	100.0
Muar	478	448	93.7	465	436	93.8	5	4	80.0	6	6	100.0	2	2	100.0
Putrajaya	246	225	91.5	217	203	93.5	26	19	73.1	3	3	100.0	0	0	0.0
Shah Alam	410	382	93.2	407	380	93.4	3	2	66.7	0	0	0.0	0	0	0.0
Kuantan	882	818	92.7	780	728	93.3	89	79	88.8	8	7	87.5	0	0	0.0
MAIWP	2633	2438	92.6	2581	2398	92.9	32	23	71.9	14	14	100.0	4	2	50.0
KK-KKM Johor	14	13	92.9	14	13	92.9	0	0	0.0	0	0	0.0	0	0	0.0
KK-KKM Pulau Pinang	54	50	92.6	53	49	92.5	1	1	100.0	0	0	0.0	0	0	0.0
Sungai Buloh	493	453	91.9	471	435	92.4	19	16	84.2	1	0	0.0	0	0	0.0
Batu Pahat	284	259	91.2	270	249	92.2	12	9	75.0	1	1	100.0	0	0	0.0
Kuala Pilah	226	208	92.0	221	203	91.9	5	5	100.0	0	0	0.0	0	0	0.0
Kota Bharu	972	883	90.8	763	699	91.6	197	172	87.3	8	8	100.0	3	3	100.0
KK-KKM Pahang	200	179	89.5	190	174	91.6	10	5	50.0	0	0	0.0	0	0	0.0
Sungei Petani	742	670	90.3	689	630	91.4	48	36	75.0	4	3	75.0	1	1	100.0
Melaka	1316	1189	90.3	1276	1157	90.7	31	25	80.6	7	6	85.7	0	0	0.0
Umm Sarawak	1136	1026	90.3	1111	1006	90.5	11	9	81.8	12	11	91.7	1	0	0.0
KK-KKM Neg. Sembilan	262	237	90.5	251	227	90.4	9	8	88.9	1	1	100.0	0	0	0.0
Selayang	484	435	89.9	456	412	90.4	13	11	84.6	10	9	90.0	3	1	33.3
Pulau Pinang	1072	963	89.8	1041	939	90.2	26	21	80.8	2	2	100.0	1	1	100.0
Alor Setar	1159	1029	88.8	1060	955	90.1	84	60	71.4	11	10	90.9	0	0	0.0
Sultanah Aminah JB	379	340	89.7	362	326	90.1	8	5	62.5	7	7	100.0	0	0	0.0
Segamat	301	270	89.7	291	262	90.0	6	4	66.7	3	3	100.0	1	1	100.0
Ampang	723	633	87.6	630	565	89.7	85	60	70.6	5	5	100.0	0	0	0.0
Sibu	380	333	87.6	363	324	89.3	8	5	62.5	2	1	50.0	6	3	50.0
Miri	670	598	89.3	635	566	89.1	32	29	90.6	3	3	100.0	0	0	0.0
Kuala Terengganu	650	564	86.8	568	504	88.7	65	46	70.8	14	12	85.7	1	1	100.0

Bintulu	137	121	88.3	132	117	88.6	4	4	100.0	1	0	0.0	0	0	0.0
KK-KKM Sabah	236	207	87.7	226	200	88.5	10	7	70.0	0	0	0.0	0	0	0.0
KK-KKM Sarawak	686	599	87.3	679	596	87.8	5	2	40.0	0	0	0.0	1	0	0.0
Teluk Intan	737	634	86.0	664	577	86.9	59	45	76.3	13	11	84.6	0	0	0.0
KK-KKM Terengganu	170	145	85.3	153	133	86.9	17	12	70.6	0	0	0.0	0	0	0.0
Tawau	195	166	85.1	179	155	86.6	15	10	66.7	1	1	100.0	0	0	0.0
Kangar	494	413	83.6	418	357	85.4	72	53	73.6	2	1	50.0	1	1	100.0
KK-KKM Kelantan	98	82	83.7	79	67	84.8	18	14	77.8	0	0	0.0	1	1	100.0
KK-KKM Kedah	205	170	82.9	185	153	82.7	20	17	85.0	0	0	0.0	0	0	0.0
Kemaman	97	78	80.4	74	59	79.7	21	17	81.0	0	0	0.0	1	1	100.0
Sultan Ismail	523	411	78.6	500	395	79.0	18	11	61.1	4	4	100.0	1	1	100.0
Kuala Krai	254	192	75.6	204	152	74.5	48	38	79.2	1	1	100.0	1	1	100.0
Likas	18	8	44.4	0	0	0.0	0	0	0.0	18	8	44.4	0	0	0.0

Number and percentage (%) are based on available information.

1 case of SICS in Hospital Alor Setar.

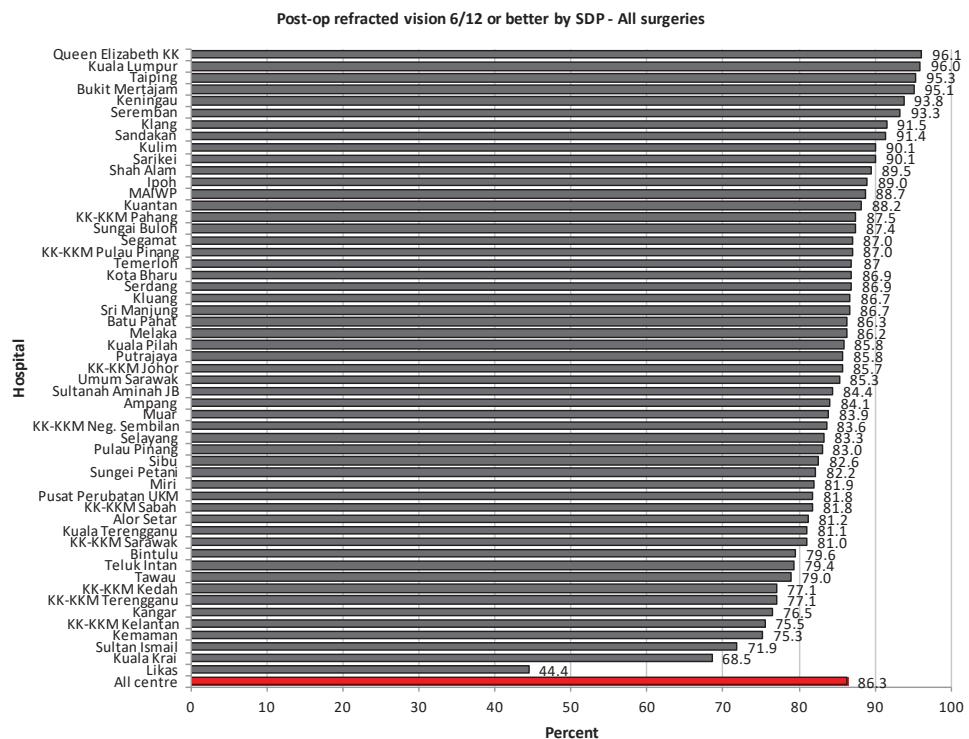


Figure 1.5.7-7: Post-operative Best Corrected Visual Acuity 6/12 or Better in Eyes Without Ocular Co-morbidity by SDP (All Surgery), CSR 2017

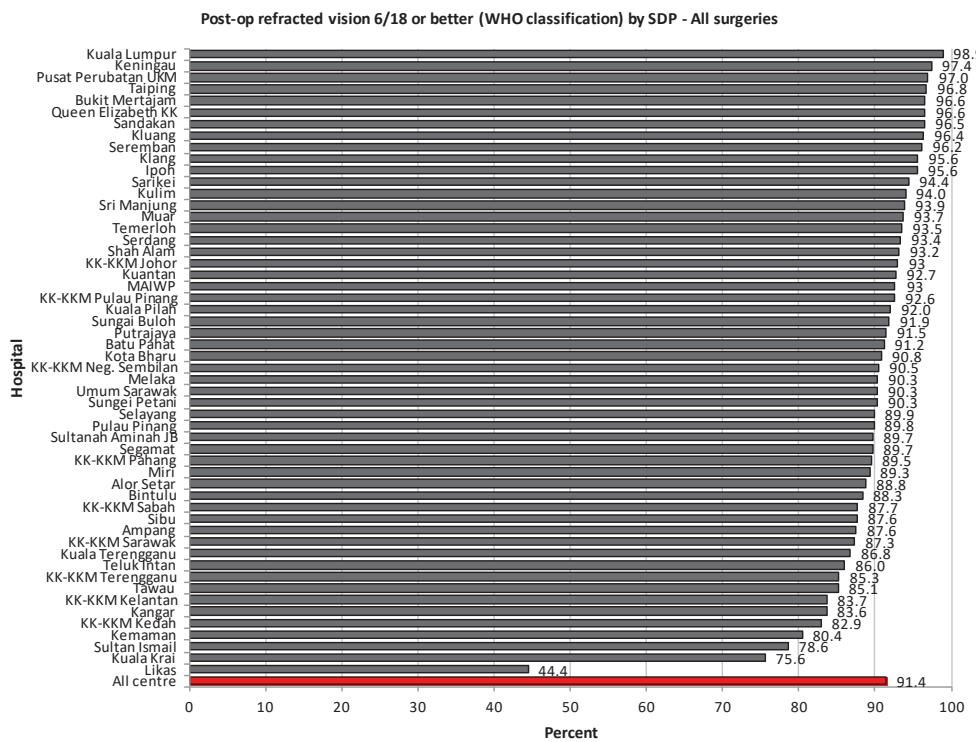


Figure 1.5.7-8: Post-operative Best Corrected Visual Acuity 6/18 or Better (WHO Classification) in Eyes Without Ocular Co-morbidity by SDP (All Surgery), CSR 2017

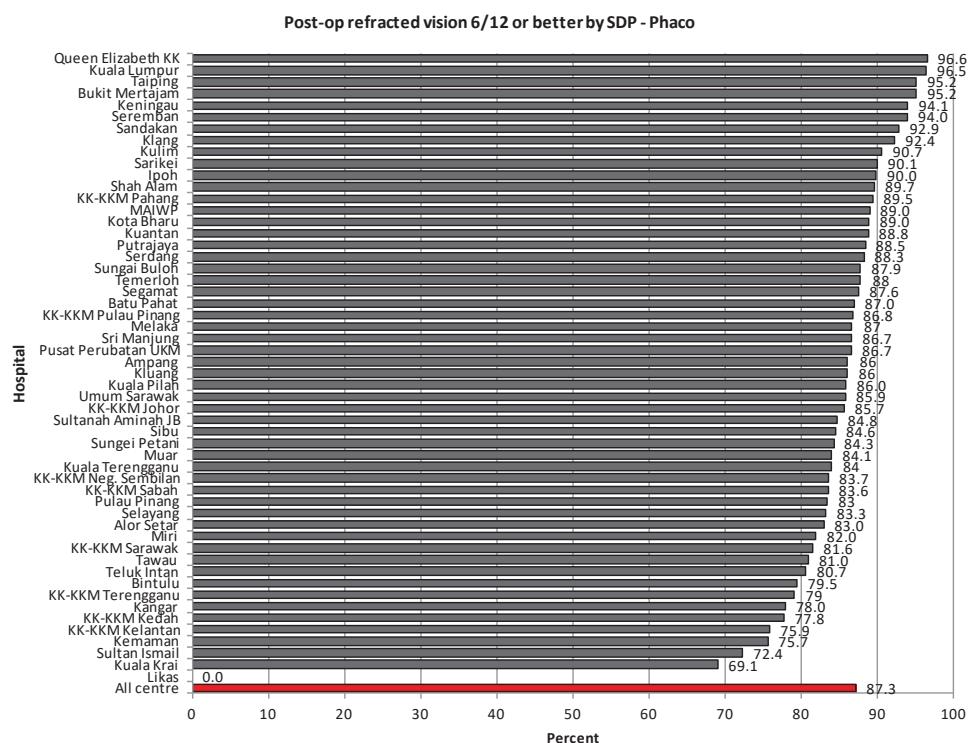


Figure 1.5.7-9: Post-operative Best Corrected Visual Acuity 6/12 or Better in Eyes Without Ocular Co-morbidity by SDP (Phaco), CSR 2017

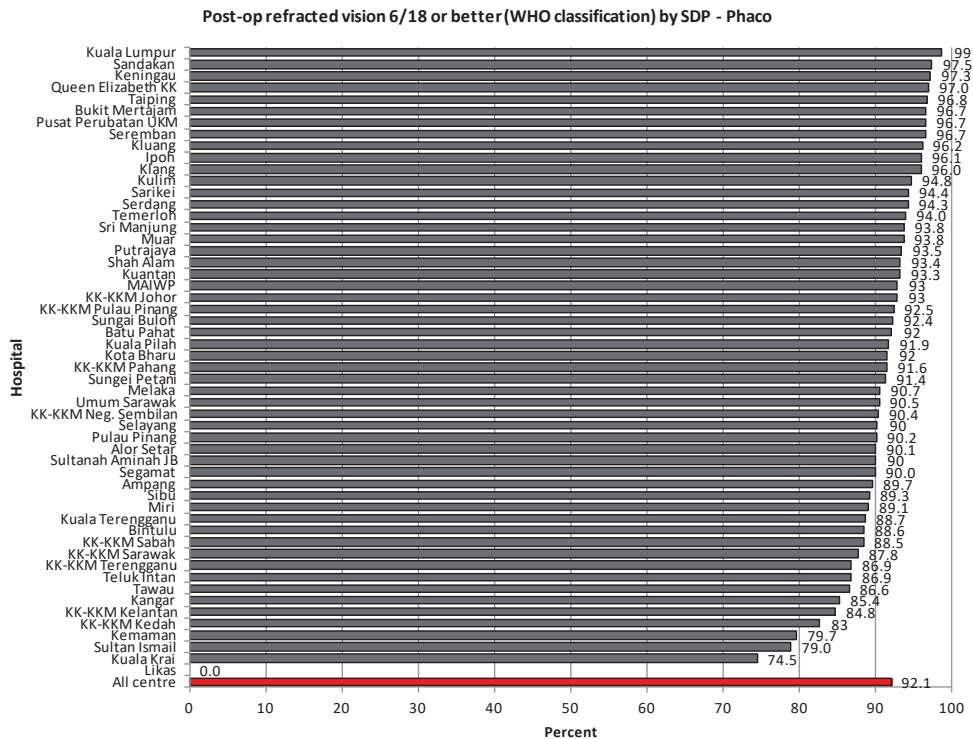


Figure 1.5.7-10: Post-operative Best Corrected Visual Acuity 6/18 or Better (WHO Classification) in Eyes Without Ocular Co-morbidity by SDP (Phaco), CSR 2017

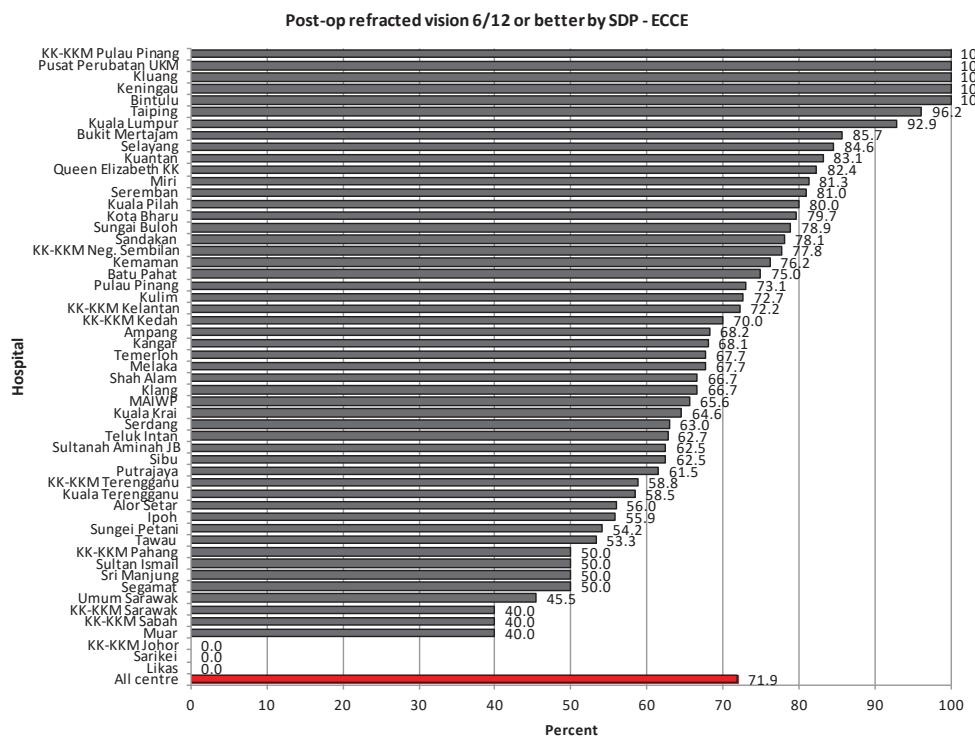


Figure 1.5.7-11: Post-operative Best Corrected Visual Acuity 6/12 or Better in Eyes Without Ocular Co-morbidity by SDP (ECCE), CSR 2017

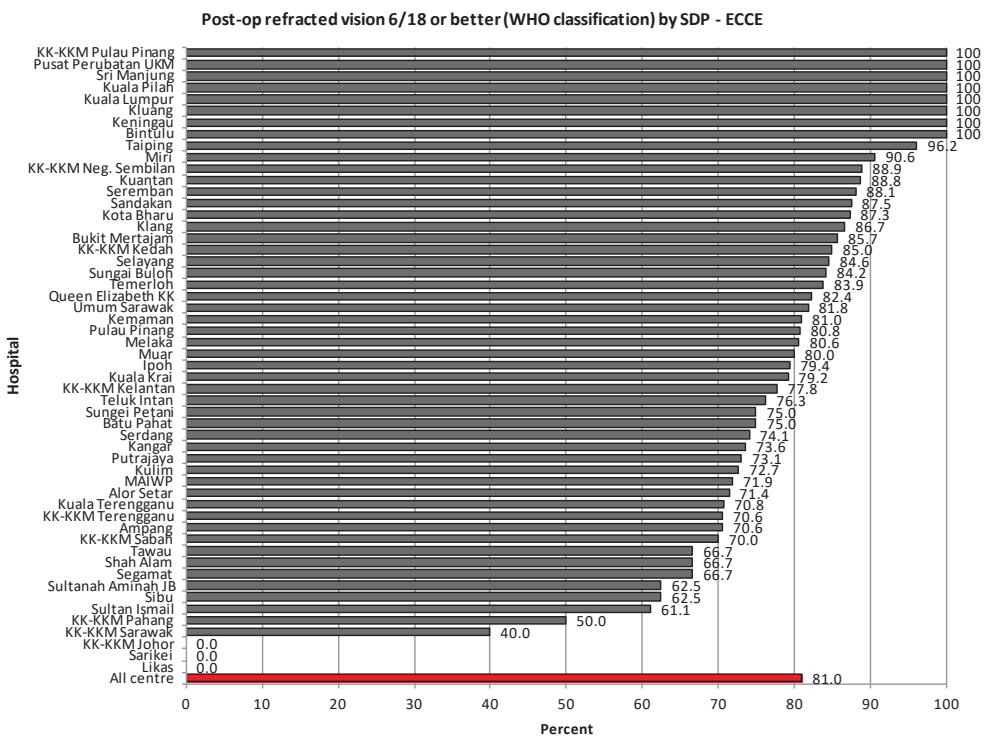


Figure 1.5.7-12: Post-operative Best Corrected Visual Acuity 6/18 or Better (WHO Classification) in Eyes

1.5.8. Reasons for No Record of Visual Acuity

Table 1.5.8-1: Reasons for No Records of Visual Acuity, CSR 2007-2017

Reasons	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
All cases	1428	100.0	1535	100.0	1805	100.0	1659	100.0	2036	100.0	2022	100.0	2333	100.0	2247	100.0	2984	100.0	2468	100.0	3711	100.0
Loss to follow-up	1018	71.3	1230	80.1	1261	69.9	1078	65.0	1362	66.9	1451	71.8	1697	72.7	1698	75.6	2024	67.8	1644	66.6	3214	86.6
Discharged by doctor	31	2.2	13	0.8	44	2.4	38	2.3	32	1.6	22	1.1	36	1.5	21	0.9	32	1.1	37	1.5	17	0.5
Unable to take vision	47	3.3	26	1.7	30	1.7	33	2.0	27	1.3	33	1.6	26	1.1	15	0.7	24	0.8	14	0.6	15	0.4
Others	269	18.8	194	12.6	222	12.3	210	12.7	186	9.1	281	13.9	260	11.1	238	10.6	301	10.1	275	11.1	217	5.8

Number and percentage (%) are based on available information.

1.5.9. Factors Contributing to Post-operative Best Corrected Visual Acuity of Worse than 6/12

Table 1.5.9-1: Factors Contributing to Post-operative Best Corrected Visual Acuity of Worse than 6/12 (All Eyes), CSR 2007-2017

Factors	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
N (total no. of post-op refracted vision worse than 6/12)	2971		2815		2973		3397		3597		3694		3948		4261		4524		6143		8511	
Preexisting ocular co-morbidity	864	29.1	800	28.4	1016	34.2	1364	40.2	1412	39.3	1544	41.8	1571	39.8	1715	40.2	1942	42.9	2084	33.9	1767	20.8
High astigmatism	471	15.9	460	16.3	395	13.3	378	11.1	397	11.0	438	11.9	435	11.0	364	8.5	366	8.1	375	6.1	343	4.0
Cystoid macular oedema	68	2.3	64	2.3	82	2.8	94	2.8	96	2.7	88	2.4	80	2.0	110	2.6	84	1.9	97	1.6	100	1.2
Posterior capsular opacity	130	4.4	112	4.0	136	4.6	112	3.3	111	3.1	114	3.1	91	2.3	94	2.2	107	2.4	83	1.4	90	1.1
Corneal decompensation	19	0.6	31	1.1	61	2.1	33	1.0	36	1.0	42	1.1	50	1.3	84	2.0	125	2.8	83	1.4	38	0.4

Retinal detachment	64	2.2	50	1.8	56	1.9	44	1.3	35	1.0	69	1.9	29	0.7	36	0.8	23	0.5	12	0.2	21	0.2
Decentered IOL	3	0.1	6	0.2	5	0.2	5	0.1	8	0.2	9	0.2	15	0.4	7	0.2	17	0.4	11	0.2	8	0.1
Endophthalmitis	11	0.4	6	0.2	6	0.2	5	0.1	2	0.1	4	0.1	2	0.1	10	0.2	8	0.2	5	0.1	5	0.1
Others	421	14.2	603	21.3	794	26.7	857	25.2	927	25.8	1072	29.0	1111	28.1	1098	25.8	1083	23.9	987	16.1	1208	14.2

Using WHO Classification

N (total no. of post-op refracted vision worse than 6/18)	1916	1803	1923	2266	2379	2367	2567	2786	2897	4001	5651											
Preexisting ocular co-morbidity	634	33.1	601	33.3	750	39.0	1028	45.4	1062	44.6	1077	45.5	1113	43.4	1242	44.6	1353	46.7	1521	38.0	1284	22.7
High astigmatism	235	12.3	261	14.5	212	11.0	202	8.9	195	8.2	242	10.2	243	9.5	215	7.7	195	6.7	216	5.4	189	3.3
Cystoid macular oedema	68	3.5	47	2.6	59	3.1	55	2.4	65	2.7	60	2.5	43	1.7	75	2.7	53	1.8	60	1.5	58	1.0
Posterior capsular opacity	68	3.5	75	4.2	83	4.3	65	2.9	70	2.9	68	2.9	46	1.8	43	1.5	63	2.2	44	1.1	49	0.9
Corneal decompensation	19	1.0	25	1.4	45	2.3	26	1.1	29	1.2	32	1.4	42	1.6	54	1.9	89	3.1	55	1.4	28	0.5
Retinal detachment	64	3.3	49	2.7	49	2.5	41	1.8	34	1.4	63	2.7	25	1.0	27	1.0	18	0.6	10	0.2	19	0.3
Decentered IOL	3	0.2	5	0.3	4	0.2	3	0.1	4	0.2	6	0.3	12	0.5	5	0.2	11	0.4	9	0.2	6	0.1
Endophthalmitis	11	0.6	5	0.3	4	0.2	3	0.1	2	0.1	4	0.2	2	0.1	8	0.3	8	0.3	5	0.1	4	0.1
Others	421	22.0	408	22.6	530	27.6	589	26.0	636	26.7	690	29.2	757	29.5	719	25.8	711	24.5	622	15.5	822	14.5

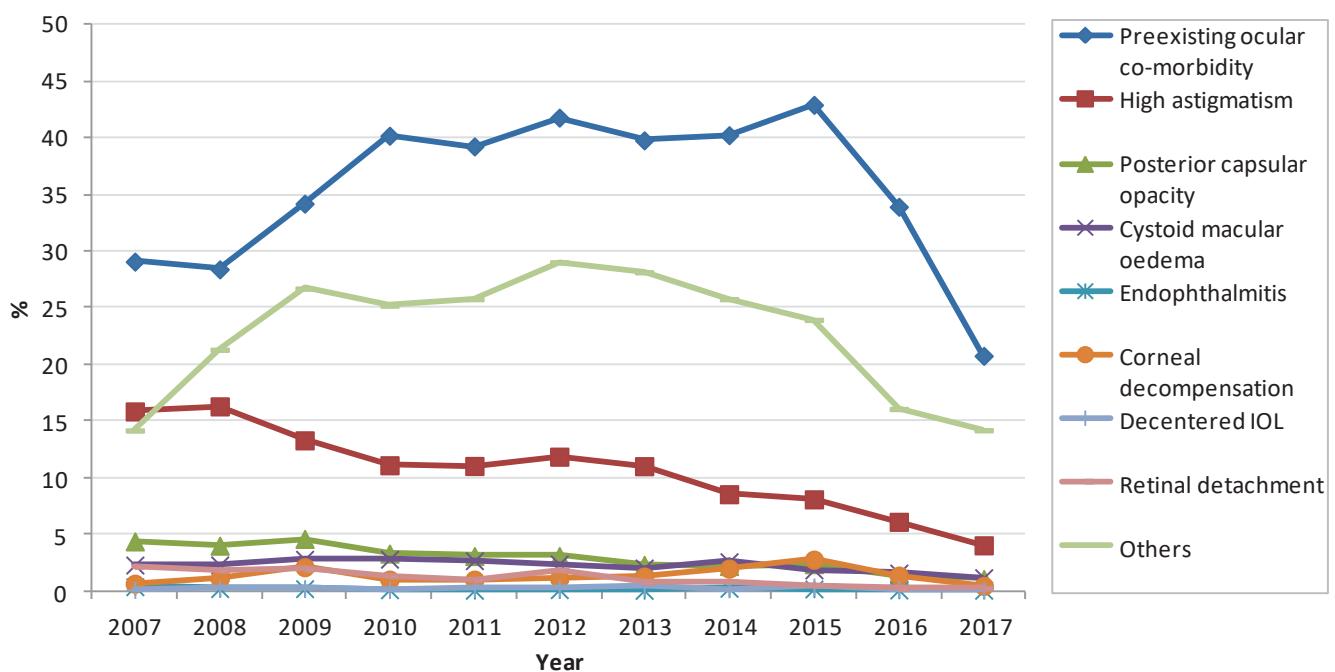


Figure 1.5.9-1: Factors Contributing to Post-operative Best Corrected Visual Acuity worse than 6/12 (All Eyes), CSR 2007-2017

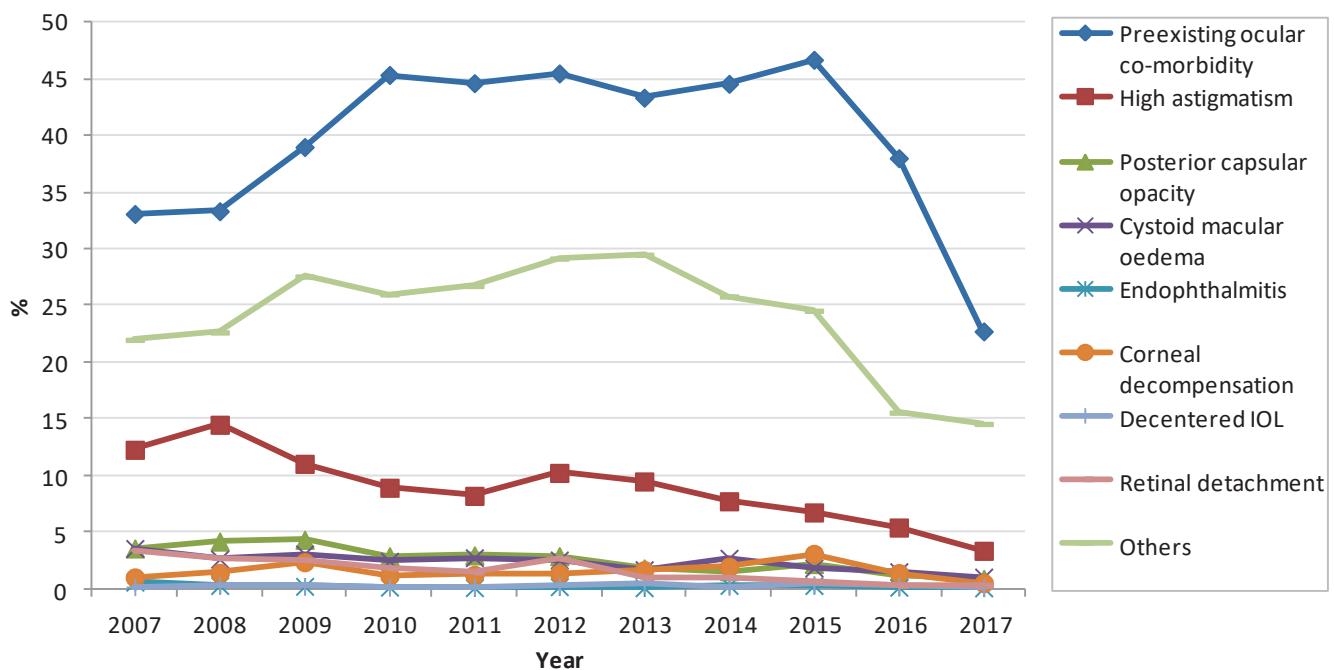


Figure 1.5.9-2: Factors Contributing to Post-operative Best Corrected Visual Acuity worse than 6/18 (All Eyes), CSR 2007-2017

Figure 1.5.9-3: Factors Contributing to Post-operative Best Corrected Visual Acuity of Worse than 6/12 (Eyes without Ocular Co-morbidity), CSR 2007-2017

Factors (not detected pre-operatively)	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
N (worse than 6/12)	1536		1382		1078		1056		1108		1134		1200		1266		1321		2189		4088	
High astigmatism	303	19.7	286	20.6	178	16.5	180	17.0	175	15.8	193	17.0	167	13.9	162	12.8	178	13.5	203	9.3	187	4.6
Preexisting ocular co-morbidity	271	17.6	228	16.5	121	11.2	92	8.7	66	6.0	98	8.6	70	5.8	112	8.8	96	7.3	95	4.3	77	1.9
Cystoid macular oedema	52	3.4	26	1.9	32	3.0	42	4.0	38	3.4	38	3.4	29	2.4	45	3.6	29	2.2	43	2.0	53	1.3
Posterior capsular opacity	83	5.4	61	4.4	87	8.1	65	6.2	50	4.5	51	4.5	39	3.3	39	3.1	45	3.4	39	1.8	49	1.2
Corneal decompensation	15	1.0	13	0.9	36	3.3	21	2.0	18	1.6	18	1.6	18	1.5	36	2.8	75	5.7	52	2.4	25	0.6
Decentered IOL	4	0.3	2	0.1	1	0.1	0	0.0	4	0.4	5	0.4	6	0.5	1	0.1	5	0.4	5	0.2	4	0.1
Endophthalmitis	9	0.6	4	0.3	4	0.4	2	0.2	1	0.1	2	0.2	0	0.0	4	0.3	3	0.2	1	0.0	4	0.1
Retinal detachment	18	1.2	11	0.8	11	1.0	6	0.6	1	0.1	6	0.5	3	0.3	3	0.2	4	0.3	2	0.1	3	0.1
Others	320	20.8	323	23.3	368	34.1	389	36.8	453	40.9	506	44.6	521	43.4	501	39.6	533	40.3	476	21.7	554	13.6
Missing/Unavailable	461	30.0	NA	-																		
Using WHO Classification																						
N (worse than 6/18)	902		805		599		611		628		633		692		718		743		1263		2567	
High astigmatism	147	16.3	158	19.6	83	13.9	98	16.0	86	13.7	98	15.5	87	12.6	86	12.0	96	12.9	114	9.0	92	3.6
Preexisting ocular co-morbidity	186	20.6	165	20.5	84	14.0	64	10.5	41	6.5	74	11.7	55	7.9	78	10.9	67	9.0	54	4.3	48	1.9
Cystoid macular oedema	35	3.9	18	2.2	19	3.2	24	3.9	21	3.3	27	4.3	14	2.0	31	4.3	19	2.6	21	1.7	29	1.1
Posterior capsular opacity	44	4.9	34	4.2	54	9.0	39	6.4	32	5.1	23	3.6	20	2.9	15	2.1	23	3.1	20	1.6	25	1.0
Corneal decompensation	11	1.2	10	1.2	24	4.0	18	2.9	13	2.1	13	2.1	14	2.0	19	2.6	51	6.9	32	2.5	17	0.7
Decentered IOL	3	0.3	2	0.2	1	0.2	0	0.0	1	0.2	3	0.5	4	0.6	1	0.1	4	0.5	3	0.2	3	0.1
Endophthalmitis	6	0.7	3	0.4	3	0.5	1	0.2	1	0.2	2	0.3	0	0.0	2	0.3	3	0.4	1	0.1	3	0.1
Retinal detachment	18	2.0	11	1.4	8	1.3	6	1.0	1	0.2	4	0.6	2	0.3	3	0.4	4	0.5	2	0.2	2	0.1
Others	206	22.8	215	26.7	226	37.7	257	42.1	293	46.7	300	47.4	316	45.7	308	42.9	320	43.1	284	22.5	349	13.6

1.5.10. Actual or Residual Refractive Power (Spherical Equivalent)

Targeted refractive power is the refractive power aimed for a patient by the surgeon, while the actual or residual refractive power or spherical equivalent (SE) is the post-operative refraction result of the same eye. Myopic shift is the shift of the refractive status (actual refraction) post-operatively towards a more negative value as compared to the targeted refraction pre-operatively. It could be the result from a more anteriorly placed IOL in the bag or surgically induced astigmatism. It could also be due to the indentation of eyeball during biometry, resulting in shorter axial length.

Table 1.5.10-1: Distribution of Target and Actual Refractive Power in ECCE and Phaco, CSR 2007-2017

Year	Target Refraction										
	All Patient										
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
N	11876	15083	20279	24528	25887	26061	28693	32260	36706	43840	48153
Mean	-0.5	-0.1	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4
SD	+0.4	+0.4	+0.4	+0.4	+0.3	+0.4	+0.3	+0.3	0.3	0.3	0.3
Median	-0.5	-0.5	-0.5	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4
Min	-9.0	-9.9	-9.9	-9.1	-9.1	-8.0	-8.5	-8.1	-9.9	-9.9	-9.9
Max	+5.0	+9.5	+5.9	+6.0	+4.8	+9.0	+9.0	+6.0	+6.1	+6.2	8.6

Year	Actual Refraction										
	ECCE										
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
N	3624	4400	4014	3853	3714	3153	2809	2429	2477	2355	2624
Mean	-1.1	-0.2	-1.1	-1.0	-1.0	-0.9	-0.9	-0.9	-0.8	-0.8	-0.8
SD	+1.4	+1.2	+1.3	+1.4	+1.3	+1.4	+1.4	+1.2	1.3	1.4	1.6
Median	-1.0	-0.2	-1.0	-1.0	-1.0	-1.0	-0.9	-0.9	-0.9	-0.9	-0.9
Min	-10.0	-8.4	-10.0	-9.2	-7.3	-8.5	-10.0	-6.7	-8.3	-8.3	-8.9
Max	+9.8	+10.0	+10.0	+10.0	+10.0	+10.0	+10.0	+10.0	10.0	10.0	10.0

Note: Eyes with actual refractive power (SE) of more than +10.0D and -10.0D were excluded from analysis

Year	Actual Refraction										
	Phaco										
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
N	8343	12085	12891	15485	17197	17931	22173	25325	27467	31587	36418
Mean	-0.8	0.0	-0.8	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6	-0.5	-0.5
SD	+1.1	1.03	+1.0	+0.9	+0.9	+0.9	+0.8	+0.8	+0.8	+0.8	0.8
Median	-0.7	0.0	-0.7	-0.6	-0.6	-0.6	-0.5	-0.5	-0.5	-0.5	-0.5
Min	-10.0	-10.0	-9.0	-10.0	-10.0	-9.9	-9.7	-10.0	-9.8	-9.0	-9.5
Max	+10.0	+10.0	+10.0	+10.0	+10.0	+10.0	+10.0	+10.0	+10.0	+10.0	10.0

Note: Eyes with actual refractive power (SE) of more than +10.0D and -10.0D were excluded from analysis

Year	Actual-Target Refraction										
	All Patient										
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
N	8738	12295	14670	17697	18813	17964	20457	23180	25888	30744	35424
Mean	-0.5	-0.4	-0.4	-0.3	-0.3	-0.3	-0.3	-0.2	-0.2	-0.2	-0.1

SD	+1.1	+1.2	+1.1	+1.1	+1.0	+1.0	+0.9	+0.9	+0.9	+0.9	0.8
Median	-0.4	-0.4	-0.4	-0.3	-0.3	-0.3	-0.2	-0.2	-0.2	-0.1	-0.1
Min	-9.5	-9.9	-8.8	-9.8	-9.2	-9.9	-9.7	-9.4	-8.0	-8.6	-9.4
Max	+5.0	+9.0	+10.7	+10.7	+10.7	+10.6	+10.7	+10.6	+11.3	+10.6	10.8

Note: Eyes with actual refractive power (SE) of more than +10.0D and -10.0D were excluded from analysis.

Number and percentage (%) are based on available information.

Table 1.5.10-2: Distribution of Targeted and Actual Refractive Power in ECCE and Phaco by Diopter, CSR 2007-2017

Year	Target Refraction											
	All Patients											
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Dioptre (D)	n	%	n	%	n	%	n	%	n	%	n	%
-10.0-<(-9.5)	0	0.0	1	0.0	2	0.0	0	0.0	0	0.0	0	0.0
-9.5-<(-9.0)	4	0.0	1	0.0	1	0.0	2	0.0	1	0.0	0	0.0
-9.0-<(-8.5)	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
-8.5-<(-8.0)	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
-8.0-<(-7.5)	2	0.0	3	0.0	1	0.0	1	0.0	0	0.0	1	0.0
-7.5-<(-7.0)	1	0.0	0	0.0	1	0.0	1	0.0	0	0.0	1	0.0
-7.0-<(-6.5)	3	0.0	1	0.0	0	0.0	1	0.0	1	0.0	0	0.0
-6.5-<(-5.0)	1	0.0	2	0.0	7	0.0	4	0.0	10	0.0	10	0.0
-5.0-<(-4.5)	3	0.0	4	0.0	7	0.0	3	0.0	5	0.0	5	0.0
-4.5-<(-4.0)	2	0.0	3	0.0	5	0.0	10	0.0	3	0.0	5	0.0
-4.0-<(-3.5)	7	0.1	8	0.1	11	0.1	5	0.0	11	0.0	5	0.0
-3.5-<(-3.0)	6	0.0	7	0.0	11	0.1	15	0.1	12	0.0	6	0.0
-3.0-<(-2.5)	13	0.1	22	0.1	18	0.1	29	0.1	15	0.1	15	0.1
-2.5-<(-2.0)	29	0.2	21	0.1	29	0.1	33	0.1	26	0.1	38	0.1
-2.0-<(-1.5)	77	0.6	48	0.3	58	0.3	46	0.2	54	0.2	67	0.3
-1.5-<(-1.0)	429	3.5	373	2.5	260	1.3	292	1.2	201	0.8	226	0.9
-1.0-<(-0.5)	467	37.	615	40.	797	39.	759	30.	750729.07190	27.	6241	21.
<0.0	0	7	5	9	2	3	0	9	750729.07190	6	684	21.
-0.5-	663	53.	748	49.	106	52.	152	62.	169165.317421	66.	242	75.
0.0-<0.5	406	3.3	719	4.8	977	4.8	921	3.8	849	3.3	631	2.4
0.5-<1.0	77	0.6	145	1.0	182	0.9	238	1.0	234	0.9	216	0.8
1.0-<1.5	12	0.1	28	0.2	17	0.1	23	0.1	20	0.1	32	0.1
1.5-<2.0	5	0.0	14	0.1	22	0.1	19	0.1	9	0.0	52	0.2
2.0-<2.5	15	0.1	10	0.1	85	0.4	69	0.3	12	0.0	123	0.5

2.5-<3.0	0	0.0	6	0.0	4	0.0	3	0.0	2	0.0	10	0.0	11	0.0	2	0.0	2	0.0	0	0.0	10	0.0
3.0-<3.5	1	0.0	2	0.0	2	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	1	0.0	0	0.0	10	0.0
3.5-<4.0	1	0.0	2	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	4	0.0	3	0.0	4	0.0
4.0-<4.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	2	0.0	2	0.0	3	0.0
4.5-<5.0	1	0.0	1	0.0	1	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0
5.0-<5.5	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.0	0	0.0	1	0.0
5.5-<6.0	0	0.0	0	0.0	2	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	1	0.0
6.0-<6.5	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0	2	0.0	1	0.0	3	0.0
6.5-<7.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	1.00
7.0-<7.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	1.00
7.5-<8.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
8.0-<8.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
8.5-<9.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	1.00
9.0-<9.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9.5-<10.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Number and percentage (%) are based on available information.

Year	Actual Refraction - ECCE																					
	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017	
Dioptre (D)	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
-10.0-<(-9.5)	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-9.5-<(-9.0)	0	0.0	1	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-9.0-<(-8.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
-8.5-<(-8.0)	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	2	0.1	0	0.0	0	0.0	1	0.0	3	0.1	0	0.0
-8.0-<(-7.5)	0	0.0	0	0.0	3	0.1	1	0.0	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0	0	0.0	1	0.0
-7.5-<(-7.0)	0	0.0	1	0.0	1	0.0	0	0.0	1	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1
-7.0-<(-6.5)	0	0.0	1	0.0	1	0.0	1	0.0	3	0.1	5	0.2	0	0.0	1	0.0	1	0.0	0	0.0	1	0.0
-6.5-<(-5.0)	0	0.0	3	0.1	10	0.2	10	0.3	16	0.4	4	0.1	2	0.1	6	0.2	7	0.3	3	0.1	12	0.5
-5.0-<(-4.5)	1	0.0	1	0.0	12	0.3	15	0.4	8	0.2	11	0.3	8	0.3	4	0.2	4	0.2	6	0.2		
-4.5-<(-4.0)	3	0.1	5	0.1	16	0.4	16	0.4	20	0.5	20	0.6	5	0.2	8	0.3	1	0.0	9	0.4	10	0.4
-4.0-<(-3.5)	8	0.2	7	0.2	52	1.3	42	1.1	30	0.8	26	0.8	27	1.0	21	0.9	9	0.4	14	0.6	11	0.4
-3.5-<(-3.0)	19	0.5	15	0.3	75	1.9	71	1.8	63	1.7	51	1.6	45	1.6	29	1.2	39	1.6	20	0.8	39	1.5
-3.0-<(-2.5)	26	0.6	41	0.9	184	4.6	137	3.6	131	3.5	128	4.1	93	3.3	75	3.1	64	2.6	74	3.1	77	2.9
-2.5-<(-2.0)	65	1.6	76	1.7	323	8.0	256	6.6	236	6.4	204	6.5	164	5.8	152	6.3	136	5.5	132	5.6	143	5.4
-2.0-<(-1.5)	149	3.6	203	4.6	515	12.8	464	12.0	464	12.5	377	12.0	303	10.8	260	10.7	257	10.	256	10.	271	10.

-1.5-<(-1.0)	360	8.7	431	9.7	723	18.0	721	18.7	665	17.9	530	16.8	492	17.5	424	17.5	445	18.0	420	17.8	478	18.2
-1.0-<(-0.5)	722	17.5	763	17.2	771	19.2	817	21.2	776	20.9	667	21.2	636	22.6	547	22.5	525	21.2	525	22.3	526	20.0
-0.5-<0.0	956	23.2	956	21.6	657	16.4	616	16.0	640	17.2	544	17.3	485	17.3	443	18.2	499	20.1	425	18.0	482	18.4
0.0-<0.5	860	20.8	983	22.2	391	9.7	375	9.7	372	10.0	297	9.4	296	10.5	264	10.9	268	10.8	275	11.7	332	12.7
0.5-<1.0	444	10.8	460	10.4	147	3.7	157	4.1	146	3.9	144	4.6	136	4.8	110	4.5	114	4.6	99	4.2	101	3.8
1.0-<1.5	236	5.7	228	5.1	54	1.3	77	2.0	66	1.8	65	2.1	46	1.6	39	1.6	41	1.7	39	1.7	51	1.9
1.5-<2.0	129	3.1	98	2.2	31	0.8	26	0.7	30	0.8	33	1.0	21	0.7	20	0.8	25	1.0	16	0.7	14	0.5
2.0-<2.5	50	1.2	48	1.1	18	0.4	13	0.3	17	0.5	9	0.3	10	0.4	9	0.4	12	0.5	11	0.5	12	0.5
2.5-<3.0	24	0.6	22	0.5	5	0.1	6	0.2	3	0.1	6	0.2	4	0.1	2	0.1	6	0.2	4	0.2	9	0.3
3.0-<3.5	15	0.4	16	0.4	1	0.0	5	0.1	4	0.1	4	0.1	3	0.1	2	0.1	1	0.0	2	0.1	2	0.1
3.5-<4.0	10	0.2	8	0.2	2	0.0	1	0.0	0	0.0	3	0.1	2	0.1	2	0.1	2	0.1	2	0.1	2	0.1
4.0-<4.5	3	0.1	3	0.1	0	0.0	2	0.1	0	0.0	3	0.1	3	0.1	2	0.1	1	0.0	1	0.0	0	0.0
4.5-<5.0	3	0.1	2	0.0	1	0.0	1	0.0	1	0.0	2	0.1	0	0.0	0	0.0	2	0.1	0	0.0	2	0.1
5.0-<5.5	3	0.1	2	0.0	1	0.0	1	0.0	1	0.0	0	0.0	2	0.1	2	0.1	2	0.1	0	0.0	2	0.1
5.5-<6.0	2	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1	1	0.0	0	0.0	0	0.0	2	0.1
6.0-<6.5	1	0.0	0	0.0	0	0.0	0	0.0	2	0.1	1	0.0	2	0.1	0	0.0	0	0.0	0	0.0	1	0.0
6.5-<7.0	2	0.0	1	0.0	0	0.0	2	0.1	2	0.1	1	0.0	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0
7.0-<7.5	1	0.0	3	0.1	1	0.0	0	0.0	0	0.0	3	0.1	0	0.0	0	0.0	1	0.0	1	0.0	2	0.1
7.5-<8.0	2	0.0	1	0.0	2	0.0	1	0.0	1	0.0	1	0.0	1	0.0	0	0.0	1	0.0	2	0.1	2	0.1
8.0-<8.5	1	0.0	3	0.1	1	0.0	1	0.0	2	0.1	1	0.0	1	0.0	0	0.0	1	0.0	1	0.0	9	0.3
8.5-<9.0	5	0.1	1	0.0	0	0.0	1	0.0	3	0.1	0	0.0	1	0.0	2	0.1	5	0.2	2	0.1	2	0.1
9.0-<9.5	1	0.0	8	0.2	3	0.1	4	0.1	5	0.1	3	0.1	3	0.1	2	0.1	0	0.0	3	0.1	4	0.2
9.5-<10.0	5	0.1	2	0.0	10	0.2	11	0.3	6	0.2	7	0.2	13	0.5	2	0.1	5	0.2	11	0.5	16	0.6

Number and percentage (%) are based on available information; eyes with actual refractive power (SE) of more than +10.0D and -10.0D were excluded from analysis.

Years	Actual Refraction - Phaco																							
	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017			
Dioptre (D)	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
-10.0-<(-9.5)	0	0.0	1	0.0	0	0.0	2	0.0	1	0.0	1	0.0	1	0.0	4	0.0	1	0.0	0	0.0	0	0.0	0	0.0
-9.5-<(-9.0)	0	0.0	7	0.1	0	0.0	1	0.0	2	0.0	2	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
-9.0-<(-8.5)	0	0.0	1	0.0	2	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0	2	0.0	3	0.0
-8.5-<(-8.0)	0	0.0	2	0.0	0	0.0	0	0.0	1	0.0	1	0.0	2	0.0	2	0.0	1	0.0	0	0.0	0	0.0	1	0.0
-8.0-<(-7.5)	0	0.0	3	0.0	0	0.0	0	0.0	1	0.0	2	0.0	4	0.0	1	0.0	2	0.0	3	0.0	1	0.0	0	0.0
-7.5-<(-7.0)	1	0.0	11	0.1	0	0.0	3	0.0	1	0.0	2	0.0	1	0.0	3	0.0	1	0.0	4	0.0	4	0.0	4	0.0
-7.0-<(-6.5)	0	0.0	6	0.0	3	0.0	3	0.0	2	0.0	2	0.0	2	0.0	1	0.0	3	0.0	3	0.0	3	0.0	3	0.0
-6.5-<(-5.0)	1	0.0	16	0.1	24	0.2	22	0.1	11	0.1	21	0.1	27	0.1	21	0.1	17	0.1	16	0.1	20	0.1	16	0.6

-5.0-<(-4.5)	1	0.0	15	0.1	14	0.1	13	0.1	11	0.1	13	0.1	11	0.0	8	0.0	6	0.0	9	0.0	19	0.1
-4.5-<(-4.0)	3	0.0	15	0.1	14	0.1	17	0.1	19	0.1	21	0.1	15	0.1	16	0.1	18	0.1	13	0.0	18	0.0
-4.0-<(-3.5)	5	0.1	19	0.2	44	0.3	41	0.3	35	0.2	37	0.2	31	0.1	35	0.1	29	0.1	37	0.1	35	0.1
-3.5-<(-3.0)	2	0.0	29	0.2	80	0.6	81	0.5	74	0.4	74	0.4	69	0.3	74	0.3	50	0.2	69	0.2	57	0.2
-3.0-<(-2.5)	7	0.1	58	0.5	212	1.6	190	1.2	163	0.9	164	0.9	169	0.8	172	0.7	160	0.6	149	0.5	173	0.5
-2.5-<(-2.0)	27	0.3	80	0.7	448	3.5	436	2.8	450	2.6	451	2.5	383	1.7	451	1.8	372	1.4	403	1.3	438	1.2
-2.0-<(-1.5)	88	1.0	147	1.2	1067	8.3	1067	6.9	1138	6.6	1100	6.1	1079	4.9	1187	4.7	121	4.4	127	4.0	135	3.7
-1.5-<(-1.0)	277	3.1	393	3.2	2115	16.4	2390	15.4	2701	15.7	2700	15.1	2993	13.5	3280	13.0	347	12.	380	12.	422	11.
-1.0-<(-0.5)	1022	11.4	1370	11.3	3232	25.1	3870	25.0	4461	25.9	4716	26.3	5735	25.9	6776	26.8	764	27.	868	27.	972	26.
-0.5-<0.0	2602	29.1	3152	26.0	3143	24.4	3941	25.5	4570	26.6	4753	26.5	6610	29.8	7865	31.1	876	31.	104	33.	118	32.
0.0-<0.5	2551	28.5	3568	29.5	1680	13.0	2177	14.1	2350	13.7	2562	14.3	3403	15.3	3761	14.9	398	14.	469	14.	612	16.
0.5-<1.0	1273	14.2	1738	14.3	513	4.0	772	5.0	762	4.4	844	4.7	1081	4.9	1130	4.5	115	4.2	136	4.3	155	4.3
1.0-<1.5	546	6.1	780	6.4	168	1.3	265	1.7	249	1.4	277	1.5	317	1.4	320	1.3	338	1.2	368	1.2	474	1.3
1.5-<2.0	268	3.0	367	3.0	66	0.5	99	0.6	90	0.5	85	0.5	123	0.6	98	0.4	97	0.4	118	0.4	146	0.4
2.0-<2.5	117	1.3	160	1.3	21	0.2	38	0.2	42	0.2	44	0.2	44	0.2	47	0.2	40	0.1	63	0.2	60	0.2
2.5-<3.0	59	0.7	56	0.5	10	0.1	14	0.1	17	0.1	17	0.1	18	0.1	19	0.1	18	0.1	30	0.1	23	0.1
3.0-<3.5	28	0.3	32	0.3	8	0.1	10	0.1	13	0.1	11	0.1	11	0.0	9	0.0	17	0.1	10	0.0	12	0.0
3.5-<4.0	17	0.2	23	0.2	4	0.0	5	0.0	4	0.0	7	0.0	4	0.0	8	0.0	12	0.0	7	0.0	7	0.0
4.0-<4.5	12	0.1	12	0.1	3	0.0	5	0.0	2	0.0	6	0.0	11	0.0	7	0.0	10	0.0	12	0.0	12	0.0
4.5-<5.0	11	0.1	4	0.0	2	0.0	2	0.0	4	0.0	1	0.0	6	0.0	3	0.0	6	0.0	7	0.0	4	0.0
5.0-<5.5	3	0.0	1	0.0	2	0.0	4	0.0	4	0.0	1	0.0	3	0.0	2	0.0	9	0.0	2	0.0	4	0.0
5.5-<6.0	1	0.0	3	0.0	1	0.0	1	0.0	2	0.0	1	0.0	1	0.0	2	0.0	1	0.0	3	0.0	5	0.0
6.0-<6.5	4	0.0	2	0.0	2	0.0	3	0.0	1	0.0	2	0.0	1	0.0	2	0.0	3	0.0	3	0.0	2	0.0
6.5-<7.0	4	0.0	1	0.0	2	0.0	2	0.0	1	0.0	1	0.0	4	0.0	2	0.0	0	0.0	1	0.0	3	0.0
7.0-<7.5	0	0.0	1	0.0	0	0.0	2	0.0	2	0.0	2	0.0	4	0.0	0	0.0	0	0.0	2	0.0	1	0.0
7.5-<8.0	2	0.0	3	0.0	0	0.0	0	0.0	1	0.0	2	0.0	3	0.0	0	0.0	5	0.0	1	0.0	2	0.0
8.0-<8.5	3	0.0	1	0.0	1	0.0	1	0.0	0	0.0	0	0.0	2	0.0	3	0.0	2	0.0	4	0.0	1	0.0
8.5-<9.0	0	0.0	0	0.0	2	0.0	1	0.0	1	0.0	1	0.0	1	0.0	4	0.0	2	0.0	3	0.0	2	0.0
9.0-<9.5	0	0.0	0	0.0	2	0.0	0	0.0	6	0.0	1	0.0	2	0.0	5	0.0	3	0.0	5	0.0	2	0.0
9.5-<10.0	4	0.0	6	0.0	6	0.0	7	0.0	5	0.0	6	0.0	1	0.0	5	0.0	7	0.0	8	0.0	7	0.0

Number and percentage (%) are based on available information; eyes with actual refractive power (SE) of more than +10.0D and -10.0D were excluded from analysis.

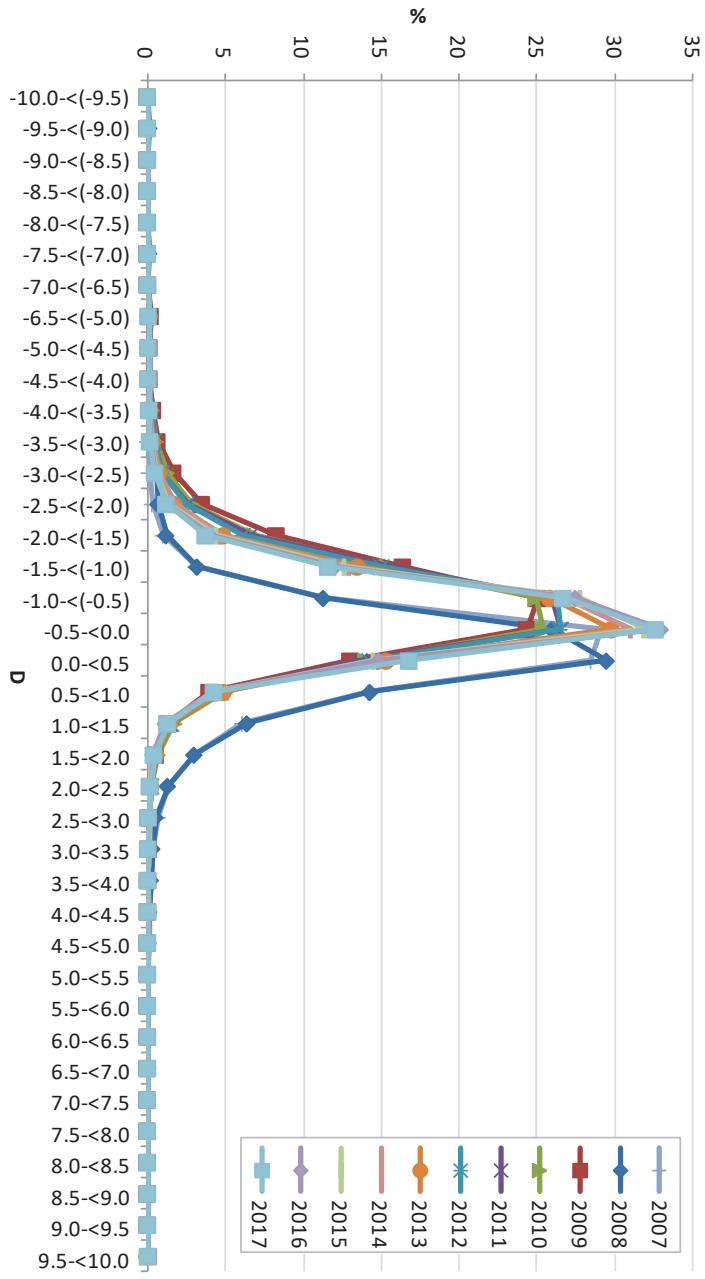


Figure 1.5.10-2: Percentage Distribution of Actual Refractive Power (Phaco), CSR 2007-2017

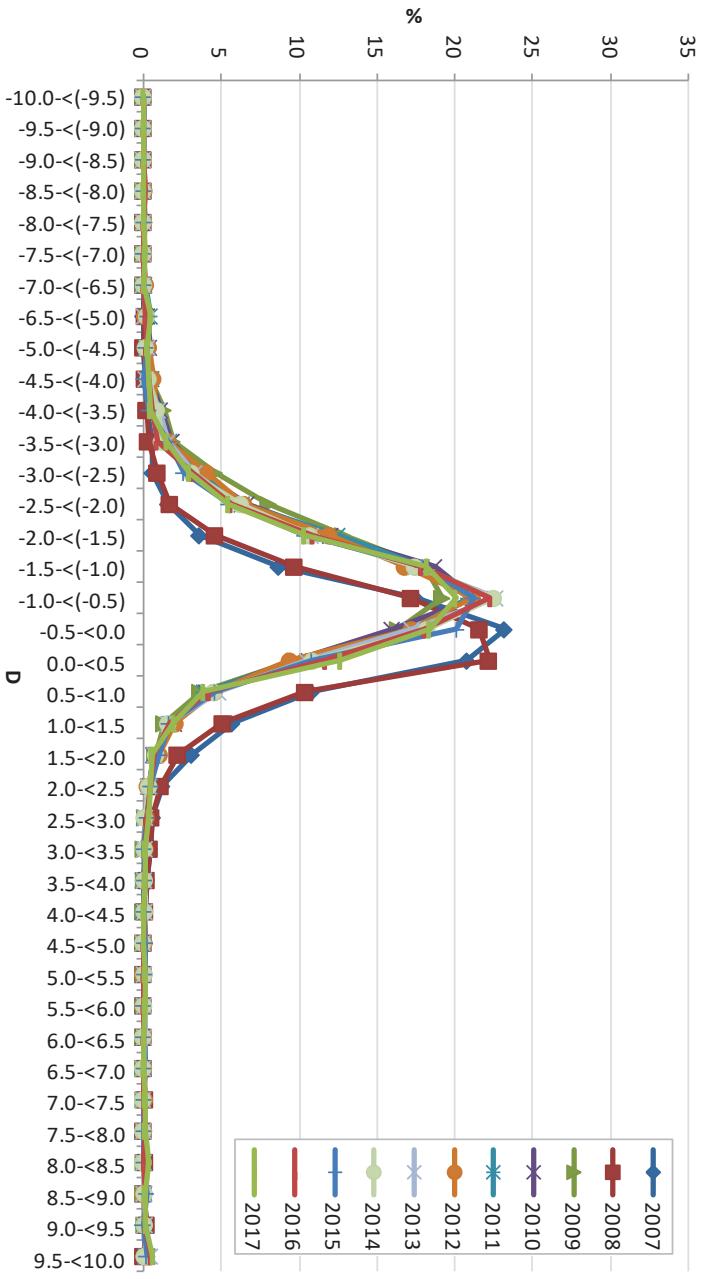


Figure 1.5.10-1: Percentage Distribution of Actual Refractive Power (ECCE), CSR 2007-2017

Table 1.5.10-3: Difference Between Targeted and Actual Refractive Power by Diopter in Phaco, CSR 2007-2017

Year	Target Refraction - Phaco																					
	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016			
Power (D)	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
N	797	100	106	100	149	100	189	100	203	100	213	100	243	100	282	100	322	100	394	100	441	100
-5.0-<(-4.5)	5	.0	60	.0	76	.0	38	.0	21	.0	28	.0	6	.0	56	.0	35	.0	25	.0	18	.0
-4.5-<(-4.0)	2	0.0	4	0.0	7	0.0	2	0.0	2	0.0	5	0.0	4	0.0	1	0.0	3	0.0	3	0.0	8	0.0
-4.0-<(-3.5)	1	0.0	3	0.0	5	0.0	9	0.0	2	0.0	4	0.0	3	0.0	4	0.0	3	0.0	2	0.0	7	0.0
-3.5-<(-3.0)	5	0.1	7	0.1	7	0.0	5	0.0	8	0.0	5	0.0	1	0.0	4	0.0	4	0.0	2	0.0	3	0.0
-3.0-<(-2.5)	5	0.1	6	0.1	9	0.1	12	0.1	10	0.0	4	0.0	8	0.0	3	0.0	8	0.0	4	0.0	6	0.0
-2.5-<(-2.0)	10	0.1	20	0.2	14	0.1	23	0.1	12	0.1	13	0.1	14	0.1	8	0.0	12	0.0	14	0.0	14	0.0
-2.0-<(-1.5)	18	0.2	16	0.2	19	0.1	27	0.1	19	0.1	30	0.1	30	0.1	23	0.1	28	0.1	31	0.1	44	0.1
-1.5-<(-1.0)	51	0.6	35	0.3	44	0.3	32	0.2	38	0.2	49	0.2	43	0.2	44	0.2	49	0.2	58	0.1	108	0.2
-1.0-<(-0.5)	239	3.0	288	2.7	184	1.2	195	1.0	158	0.8	164	0.8	149	0.6	180	0.6	206	0.6	211	0.5	371	0.8
-0.5-<(<0.0)	247	31.	406	38.	560	37.	567	30.	556	27.	570	26.	503	20.	564	20.	743	23.	106	27.	141	32.
0.0-<0.5	3	0	5	1	2	4	2	0	7	4	9	8	1	7	2	0	2	1	63	0	46	1
0.5-<1.0	451	56.	549	51.	820	54.	121	64.	138	68.	146	68.	183	75.	216	76.	240	74.	281	71.	290	65.
1.0-<1.5	2	6	8	6	1	8	44	1	64	2	53	7	02	3	41	6	58	6	46	4	75	9
1.5-<2.0	583	7.3	563	5.3	663	4.4	601	3.2	470	2.3	345	1.6	461	1.9	635	2.2	381	1.2	245	0.6	225	0.5
2.0-<2.5	45	0.6	107	1.0	129	0.9	147	0.8	143	0.7	160	0.8	144	0.6	52	0.2	28	0.1	24	0.1	46	0.1
2.5-<3.0	6	0.1	23	0.2	9	0.1	9	0.0	7	0.0	16	0.1	5	0.0	3	0.0	8	0.0	6	0.0	8	0.0
3.0-<3.5	2	0.0	7	0.1	11	0.1	7	0.0	1	0.0	43	0.2	23	0.1	2	0.0	3	0.0	0	0.0	9	0.0
3.5-<4.0	9	0.1	6	0.1	63	0.4	42	0.2	10	0.0	106	0.5	65	0.3	3	0.0	1	0.0	2	0.0	22	0.0
4.0-<4.5	1	0.0	4	0.0	2	0.0	1	0.0	2	0.0	6	0.0	10	0.0	0	0.0	1	0.0	0	0.0	8	0.0
4.5-<5.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	
5.0-<5.5	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	

Number and percentage (%) are based on available information.

	Actual Refraction - Phaco																								
Year	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017				
Power (D)	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
N	834	100	121	100	128	100	154	100	171	100	179	100	221	100	253	100	274	100	315	100	364	100	2	.0	
-5.0-<(-4.5)	15	0.2	13	0.1	14	0.1	13	0.1	11	0.1	13	0.1	11	0.0	8	0.0	6	0.0	9	0.0	19	0.1	54	.0	
-4.5-<(-4.0)	30	0.4	19	0.2	14	0.1	17	0.1	19	0.1	21	0.1	15	0.1	16	0.1	18	0.1	13	0.0	18	0.0	91	.0	
-4.0-<(-3.5)	49	0.6	17	0.1	44	0.3	41	0.3	35	0.2	37	0.2	31	0.1	35	0.1	29	0.1	37	0.1	35	0.1	85	.0	
-3.5-<(-3.0)	97	1.2	20	0.2	80	0.6	81	0.5	74	0.4	74	0.4	69	0.3	74	0.3	50	0.2	69	0.2	57	0.2	74	.0	
-3.0-<(-2.5)	200	2.4	55	0.5	212	1.6	190	1.2	163	0.9	164	0.9	169	0.8	172	0.7	160	0.6	149	0.5	173	0.5	106	.0	
-2.5-<(-2.0)	405	4.9	85	0.7	448	3.5	436	2.8	450	2.6	451	2.5	383	1.7	451	1.8	372	1.4	403	1.3	438	1.2	106	.0	
-2.0-<(-1.5)	746	8.9	164	1.3	106	8.3	106	7	6.9	113	6.6	110	6.1	107	4.9	118	4.7	121	4.4	127	4.0	135	3.7	2	.0
-1.5-<(-1.0)	138	16	423	3.5	211	16	239	15	270	15	270	15	299	13	328	13	347	12	380	12	422	11.6	5	.0	
-1.0-<(-0.5)	177	21	140	11	323	25	387	25	446	25	471	26	573	25	677	26	764	27	868	27	972	26.7	1	.0	
-0.5-<0.0	177	21	140	11	323	25	387	25	446	25	471	26	573	25	677	26	764	27	868	27	972	26.7	2	.0	
0.0-<0.5	188	22	316	26	314	24	394	25	457	26	475	26	661	29	786	31	876	31	104	33	118	32.6	1	.0	
0.0-0.5	106	12	353	29	168	13	217	14	235	13	256	14	340	15	376	14	398	14	469	14	612	16.8	9	.0	
0.5-<1.0	399	4.8	174	14	513	4.0	772	5.0	762	4.4	844	4.7	108	4.9	113	4.5	115	4.2	136	4.3	155	4.3	0	.0	
1.0-<1.5	142	1.7	786	6.5	168	1.3	265	1.7	249	1.4	277	1.5	317	1.4	320	1.3	338	1.2	368	1.2	474	1.3	3	.0	
1.5-<2.0	55	0.7	365	3.0	66	0.5	99	0.6	90	0.5	85	0.5	123	0.6	98	0.4	97	0.4	118	0.4	146	0.4	0	.0	
2.0-<2.5	14	0.2	156	1.3	21	0.2	38	0.2	42	0.2	44	0.2	44	0.2	47	0.2	40	0.1	63	0.2	60	0.2	1	.0	
2.5-<3.0	15	0.2	55	0.5	10	0.1	14	0.1	17	0.1	17	0.1	18	0.1	19	0.1	18	0.1	30	0.1	23	0.1	0	.0	
3.0-<3.5	13	0.2	30	0.2	8	0.1	10	0.1	13	0.1	11	0.1	11	0.0	9	0.0	17	0.1	10	0.0	12	0.0	0	.0	
3.5-<4.0	4	0.0	22	0.2	4	0.0	5	0.0	4	0.0	7	0.0	4	0.0	8	0.0	12	0.0	7	0.0	7	0.0	0	.0	
4.0-<4.5	3	0.0	10	0.1	3	0.0	5	0.0	2	0.0	6	0.0	11	0.0	7	0.0	10	0.0	12	0.0	12	0.0	0	.0	
4.5-<5.0	4	0.0	4	0.0	2	0.0	2	0.0	4	0.0	1	0.0	6	0.0	3	0.0	6	0.0	7	0.0	4	0.0	0	.0	
5.0-<5.5	1	0.0	1	0.0	2	0.0	4	0.0	4	0.0	1	0.0	3	0.0	2	0.0	9	0.0	2	0.0	4	0.0	0	.0	

Number and percentage (%) are based on available information; eyes with actual refractive power (SE) of more than +10.0D and -10.0D were excluded from analysis.

Year	Difference between Target and Actual Refraction - Phaco																							
	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017			
Power (D)	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
N	578	100	880	100	108	100	136	100	149	100	147	100	174	100	204	100	229	100	277	100	326	100	2	.0
-5.0-<(-4.5)	12	0.2	12	0.1	5	0.0	5	0.0	7	0.0	8	0.1	8	0.0	5	0.0	5	0.0	4	0.0	8	0.0	3	.0
-4.5-<(-4.0)	14	0.2	19	0.2	8	0.1	7	0.1	10	0.1	9	0.1	12	0.1	10	0.0	6	0.0	5	0.0	11	0.0	53	.0
-4.0-<(-3.5)	28	0.5	18	0.2	24	0.2	28	0.2	14	0.1	18	0.1	10	0.1	16	0.1	15	0.1	16	0.1	20	0.1	37	.0
-3.5-<(-3.0)	43	0.7	51	0.6	52	0.5	37	0.3	32	0.2	38	0.3	37	0.2	35	0.2	24	0.1	37	0.1	36	0.1	52	.0
-3.0-<(-2.5)	93	1.6	103	1.2	95	0.9	110	0.8	81	0.5	100	0.7	92	0.5	84	0.4	66	0.3	69	0.2	76	0.2	100	.0
-2.5-<(-2.0)	176	3.0	245	2.8	243	2.2	198	1.5	192	1.3	204	1.4	184	1.1	223	1.1	167	0.7	163	0.6	182	0.6	42	.0
-2.0-<(-1.5)	311	5.4	541	6.1	475	4.4	520	3.8	532	3.6	533	3.6	473	2.7	568	2.8	472	2.1	516	1.9	515	1.6	53	.0
-1.5-<(-1.0)	595	10.	105	12.	114	10.	129	9.5	139	9.3	130	8.8	136	7.8	153	7.5	151	6.6	154	5.5	170	5.2	1	.0
-1.0-<(-0.5)	994	17.	198	22.	215	19.	268	19.	308	20.	300	20.	342	19.	384	18.	426	18.	476	17.	495	15.2	5	.0
-0.5-<0.0	136	23.	227	25.	287	26.	371	27.	441	29.	426	29.	538	30.	653	31.	743	32.	894	32.	102	31.6	7	.0
0.0-<0.5	117	20.	143	16.	224	20.	305	22.	327	22.	325	22.	412	23.	497	24.	581	25.	762	27.	937	28.7	9	.0
0.5-<1.0	573	9.9	558	6.3	977	9.0	131	9.6	125	8.4	134	9.1	154	8.9	181	8.9	223	9.8	289	10.	394	12.1	2	.0
1.0-<1.5	225	3.9	214	2.4	310	2.9	398	2.9	399	2.7	401	2.7	484	2.8	506	2.5	581	2.5	793	2.9	961	2.9	4	.0
1.5-<2.0	73	1.3	97	1.1	125	1.2	156	1.1	99	0.7	144	1.0	167	1.0	168	0.8	184	0.8	196	0.7	324	1.0	1	.0
2.0-<2.5	32	0.6	46	0.5	43	0.4	56	0.4	61	0.4	45	0.3	46	0.3	58	0.3	51	0.2	77	0.3	87	0.3	1	.0
2.5-<3.0	14	0.2	26	0.3	14	0.1	20	0.1	19	0.1	19	0.1	22	0.1	29	0.1	27	0.1	43	0.2	44	0.1	1	.0
3.0-<3.5	13	0.2	15	0.2	5	0.0	10	0.1	12	0.1	10	0.1	6	0.0	12	0.1	15	0.1	27	0.1	17	0.1	1	.0
3.5-<4.0	8	0.1	15	0.2	8	0.1	10	0.1	4	0.0	6	0.0	7	0.0	6	0.0	8	0.0	5	0.0	13	0.0	1	.0
4.0-<4.5	3	0.0	12	0.1	3	0.0	4	0.0	3	0.0	2	0.0	4	0.0	6	0.0	7	0.0	6	0.0	6	0.0	1	.0
4.5-<5.0	3	0.0	12	0.1	2	0.0	3	0.0	0	0.0	2	0.0	7	0.0	6	0.0	7	0.0	9	0.0	12	0.0	1	.0
5.0-<5.5	9	0.2	9	0.1	1	0.0	2	0.0	1	0.0	0	0.0	2	0.0	3	0.0	8	0.0	7	0.0	1	0.0	1	.0

NOTE: Formula of SE = Sp + ($\frac{C_y}{2}$)

Number and percentage (%) are based on available information; eyes with actual refractive power (SE) of more than +10.0D and -10.0D were excluded from analysis.

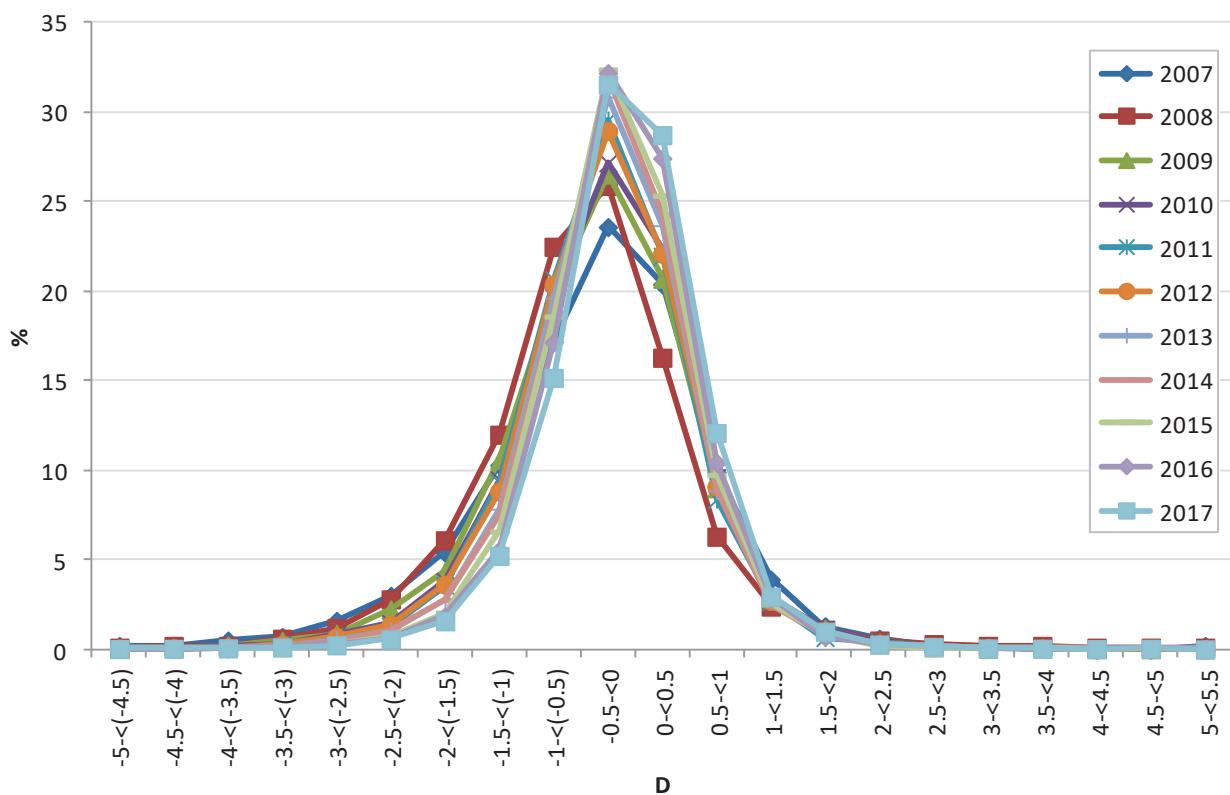


Figure 1.5.10-3: Difference in Target and Actual Refractive Power (Phaco), CSR 2007-2017

Table 1.5.10-4: Difference Between Target and Actual Refractive Power within ± 1.0 D by SDP in Phaco and ECCE, CSR

	N	n	%	N	n	%	N	n	%
All centre	35424	30447	86.0	32626	28568	87.6	2336	1555	66.6
Miri	939	881	93.8	872	833	95.5	56	38	67.9
MAIWP	2425	2259	93.2	2376	2222	93.5	28	18	64.3
Sarikei	255	233	91.4	251	230	91.6	3	2	66.7
Melaka	1849	1689	91.3	1747	1619	92.7	77	51	66.2
Taiping	1601	1454	90.8	1414	1302	92.1	184	149	81.0
KK-KKM Pulau Pinang	76	69	90.8	75	68	90.7	1	1	100.0
Kluang	168	152	90.5	159	145	91.2	7	5	71.4
Teluk Intan	1039	936	90.1	926	852	92.0	96	71	74.0
Shah Alam	62	55	88.7	60	54	90.0	2	1	50.0
Batu Pahat	405	359	88.6	368	330	89.7	31	23	74.2
Kuala Lumpur	526	465	88.4	500	444	88.8	22	17	77.3
Kulim	526	464	88.2	487	432	88.7	35	28	80.0
Klang	271	238	87.8	259	228	88.0	11	9	81.8
Bukit Mertajam	1110	971	87.5	1075	948	88.2	28	18	64.3
KK-KKM Kedah	207	181	87.4	183	169	92.3	24	12	50.0
KK-KKM Pahang	222	194	87.4	211	187	88.6	11	7	63.6
Bintulu	111	97	87.4	106	92	86.8	5	5	100.0
Kangar	716	622	86.9	595	538	90.4	111	76	68.5
Sungei Petani	1049	912	86.9	982	871	88.7	58	34	58.6

Sibu	650	563	86.6	613	538	87.8	16	11	68.8
Putrajaya	434	376	86.6	367	322	87.7	63	50	79.4
Ipoh	2536	2195	86.6	2412	2112	87.6	94	66	70.2
KK-KKM Terengganu	201	174	86.6	179	156	87.2	22	18	81.8
Kuantan	948	820	86.5	792	705	89.0	140	100	71.4
Sri Manjung	718	619	86.2	701	607	86.6	12	7	58.3
Selayang	790	680	86.1	744	649	87.2	28	18	64.3
KK-KKM Sarawak	567	487	85.9	558	482	86.4	7	5	71.4
Temerloh	698	598	85.7	646	573	88.7	45	21	46.7
Kuala Pilah	341	291	85.3	327	280	85.6	13	10	76.9
Umum Sarawak	1280	1078	84.2	1250	1060	84.8	13	7	53.8
Tawau	151	127	84.1	141	119	84.4	10	8	80.0
Kota Bharu	859	719	83.7	658	587	89.2	182	119	65.4
Sultanah Aminah JB	675	565	83.7	619	530	85.6	29	21	72.4
Serdang	544	454	83.5	509	427	83.9	30	22	73.3
Pulau Pinang	1499	1247	83.2	1447	1219	84.2	37	19	51.4
Pusat Perubatan UKM	46	38	82.6	44	37	84.1	1	1	100.0
Queen Elizabeth KK	650	537	82.6	598	498	83.3	37	27	73.0
Keningau	234	193	82.5	228	191	83.8	5	1	20.0
KK-KKM Sabah	223	184	82.5	213	178	83.6	7	4	57.1
Kuala Terengganu	995	818	82.2	847	721	85.1	117	76	65.0
Ampang	816	671	82.2	709	586	82.7	98	77	78.6
Kuala Krai	266	217	81.6	197	167	84.8	68	49	72.1
Segamat	103	84	81.6	101	83	82.2	1	0	0.0
Sungai Buloh	59	48	81.4	55	46	83.6	4	2	50.0
Muar	930	753	81.0	871	720	82.7	43	24	55.8
Alor Setar	1900	1537	80.9	1676	1415	84.4	202	113	55.9
Sultan Ismail	685	549	80.1	646	528	81.7	29	16	55.2
Seremban	1378	1068	77.5	1257	1007	80.1	106	51	48.1
Sandakan	258	200	77.5	221	174	78.7	36	25	69.4
KK-KKM Neg. Sembilan	226	175	77.4	216	169	78.2	6	4	66.7
Kemaman	94	72	76.6	66	61	92.4	25	9	36.0
KK-KKM Johor	14	10	71.4	14	10	71.4	0	0	0.0
KK-KKM Kelantan	79	56	70.9	58	47	81.0	20	9	45.0
Likas	20	13	65.0	0	0	0.0	0	0	0.0

NOTE: Formula of Actual Refraction, $SE = Sp + (\frac{CV}{2})$

Result is based on available info of target and actual refraction; eyes with actual refractive power (SE) of more than +10.0D and -10.0D were excluded from analysis.

Table 1.5.10-5: Post-operative Visual Acuity and Week of Outcome Notification, CSR 2017

Post op week	Unaided VA*									
	6/12 and better		<6/12-6/18		<6/18-6/60		<6/60-3/60		<3/60	
	n	%	n	%	n	%	n	%	n	%
1 week	541	2.3	242	3.0	433	3.8	39	2.9	146	4.3
2-4 weeks	2473	10.4	1006	12.4	1353	11.9	161	12.0	428	12.5
5-12 weeks	19449	81.5	6412	78.9	8747	77.2	1029	77.0	2549	74.6
13-20 weeks	746	3.1	246	3.0	373	3.3	38	2.8	109	3.2
21-30 weeks	97	0.4	27	0.3	54	0.5	4	0.3	16	0.5

31–60 weeks	32	0.1	7	0.1	21	0.2	2	0.1	4	0.1
>60 weeks	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
(Missing)	539	2.3	188	2.3	351	3.1	64	4.8	164	4.8
Total	23877		8128		11332		1337		3416	

*Missing of unaided VA = 6152 cases.

Post op week	Refracted VA*									
	6/12 and better		<6/12-6/18		<6/18-6/60		<6/60-3/60		<3/60	
	n	%	n	%	n	%	n	%	n	%
1 week	294	0.8	38	1.3	60	1.7	8	1.5	27	1.7
2–4 weeks	3955	10.9	359	12.6	424	12.1	58	10.9	186	11.5
5–12 weeks	30540	83.8	2338	81.7	2776	79.1	428	80.8	1289	79.9
13–20 weeks	1145	3.1	81	2.8	148	4.2	13	2.5	63	3.9
21–30 weeks	152	0.4	6	0.2	23	0.7	4	0.8	7	0.4
31–60 weeks	49	0.1	2	0.1	12	0.3	1	0.2	1	0.1
>60 weeks	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
(Missing)	297	0.8	36	1.3	65	1.9	18	3.4	40	2.5
Total	36432		2860		3508		530		1613	

*Missing of refracted VA = 9299 cases.

Additional:

Post op week	Unaided VA*						Refracted VA**					
	Good (≤6/18)		Borderline (<6/18–6/60)		Poor (<6/60)		Good (≤6/18)		Borderline (<6/18–6/60)		Poor (<6/60)	
	n	%	n	%	n	%	n	%	n	%	n	%
1 week	783	2.4	433	3.8	185	3.9	332	0.8	60	1.7	35	1.6
2–4 weeks	3479	10.9	1,353	11.9	589	12.4	4314	11.0	424	12.1	244	11.4
5–12 weeks	25861	80.8	8747	77.2	3578	75.3	32878	83.7	2776	79.1	1717	80.1
13–20 weeks	992	3.1	373	3.3	147	3.1	1226	3.1	148	4.2	76	3.5
21–30 weeks	124	0.4	54	0.5	20	0.4	158	0.4	23	0.7	11	0.5
31–60 weeks	39	0.1	21	0.2	6	0.1	51	0.1	12	0.3	2	0.1
>60 weeks	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
(Missing)	727	2.3	351	3.1	228	4.8	333	0.8	65	1.9	58	2.7
Total	32005		11332		4753		39292		3508		2143	

*Missing of unaided VA = 6152 cases.

**Missing of refracted VA = 9299 cases.

CHAPTER 2: KLINIK KATARAK -KKM

Klinik Katarak-KKM (KK-KKM) is the outreach arm of the MOH Cataract Surgical Services. The services include KK-KKM mobile, transit, static and carnival. All these services are categorised under each state and named after the hospital where the surgery is performed. KK-KKM Static is specifically Pusat Pembedahan Katarak Majlis Agama Islam Wilayah Persekutuan-Hospital Selayang (PPKM-HS) and KK-KKM Kedah (Hospital Jitra). They are reported separately. For this report, calculation and analysis were done for KK-KKM mobile, transit and carnival.



Note:

KK-KKM Mobile = Surgery at hospitals without Ophthalmologists with involvement of a mobile unit to transport surgical equipment

KK-KKM Transit = Surgery at hospitals without Ophthalmologists without involvement of a mobile unit to transport surgical equipment

KK-KKM Carnival = Surgery at hospitals with Ophthalmologists (mass surgery during weekends)

2.1 Stock and Flow

2.1.1 Stock and Flow

Table 2.1.1-1: Stock and Flow, CSR 2013-2017

Year	2013	2014	2015	2016	2017					
No. of SDP	6	18	25	24	34					
Total no. of cataract surgery registered to CSR	140	1055	1704	2159	2993					
Cataract surgery with visual outcome records	n 98	% 70.0	n 863	% 81.8	n 1455	% 85.4	n 1765	% 81.8	n 2496	% 83.4

Excluding KK-KKM Static

2.2 Characteristics of Patients

2.2.1 Demography

Table 2.2.1-1: Age Distribution, CSR 2013-2017

Year	2013	2014	2015	2016	2017	
Total number of cataract surgery	140	1055	1704	2159	2993	
Age						
Mean (years)	67.4	68.6	68.4	67.5	67.6	
Median (years)	69	69	69	68	68	
Minimum (years)	47	34	33	25	24	
Maximum (years)	89	95	97	98	98	
% Distribution						
Age group, years		n	%	n	%	
0-4		0	0.0	0	0.0	
5-9		0	0.0	0	0.0	
10-14		0	0.0	0	0.0	
15-19		0	0.0	0	0.0	
20-24		0	0.0	0	0.0	
25-29		0	0.0	0	0.0	
30-34		0	0.0	1	0.1	
35-39		0	0.0	1	0.1	
40-44		0	0.0	10	1.0	
45-49		5	3.6	19	1.8	
50-54		10	7.1	31	2.9	
55-59		10	7.1	92	8.7	
60-64		22	15.7	164	15.6	
65-69		28	20.0	241	22.8	
70-74		35	25.0	217	20.6	
75-79		22	15.7	159	15.1	
≥80		8	5.7	120	11.4	
Missing		0	0.0	0	0.0	
Gender						
Male	59	42.1	495	46.9	832	48.8
Female	81	57.9	560	53.1	872	51.2
Missing	0	0.0	0	0.0	0	0.0

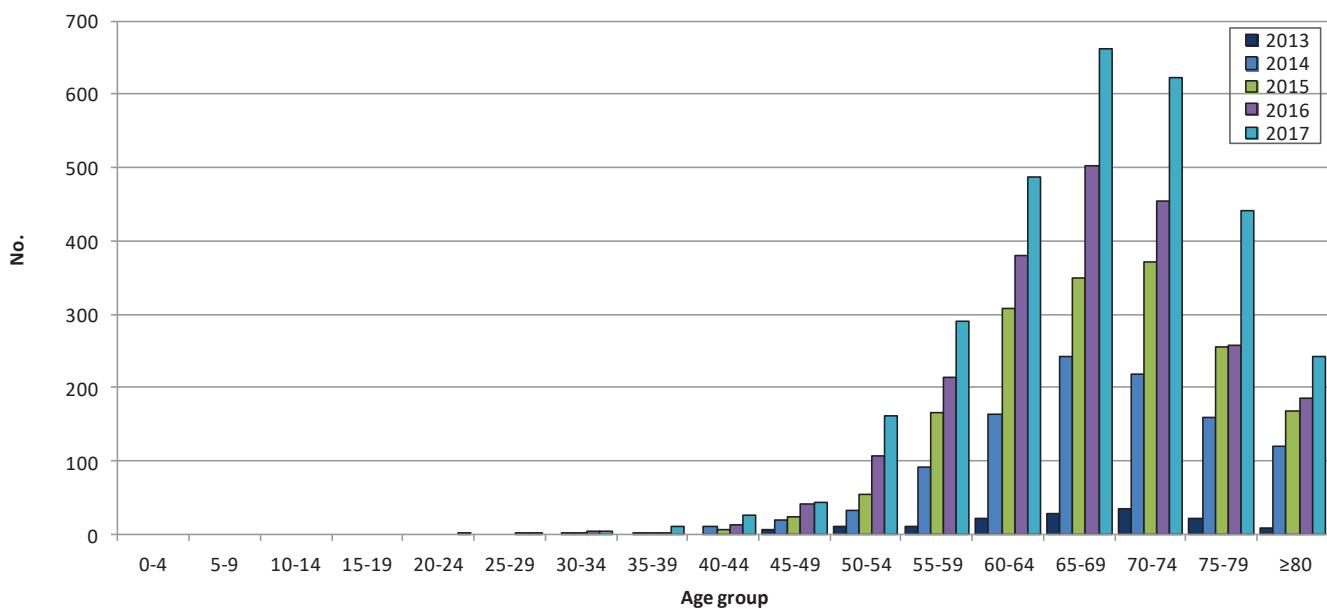


Figure 2.2.1-1: Age Distribution, CSR 2013-2017

2.2.2 Systemic Co-morbidity

Table 2.2.2-1: Distribution of Systemic Co-morbidity, CSR 2013-2017

Year	2013	2014	2015	2016	2017	
No of patients (N)	140	1055	1704	2159	2993	
Percentage of patients with any systemic co-morbidity	65.7	57.3	65.6	72.0	73.9	
Percentage of patients with specific systemic co-morbidity						
	n	%	n	%	n	%
1. Hypertension	72	51.4	500	47.4	980	57.5
2. Diabetes Mellitus	45	32.1	259	24.5	510	29.9
3. Ischaemic Heart Disease	2	1.4	11	1.0	43	2.5
4. COAD/Asthma	2	1.4	24	2.3	31	1.8
5. Renal Failure	0	0.0	6	0.6	16	0.9
5. Cerebrovascular accident	1	0.7	3	0.3	7	0.4
7. Others	12	8.6	55	5.2	112	6.6
					250	14.7
					438	14.6

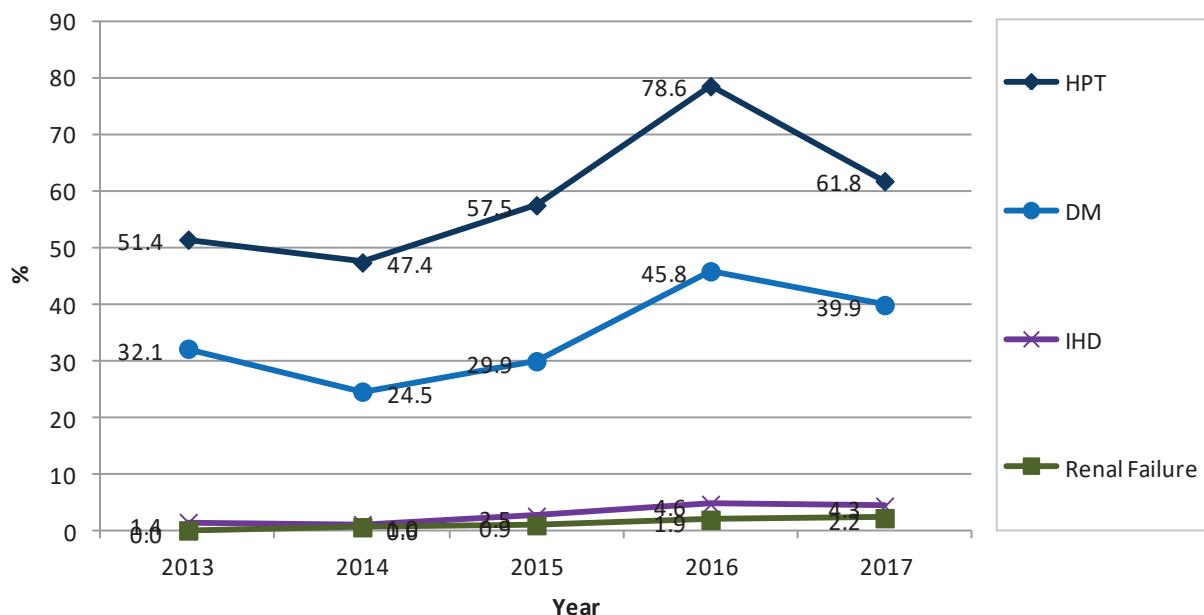


Figure 2.2.2-1: Percentage of Patients with Specific Systemic Co-morbidity, CSR 2013-2017

2.2.3 Causes of Cataract

Table 2.2.3-1: Causes of Cataract, CSR 2013-2017

Year	2013	2014	2015	2016	2017
No of patients (N)	140	1055	1704	2159	2993
	n %	n %	n %	n %	n %
Primary cataract	139 99.3	1043 98.9	1693 99.4	2148 99.5	2883 96.3
Secondary cataract	1 0.7	3 0.3	2 0.1	5 0.2	17 0.6
Missing value	0 0.0	9 0.9	9 0.5	6 0.3	93 3.1
Primary Cataract (N)	139	1043	1693	2148	2883
	n %	n %	n %	n %	n %
Senile/age related	136 97.8	1039 99.6	1672 98.8	2135 99.4	2851 98.9
Development	0 0.0	0 0.0	0 0.0	4 0.2	5 0.2
Congenital	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0
Others	3 2.2	4 0.4	21 1.2	9 0.4	27 0.9
Secondary Cataract (N)	1	3	2	5	17
	n %	n %	n %	n %	n %
Trauma	1 100.0	3 100.0	2 100.0	3 60.0	8 47.1
Drug induced	0 0.0	0 0.0	0 0.0	0 0.0	2 11.8
Surgery induced	0 0.0	0 0.0	0 0.0	1 20.0	0 0.0
Others	0 0.0	0 0.0	0 0.0	1 20.0	7 41.2

2.2.4 First or Second Eye Surgery

Table 2.2.4-1: First or Second Eye Surgery, CSR 2013-2017

Year	2013	2014	2015	2016	2017
No of patients (N)	140	1055	1704	2159	2993
	n %	n %	n %	n %	n %
First eye surgery	132 94.3	850 80.6	1305 76.6	1547 71.7	2071 69.2
Fellow eye surgery	8 5.7	205 19.4	399 23.4	611 28.3	922 30.8
Missing	0 0.0	0 0.0	0 0.0	1 0.0	0 0.0
Patients who had second surgery in the same year	2 1.4	58 5.5	111 6.5	151 7.0	241 8.1
Period of time between first and fellow eye surgery (months)					
N	8	205	396	610	883
Mean	36.7	75.9	48.1	48.4	43.1
SD	21.8	68.6	64.1	65.2	61.7
Median	43.0	50.1	12.0	13.0	13.5
Patients who had cataract surgery before	620	205	399	611	922
	n %	n %	n %	n %	n %
Eyes with intra-operative complications during surgery in the first eye	0 0.0	2 1.0	4 1.0	15 2.5	25 2.7

2.2.5 Past Ocular Surgery of the Operated Eye

Table 2.2.5-1: Past Ocular Surgery of the Operated Eye, CSR 2013-2017

Year	2013	2014	2015	2016	2017
No. of patients	104	1055	1704	2159	2993
No. of eyes with past ocular surgery record (N)	129	1042	1649	2122	2842
	n %	n %	n %	n %	n %
Patients with no past ocular surgery	129 100.0	1037 99.5	1634 99.1	2105 99.2	2796 98.4
Pterygium excision	0 0.0	3 0.3	13 0.8	11 0.5	37 1.3
Vitreoretinal surgery	0 0.0	1 0.1	1 0.1	3 0.1	0 0.0
Filtering surgery	0 0.0	0 0.0	0 0.0	1 0.0	0 0.0
Penetrating keratoplasty	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0
Others	0 0.0	1 0.1	1 0.1	2 0.1	9 0.3

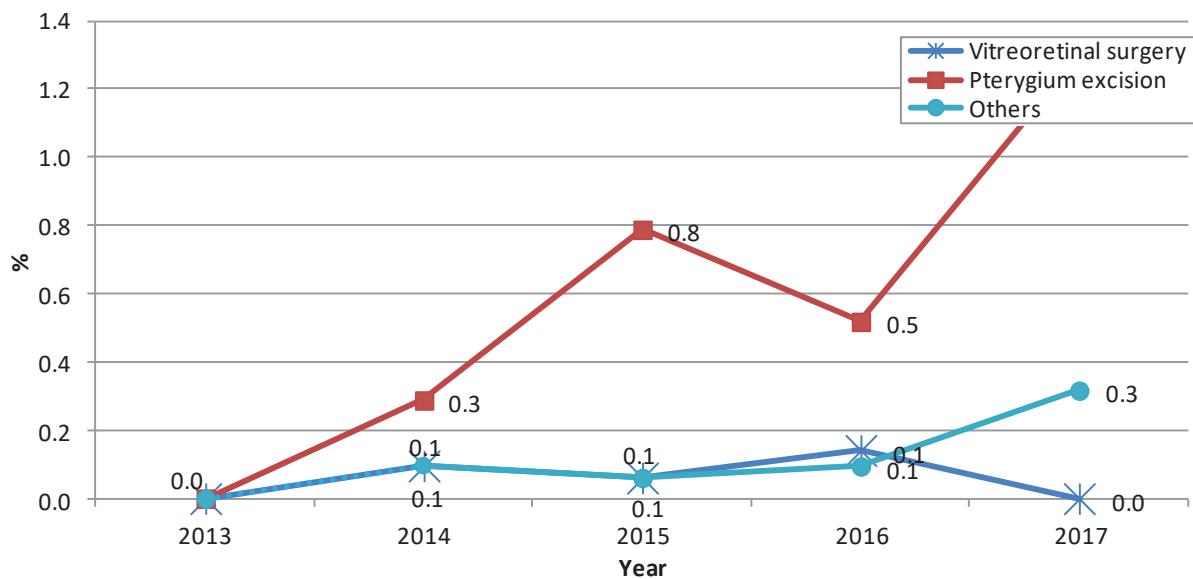


Figure 2.2.5-1: Distribution of Past Ocular Surgery of the Operated Eye, CSR 2013-2017

2.2.6 Pre-existing Ocular Co-morbidity

Table 2.2.6-2.2.6-1: Distribution of Pre-existing Ocular Co-morbidity, CSR 2013-2017

Year	2013	2014	2015	2016	2017
No of patients (N)	140 n %	1055 n %	1704 n %	2159 n %	2993 n %
Patients with any ocular co-morbidity	47 33.6	256 24.3	239 14.0	417 19.3	612 20.4
Patients with specific ocular co-morbidity					
Anterior segment					
1. Glaucoma	2 1.4	9 0.9	32 1.9	54 2.5	73 2.4
2. Pterygium involving the cornea	4 2.9	17 1.6	5 0.3	24 1.1	55 1.8
3. Pseudoexfoliation	1 0.7	3 0.3	4 0.2	11 0.5	15 0.5
4. Corneal opacity	0 0.0	2 0.2	5 0.3	14 0.6	8 0.3
5. Chronic uveitis	0 0.0	0 0.0	0 0.0	0 0.0	3 0.1
Len related complication					
1. Subluxated/Disclosed	0 0.0	0 0.0	0 0.0	0 0.0	5 0.2
2. Phacomorphic	0 0.0	0 0.0	0 0.0	0 0.0	1 0.0
3. Phacolytic	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0
Posterior segment					
1. Cannot be assessed	34 24.3	204 19.3	121 7.1	136 6.3	187 6.2
2. Diabetic Retinopathy: Non Proliferative	1 0.7	9 0.9	45 2.6	97 4.5	134 4.5
3. Diabetic Retinopathy: Proliferative	0 0.0	0 0.0	7 0.4	22 1.0	38 1.3
4. Diabetic Retinopathy: CSME*	0 0.0	1 0.1	10 0.6	22 1.0	33 1.1
5. ARMD	3 2.1	4 0.4	8 0.5	21 1.0	24 0.8
6. Diabetic Retinopathy: Vitreous haemorrhage	0 0.0	0 0.0	0 0.0	0 0.0	5 0.2

7. Optic nerve disease, any type	0	0.0	0	0.0	5	0.3	7	0.3	3	0.1
8. Retinal detachment	0	0.0	0	0.0	0	0.0	3	0.1	4	0.1
9. Other macular disease (includes hole or scar)	0	0.0	2	0.2	5	0.3	10	0.5	15	0.5
Miscellaneous										
1. Amblyopia	0	0.0	1	0.1	1	0.1	0	0.0	1	0.0
2. Significant previous eye trauma	0	0.0	1	0.1	0	0.0	1	0.0	1	0.0
3. Pre-existing non glaucoma field defect	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
4. Others	8	5.7	11	1.0	29	1.7	44	2.0	96	3.2

*CSME=Clinically Significant Macular Oedema

Number or percentage may be more than total or 100% as patients might have more than one ocular co-morbidity

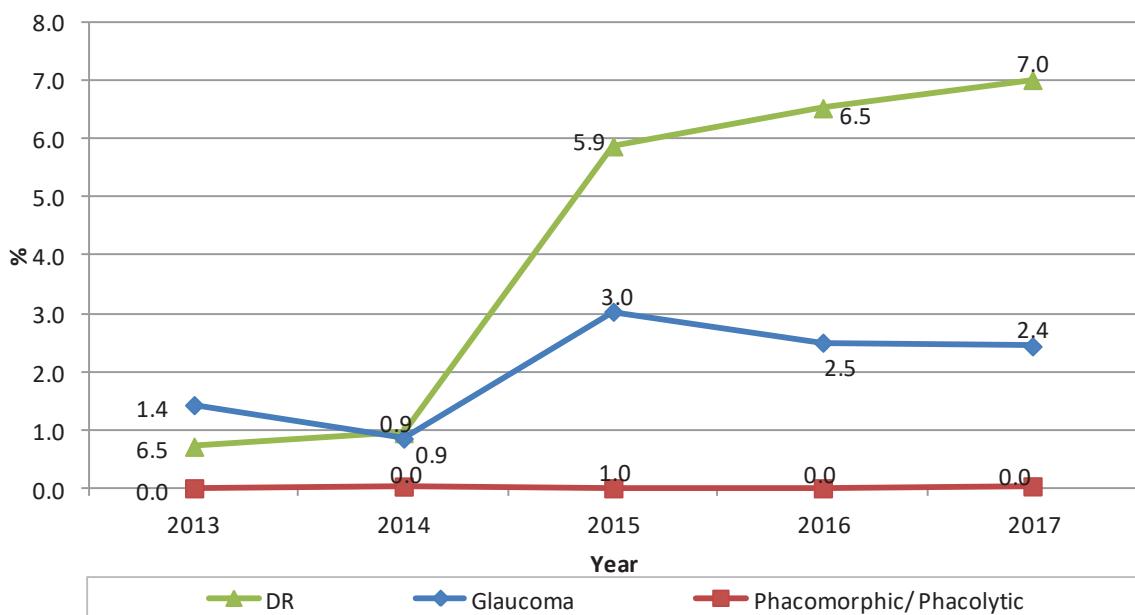


Figure 2.2.6-1: Distribution of Eyes with Specific Ocular Co-morbidity, CSR 2013-2017

2.2.7 Pre-operative Vision

Table 2.2.7-1: Distribution of Pre-Operative Vision, CSR 2013-2017

Year	2013	2014		2015		2016		2017	
No. of patients (N)	140	n	%	n	%	n	%	n	%
Patients with unaided VA	136	97.1		1048	99.3	1669	97.9	2146	99.4
Patients with pinhole VA	78	55.7		313	29.7	482	28.3	1691	78.3
Patients with refracted VA	29	20.7		56	5.3	262	15.4	577	26.7
Patients with no refraction	108	77.1		992	94.0	1410	82.7	1570	72.7
Unaided	3	2.2		16	1.5	39	2.3	58	2.7
6/12 and better	5	6.4		39	12.5	80	16.6	203	12.0
Refracted	1	3.4		6	10.7	52	19.8	125	21.7
								199	22.9

<6/12 - 6/18	Unaided	1	0.7	42	4.0	106	6.4	115	5.4	191	6.5
	Pinhole	6	7.7	45	14.4	110	22.8	247	14.6	359	13.2
	Refracted	5	17.2	12	21.4	55	21.0	102	17.7	147	16.9
<6/18 - 6/60	Unaided	46	33.8	325	31.0	589	35.3	818	38.1	1115	37.8
	Pinhole	34	43.6	139	44.4	193	40.0	549	32.5	839	30.9
	Refracted	13	44.8	16	28.6	85	32.4	192	33.3	287	33.1
<6/60 - 3/60	Unaided	5	3.7	45	4.3	112	6.7	138	6.4	202	6.8
	Pinhole	3	3.8	10	3.2	21	4.4	71	4.2	126	4.6
	Refracted	3	10.3	1	1.8	13	5.0	21	3.6	36	4.1
<3/60	Unaided	81	59.6	620	59.2	823	49.3	1017	47.4	1360	46.1
	Pinhole	30	38.5	80	25.6	78	16.2	621	36.7	1032	38.1
	Refracted	7	24.1	21	37.5	57	21.8	137	23.7	199	22.9
Unaided VA for patient with no refraction											
n		108		992		1410		1570		2094	
6/12 and better		2	1.9	14	1.4	23	1.6	26	1.7	39	1.9
<6/12 - 6/18		0	0.0	35	3.5	75	5.3	56	3.6	101	4.8
<6/18 - 6/60		30	27.8	303	30.5	462	32.8	556	35.4	709	33.9
<6/60 - 3/60		3	2.8	44	4.4	99	7.0	86	5.5	131	6.3
<3/60		73	67.6	596	60.1	751	53.3	846	53.9	1114	53.2

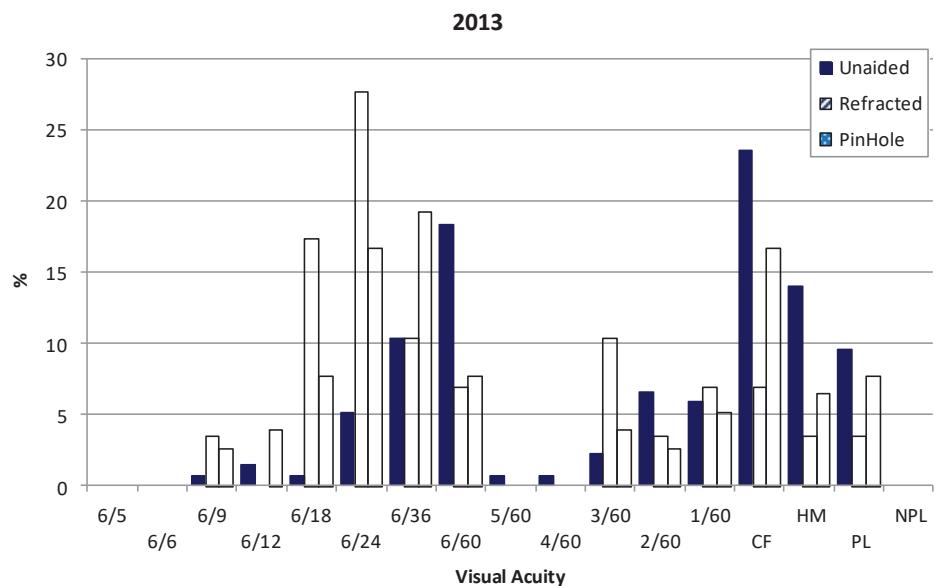


Figure 2.2.7-1: Distribution of Pre-Operative Vision (Unaided/presenting and refracted), CSR 2013

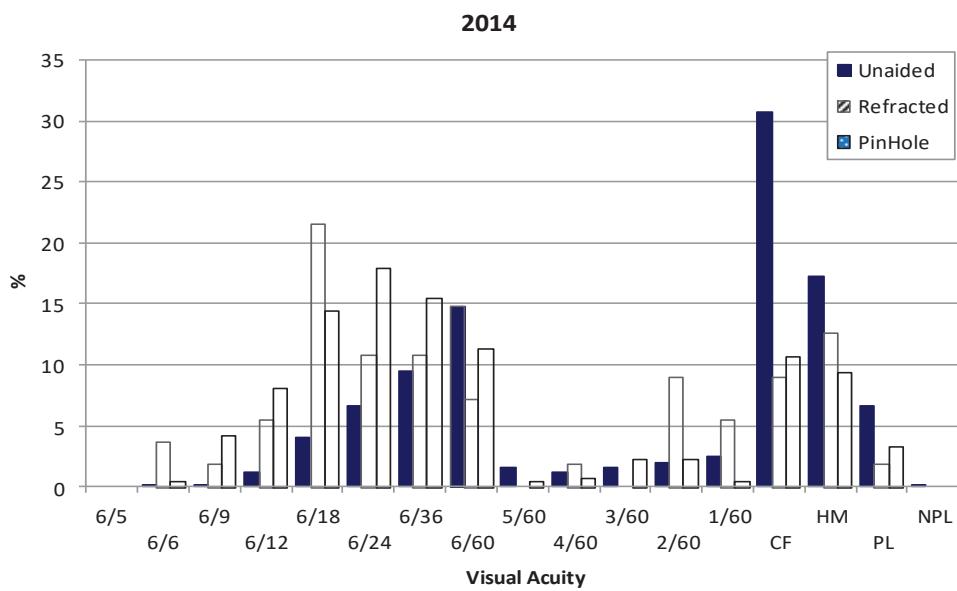


Figure 2.2.7-2: Distribution of Pre-Operative Vision (Unaided/presenting and refracted), CSR 2014

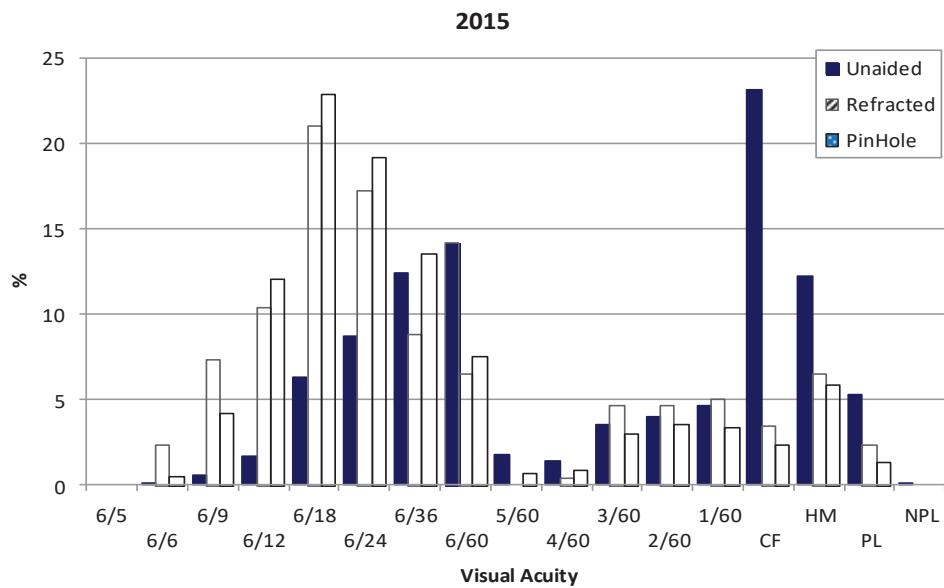


Figure 2.2.7-3: Distribution of Pre-Operative Vision (Unaided/presenting and refracted), CSR 2015

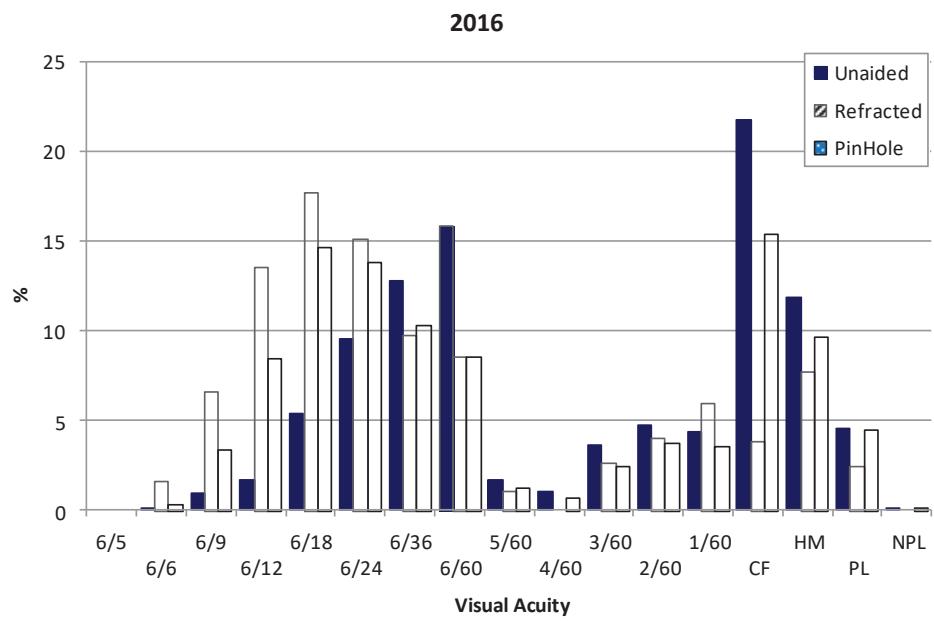


Figure 2.2.7-4: Distribution of Pre-Operative Vision (Unaided/presenting and refracted), CSR 2016

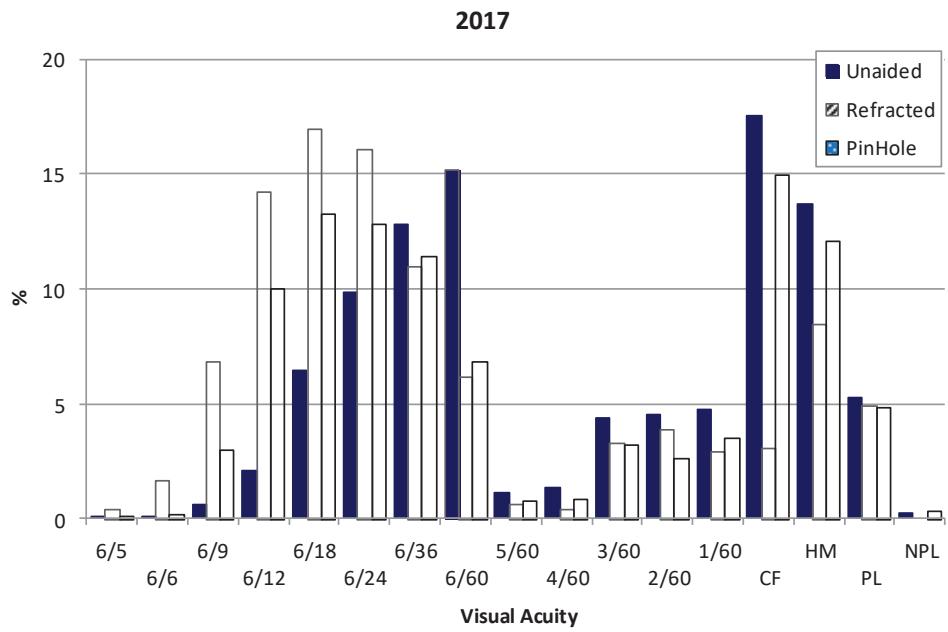


Figure 2.2.7-5: Distribution of Pre-Operative Vision (Unaided/presenting and refracted), CSR 2017

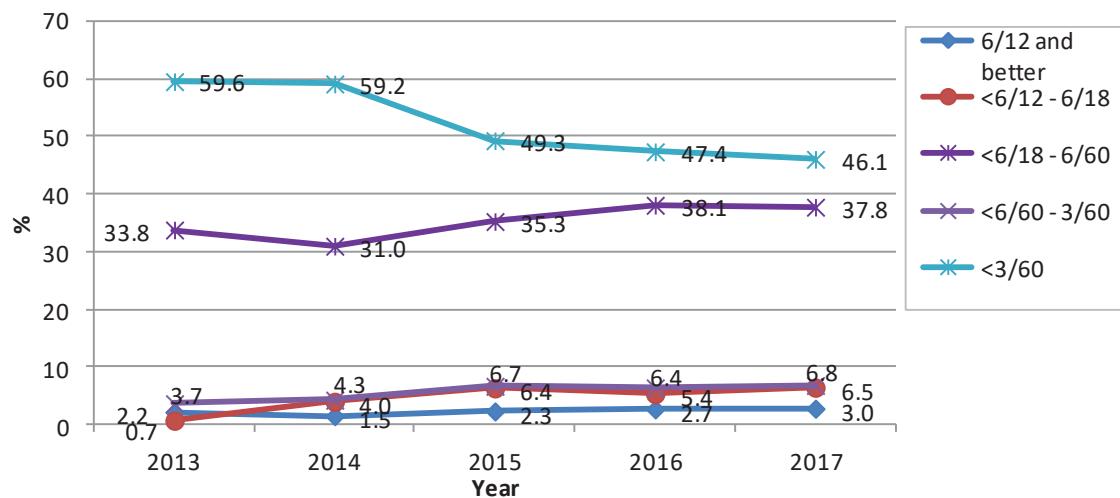


Figure 2.2.7-6: Distribution of Pre-Operative Vision (Unaided/presenting), CSR 2013-2017

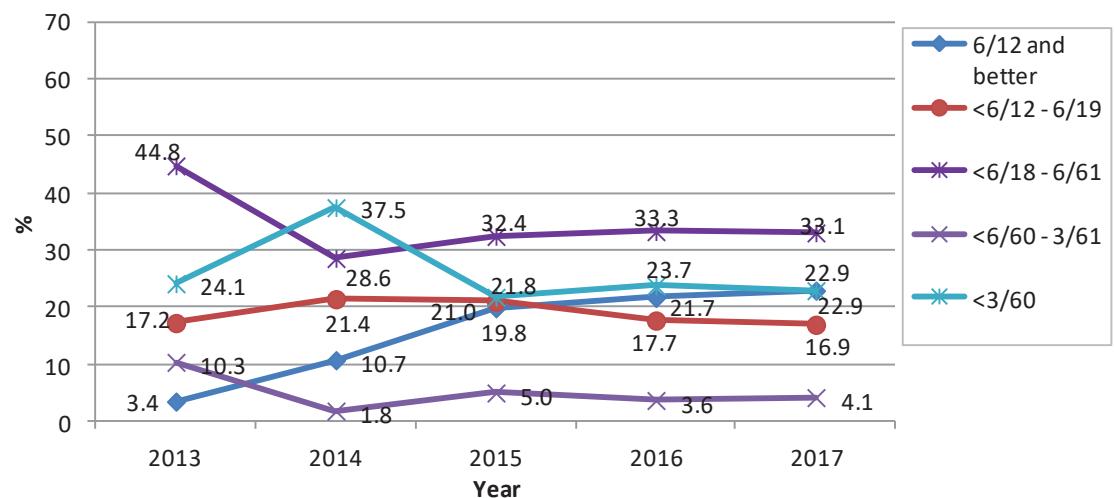


Figure 2.2.7-7: Distribution of Pre-Operative Vision (Refracted), CSR 2013-2017

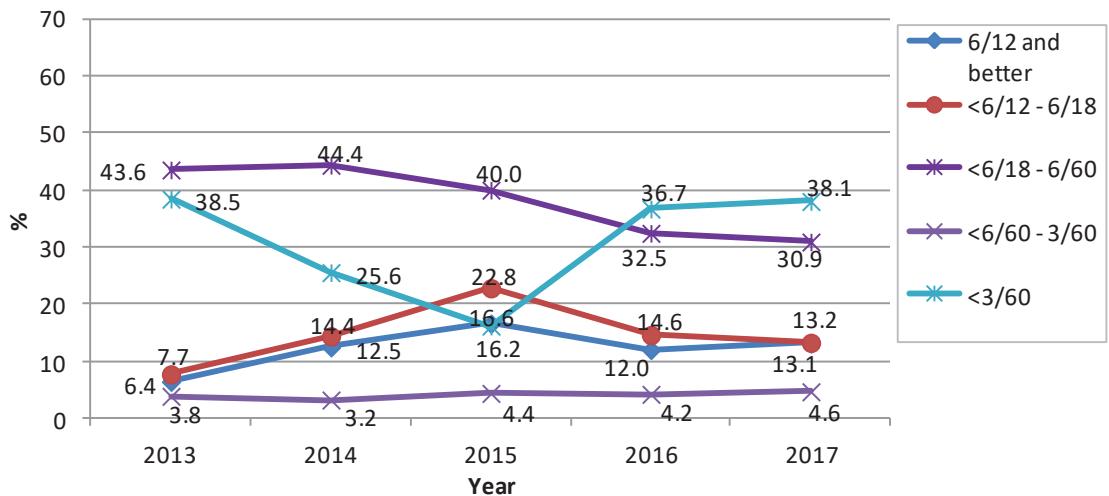


Figure 2.2.7-8: Distribution of Pre-Operative Vision (Pin Hole), CSR 2013-2017

2.2.8 Target Refractive Power

Table 2.2.8-1: Distribution of Target Refractive Power, CSR 2013-2017

Year	2013	2014	2015	2016	2017
Operated eye (N)	139	894	1598	2090	2751
Mean	-0.3	-0.3	-0.3	-0.4	-0.4
SD	0.2	0.2	0.2	0.2	0.3
Median	-0.3	-0.2	-0.3	-0.4	-0.4
Minimum	-0.8	-1.6	-2.1	-3.2	-2.3
Maximum	0.0	0.5	1.3	0.7	2.8

Table 2.2.8-2: Distribution of Target Refractive Power, CSR 2013-2017

Year	2013		2014		2015		2016		2017	
	Target refractive power (Dioptries)	Operated eye N=139	Target refractive power (Dioptries)	Operated eye N=894	Target refractive power (Dioptries)	Operated eye N=1598	Target refractive power (Dioptries)	Operated eye N=2090	Target refractive power (Dioptries)	Operated eye N=2751
-10-<(-9.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-9.5-<(-9)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-9-<(-8.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-8.5-<(-8)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-8-<(-7.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-7.5-<(-7)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-7-<(-6.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-6.5-<(-5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-5-<(-4.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

-4.5-<(-4)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-4-<(-3.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-3.5-<(-3)	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0
-3-<(-2.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-2.5-<(-2)	0	0.0	0	0.0	1	0.1	0	0.0	1	0.0
-2-<(-1.5)	0	0.0	1	0.1	1	0.1	3	0.1	0	0.0
-1.5-<(-1)	0	0.0	0	0.0	2	0.1	4	0.2	8	0.3
-1-<(-0.5)	18	13.0	67	7.5	130	8.1	404	19.3	792	28.8
-0.5-<0	120	86.3	822	92.0	1454	91.0	1666	79.7	1903	69.2
0-<0.5	1	0.7	3	0.3	5	0.3	8	0.4	8	0.3
0.5-<1	0	0.0	1	0.1	2	0.1	4	0.2	4	0.2
1-<1.5	0	0.0	0	0.0	3	0.2	0	0.0	2	0.1
1.5-<2	0	0.0	0	0.0	0	0.0	0	0.0	5	0.2
2-<2.5	0	0.0	0	0.0	0	0.0	0	0.0	20	0.7
2.5-<3	0	0.0	0	0.0	0	0.0	0	0.0	8	0.3
3-<3.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
3.5-<4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
4-<4.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
4.5-<5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
5-<5.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
5.5-<6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
6-<6.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
6.5-<7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
7-<7.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
7.5-<8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
8-<8.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
8.5-<9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9-<9.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9.5-10	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Values outside the +10D and -10D were excluded from analysis as they would skew the mean.

2.3 Cataract Surgical Practices

2.3.1 Number of Cataract Surgery Registered to CSR by State

Table 2.3.1-1: Number of Cataract Surgery Registered to CSR by State, CSR 2013-2017

State	2013	2014	2015	2016	2017
Sarawak	76	831	1131	917	885
Sabah	-	-	131	275	480
Negeri Sembilan	-	-	4	220	444
Kedah	-	-	209	339	352
Pahang	64	-	187	119	294
Terengganu	-	38	40	50	277

Kelantan	-	186	2	62	138
Pulau Pinang	-	-	-	84	90
Johor	-	-	-	93	33

2.3.2 Surgeon Status

Table 2.3.2-1: Surgeon Status, CSR 2013-2017

Year	2013		2014		2015		2016		2017	
No. of patients (N)	n	%	n	%	n	%	n	%	n	%
Specialist	135	96.43	1016	96.3	1670	98.0	2106	97.5	2819	94.2
Gazetting Specialist	5	3.57	35	3.32	26	1.5	46	2.1	113	3.8
Medical Officer	0	0	4	0.38	8	0.5	7	0.3	61	2.0
Missing/NA	0	0	0	0	0	0.0	0	0.0	0	0.0

2.3.3 Duration of Surgery

Table 2.3.3-1: Duration of Surgery by Types of Cataract Surgery in minutes, CSR 2013-2017

Year	2013*		2014*		2015*		2016*		2017*	
	Median	IQR	Median	IQR	Median	IQR	Median	IQR	Median	IQR
All eyes	25	(19-35)	20	(17-30)	20	(17-30)	21	(18-29)	23	(18-30)
Phaco	22	(18-30)	20	(16-25)	20	(17-26)	21	(18-27)	22	(18-29)
ECCE	55	(42-70)	35	(30-47)	45	(35-60)	35	(30-45)	43	(35-60)
Phaco → ECCE	50	(38-52)	41	(35-58)	50	(39-66)	46.5	(39-56)	-	-
ICCE	50	-	32	-	49.5	(46.5-62.5)	40	(38-60)	45	(30-60)
Lens Aspiration	-	-	-	-	-	-	55	-	18.5	(17-20)

*Data entered with extreme values i.e. more than 3 hours and less than 15 minutes were not analyzed as it would skew the data

2.3.4 Distribution of Cataract Surgery Performed Under Day Care Setting

Table 2.3.4-1: Distribution of Cataract Surgery Performed Under Day Care Setting, CSR 2013-2017

Year	2013	2014	2015	2016	2017					
Number of SDPs	2	4	7	9	9					
Total number of cataract surgery registered to CSR	140	1055	1704	2159	2993					
Number of surgery excluding children and combined surgery	137	1051	1692	2151	2995					
Number and % of day care surgery excluding children and combined surgery	n 76	% 55.5	n 1000	% 95.1	n 1536	% 90.8	n 1912	% 88.9	n 2622	% 87.5

2.3.5 Distribution of Types of Cataract Surgery

Table 2.3.5-1: Distribution of Types of Cataract Surgery, CSR 2013-2017

Year	2013	2014	2015	2016	2017					
No of patients (N)	140	1055	1704	2159	2993					
	n 121	% 86.4	n 934	% 88.5	n 1608	% 94.4	n 2055	% 95.2	n 2789	% 93.2
Phacoemulsification	121	86.4	934	88.5	1608	94.4	2055	95.2	2789	93.2
ECCE	12	8.6	100	9.5	57	3.3	54	2.5	183	6.1
Lens Aspiration	0	0.0	0	0.0	0	0.0	1	0.0	4	0.1
ICCE	1	0.7	1	0.1	4	0.2	3	0.1	9	0.3
Phaco converted to ECCE	6	4.3	18	1.7	35	2.1	45	2.1	-	-

Table 2.3.5-2: Distribution of Types of Cataract Surgery by SDP, CSR 2013-2017

Type of Cataract Surgery												
2013	All Surgeries	Phaco	ECCE	Lens Aspiration	Phaco Converted to ECCE	ICCE						
	N 140	% 100.0	n 121	% 86.4	n 12	% 8.6	n 0	% 0.0	n 6	% 4.3	n 1	% 0.7
All Centres	140	100.0	121	86.4	12	8.6	0	0.0	6	4.3	1	0.7
KK-KKM Pahang	64	100.0	47	73.4	11	17.2	0	0.0	5	7.8	1	1.6
KK-KKM Sarawak	76	100.0	74	97.4	1	1.3	0	0.0	1	1.3	0	0.0

Type of Cataract Surgery												
2014	All Surgeries	Phaco	ECCE	Lens Aspiration	Phaco Converted to ECCE	ICCE						
	N 1055	% 100.0	n 934	% 88.5	n 100	% 9.5	n 0	% 0.0	n 18	% 1.7	n 1	% 0.1
All Centres	1055	100.0	934	88.5	100	9.5	0	0.0	18	1.7	1	0.1
KK-KKM Terengganu	38	100.0	28	84.2	10	15.8	0	0.0	0	0.0	0	0.0
KK-KKM Kelantan	186	100.0	94	50.5	82	44.1	0	0.0	9	4.8	0	0.0

KK-KKM Sarawak	831	100.0	812	97.2	8	1.4	0	0.0	9	1.1	1	0.1
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Type of Cataract Surgery												
2015	All Surgeries		Phaco		ECCE		Lens Aspiration		Phaco Converted to ECCE		ICCE	
	N	%	n	%	n	%	n	%	n	%	n	%
All Centres	1704	100.0	1608	94.4	57	3.3	0	0.0	35	2.1	4	0.2
KK-KKM Kedah	209	100.0	209	100.0	0	0.0	0	0.0	0	0.0	0	0.0
KK-KKM Kelantan	2	100.0	2	100.0	0	0.0	0	0.0	0	0.0	0	0.0
KK-KKM Neg. Sembilan	4	100.0	3	75.0	0	0.0	0	0.0	1	25.0	0	0.0
KK-KKM Pahang	187	100.0	161	86.1	17	9.1	0	0.0	8	4.3	1	0.5
KK-KKM Sabah	131	100.0	107	81.7	18	13.7	0	0.0	6	4.6	0	0.0
KK-KKM Sarawak	1,131	100.0	1,096	96.9	13	1.1	0	0.0	19	1.7	3	0.3
KK-KKM Terengganu	40	100.0	30	75.0	9	22.5	0	0.0	1	2.5	0	0.0

Type of Cataract Surgery												
2016	All Surgeries		Phaco		ECCE		Lens Aspiration		Phaco Converted to ECCE		ICCE	
	N	%	n	%	n	%	n	%	n	%	n	%
All Centres	2159	100.0	2055	95.2	54	2.5	1	0.0	45	2.1	3	0.1
KK-KKM Johor	93	100.0	90	96.8	1	1.1	0	0.0	2	2.2	0	0.0
KK-KKM Kedah	339	100.0	332	97.9	2	0.6	0	0.0	5	1.5	0	0.0
KK-KKM Kelantan	62	100.0	34	54.8	26	41.9	0	0.0	2	3.2	0	0.0
KK-KKM Neg. Sembilan	220	100.0	206	93.6	1	0.5	1	0.5	11	5.0	1	0.5
KK-KKM Pahang	119	100.0	108	90.8	8	6.7	0	0.0	3	2.5	0	0.0
KK-KKM Pulau Pinang	84	100.0	80	95.2	2	2.4	0	0.0	2	2.4	0	0.0
KK-KKM Sabah	275	100.0	262	95.3	7	2.5	0	0.0	5	1.8	1	0.4
KK-KKM Sarawak	917	100.0	898	97.9	4	0.4	0	0.0	13	1.4	1	0.1
KK-KKM Terengganu	50	100.0	45	90.0	3	6.0	0	0.0	2	4.0	0	0.0

Type of Cataract Surgery												
2017	All Surgeries		Phaco		ECCE		Lens Aspiration		Phaco Converted to ECCE		ICCE	
	N	%	n	%	n	%	n	%	n	%	n	%
All Centres	2993	100.0	2789	93.2	183	6.1	4	0.1	-	-	9	0.3
KK-KKM Johor	33	100.0	33	100.0	0	0.0	0	0.0	-	-	0	0.0
KK-KKM Pulau Pinang	90	100.0	88	97.8	1	1.1	0	0.0	-	-	0	0.0
KK-KKM Sarawak	885	100.0	865	97.7	16	1.8	0	0.0	-	-	3	0.3
KK-KKM Sabah	480	100.0	450	93.8	24	5.0	2	0.4	-	-	2	0.4
KK-KKM Neg. Sembilan	444	100.0	416	93.7	19	4.3	2	0.5	-	-	3	0.7
KK-KKM Pahang	294	100.0	274	93.2	20	6.8	0	0.0	-	-	0	0.0

KK-KKM Terengganu	277	100.0	247	89.2	30	10.8	0	0.0	-	-	0	0.0
KK-KKM Kedah	352	100.0	311	88.4	41	11.6	0	0.0	-	-	0	0.0
KK-KKM Kelantan	138	100.0	105	76.1	32	23.2	0	0.0	-	-	1	0.7

Table 2.3.5-3: Distribution of Phacoemulsification by SDP, CSR 2013-2017

Years	2013		2014		2015		2016		2017	
	n	%	n	%	n	%	n	%	n	%
All Centres	121	86.4	934	94.2	1608	94.4	2055	95.2	2789	93.2
KK-KKM Johor	-	-	-	-	-	-	90	96.8	33	100.0
KK-KKM Pulau Pinang	-	-	-	-	-	-	80	95.2	88	97.8
KK-KKM Sarawak	74	97.4	812	97.2	1096	96.9	898	97.9	865	97.7
KK-KKM Sabah	-	-	-	-	107	81.7	262	95.3	450	93.8
KK-KKM Neg. Sembilan	-	-	-	-	3	75.0	206	93.6	416	93.7
KK-KKM Pahang	47	73.4	-	-	161	86.1	108	90.8	274	93.2
KK-KKM Terengganu	-	-	28	84.2	30	75.0	45	90.0	247	89.2
KK-KKM Kedah	-	-	-	-	209	100.0	332	97.9	311	88.4
KK-KKM Kelantan	-	-	94	50.5	2	100.0	34	54.8	105	76.1

Table 2.3.5-4: Distribution of ECCE by SDP, CSR 2013-2017

Years	2013		2014		2015		2016		2017	
	n	%	n	%	n	%	n	%	n	%
All Centres	12	8.6	100	3.6	57	3.3	54	2.5	183	6.1
KK-KKM Kelantan	-	-	82	44.1	0	0.0	26	41.9	32	23.2
KK-KKM Kedah	-	-	-	-	0	0.0	2	0.6	41	11.6
KK-KKM Terengganu	-	-	10	15.8	9	22.5	3	6.0	30	10.8
KK-KKM Pahang	11	17.2	-	-	17	9.1	8	6.7	20	6.8
KK-KKM Sabah	-	-	-	-	18	13.7	7	2.5	24	5.0
KK-KKM Neg. Sembilan	-	-	-	-	0	0.0	1	0.5	19	4.3
KK-KKM Sarawak	1	1.3	8	1.4	13	1.1	4	0.4	16	1.8
KK-KKM Pulau Pinang	-	-	-	-	-	-	2	2.4	1	1.1
KK-KKM Johor	-	-	-	-	-	-	1	1.1	0	0.0

2.3.6 Anaesthesia in Cataract Surgery

Table 2.3.6-1: Types of Anaesthesia, CSR 2013-2017

Year	2013		2014		2015		2016		2017	
No of patients (N)	n	%	n	%	n	%	n	%	n	%
General Anesthesia	0	0.0	4	0.4	4	0.2	4	0.2	14	0.5

Local Anesthesia	139	99.3	1042	98.8	1689	99.1	2149	99.5	2904	97.0
Type of local anaesthesia										
Topical	90	64.7	879	84.4	1549	91.7	1903	88.6	2610	89.9
Combined local anaesthesia	13	9.4	6	0.6	99	5.9	181	8.4	596	20.5
Intracamerale	3	2.2	5	0.5	38	2.2	148	6.9	585	20.1
Subtenon	52	37.4	153	14.7	150	8.9	254	11.8	294	10.1
Subconjunctival	0	0.0	2	0.2	0	0.0	19	0.9	8	0.3
Peribulbar	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
Retrobulbar	3	2.2	0	0.0	0	0.0	2	0.1	0	0.0
Facial block	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Types of sedation for patients under local anaesthesia										
No sedation	39	28.1	582	55.9	924	54.7	1194	55.6	1627	56.0
Oral sedation alone	9	6.5	0	0.0	1	0.1	34	1.6	2	0.1
Intravenous alone	1	0.7	0	0.0	1	0.1	1	0.0	4	0.1
Intravenous plus oral	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Intramuscular alone	17	12.2	0	0.0	0	0.0	0	0.0	1	0.0

Table 2.3.6-2: Types of Anaesthesia in Patients 50 years and above, CSR 2013-2017

Year	2013	2014		2015		2016		2017		
No of patients (N)	135	1024		1672		2100		2906		
	n	%	n	%	n	%	n	%	n	%
General Anesthesia	0	0.0	4	0.4	4	0.2	4	0.2	9	0.3
Local Anesthesia	134	99.3	1011	98.7	1658	99.2	2090	99.5	2826	97.2
Type of local anaesthesia										
Topical	89	66.4	855	84.6	1520	91.7	1852	88.6	2537	89.8
Combined local anaesthesia	13	9.7	6	0.6	97	5.9	178	8.5	583	20.6
Intracamerale	3	2.2	5	0.5	36	2.2	142	6.8	571	20.2
Subtenon	49	36.6	148	14.6	148	8.9	249	11.9	292	10.3
Subconjunctival	0	0.0	2	0.2	0	0.0	19	0.9	7	0.2
Peribulbar	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Retrobulbar	2	1.5	0	0.0	0	0.0	2	0.1	0	0.0
Facial block	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Types of sedation for patients under local anaesthesia										
No sedation	38	28.4	566	56.0	905	54.6	1162	55.6	1589	56.2
Oral sedation alone	9	6.7	0	0.0	1	0.1	32	1.5	2	0.1
Intravenous alone	1	0.7	0	0.0	1	0.1	1	0.0	4	0.1
Intravenous plus oral	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Intramuscular alone	16	11.9	0	0.0	0	0.0	0	0.0	1	0.0

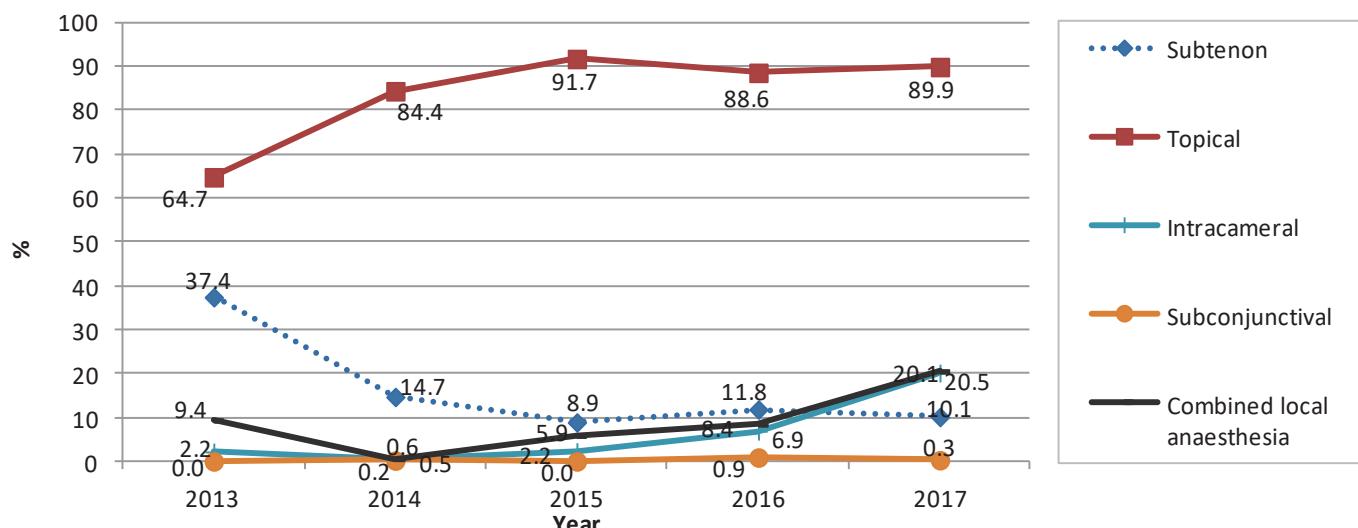


Figure 2.3.6-1: Types of Anaesthesia, CSR 2013-2017

2.3.7 Intraocular Lens Implantation

Table 2.3.7-1: Intraocular Lens Implantation, CSR 2013-2017

Year	2013		2014		2015		2016		2017	
No of patients (N)	140		1055		1704		2159		2993	
	n	%	n	%	n	%	n	%	n	%
With IOL	139	99.3	1026	97.3	1678	98.5	2133	98.8	2947	98.5
Without IOL	1	0.7	29	2.7	26	1.5	26	1.2	46	1.5
Not Available	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
IOL Placement										
No of IOL	139		1026		1678		2133		2947	
PCIOL	131	94.2	974	94.9	1628	97.0	2092	98.1	2826	95.9
ACIOL	4	2.9	4	0.4	23	1.4	21	1.0	44	1.5
Scleral Fixated IOL	0	0.0	0	0.0	0	0.0	0	0.0	6	0.2
Others	0	0.0	3	0.3	0	0.0	3	0.1	13	0.4
Not Available /missing	4	2.9	45	4.4	27	1.6	17	0.8	58	2.0
Materials of IOL										
No of IOL	139		1026		1678		2133		2947	
1. Acrylic	123	88.5	987	96.2	1598	95.2	2078	97.4	2706	91.8
2. PMMA	16	11.5	23	2.2	63	3.8	41	1.9	129	4.4
3. Silicone	0	0.0	1	0.1	1	0.1	1	0.0	30	1.0
4. Others	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
Not Available/ missing	0	0.0	15	1.5	16	1.0	13	0.6	81	2.7
Types of IOL										
No of IOL	139		1026		1678		2133		2947	
1. Foldable	121	87.1	1008	98.2	1623	96.7	2092	98.1	2884	97.9
2. Non-foldable	18	12.9	14	1.4	50	3.0	38	1.8	61	2.1

Not Available/ missing	0	0.0	4	0.4	5	0.3	3	0.1	2	0.1
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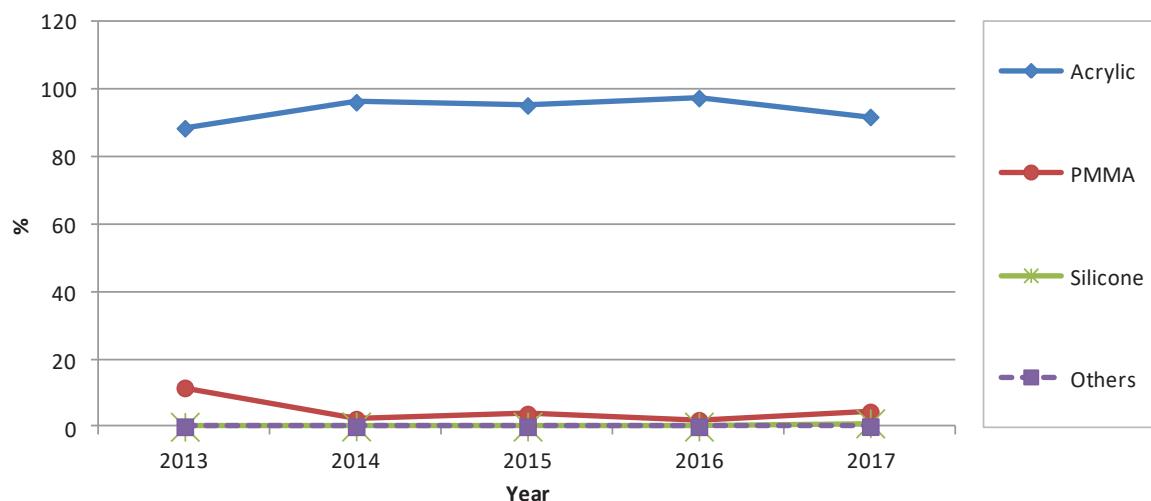


Figure 2.3.7-1: Intraocular Lens Implantation, CSR 2013-2017

Table 2.3.7-2: Distribution of IOL Placement, CSR 2013-2017

	Cataract Surgery With IOL											
	2013				2014				2015			
	N	Posterior Chamber IOL n %	Anterior Chamber IOL n %	Scleral Fixed IOL n %	N	Posterior Chamber IOL n %	Anterior Chamber IOL n %	Scleral Fixed IOL n %	N	Posterior Chamber IOL n %	Anterior Chamber IOL n %	Scleral Fixed IOL n %
All Centres	139	131 94.2	4 2.9	0 0.0	1026	974 94.9	4 0.4	0 0.0	1678	1628 97.0	23 1.4	0 0.0
KK-KKM Johor	-	- - -	- - -	- - -	-	- - -	- - -	- - -	-	- - -	- - -	- - -
KK-KKM Kedah	-	- - -	- - -	- - -	-	- - -	- - -	- - -	209	206 98.6	1 0.5	0 0.0
KK-KKM Kelantan	-	- - -	- - -	- - -	185	174 94.1	4 2.2	0 0.0	2	2 100.0	0 0.0	0 0.0
KK-KKM Neg. Sembilan	-	- - -	- - -	- - -	-	- - -	- - -	- - -	4	4 100.0	0 0.0	0 0.0
KK-KKM Pahang	64	58 90.6	3 4.7	0 0.0	-	- - -	- - -	- - -	184	175 95.1	6 3.3	0 0.0
KK-KKM Pulau Pinang	-	- - -	- - -	- - -	-	- - -	- - -	- - -	-	- - -	- - -	- - -
KK-KKM Sabah	-	- - -	- - -	- - -	-	- - -	- - -	- - -	129	115 89.1	3 2.3	0 0.0
KK-KKM Sarawak	75	73 97.3	1 1.3	0 0.0	805	766 95.2	0 0.0	0 0.0	1110	1089 98.1	12 1.1	0 0.0
KK-KKM Terengganu	-	- - -	- - -	- - -	36	34 94.4	0 0.0	0 0.0	40	37 92.5	1 2.5	0 0.0

	Cataract Surgery With IOL											
	2016				2017							
	N	Posterior Chamber IOL n %	Anterior Chamber IOL n %	Scleral Fixated IOL n %	N	Posterior Chamber IOL n %	Anterior Chamber IOL n %	Scleral Fixated IOL n %	N	Posterior Chamber IOL n %	Anterior Chamber IOL n %	Scleral Fixated IOL n %
All Centres	2133	2092 98.1	21 1.0	0 0.0	2947	2826 95.9	44 1.5	6 0.2				

KK-KKM Johor	93	92	98.9	1	1.1	0	0.0	33	28	84.8	0	0.0	0	0.0
KK-KKM Kedah	334	332	99.4	2	0.6	0	0.0	347	341	98.3	5	1.4	0	0.0
KK-KKM Kelantan	61	60	98.4	1	1.6	0	0.0	136	127	93.4	2	1.5	0	0.0
KK-KKM Neg. Sembilan	217	207	95.4	4	1.8	0	0.0	437	397	90.8	10	2.3	5	1.1
KK-KKM Pahang	119	110	92.4	5	4.2	0	0.0	291	278	95.5	6	2.1	0	0.0
KK-KKM Pulau Pinang	83	83	100.0	0	0.0	0	0.0	88	86	97.7	2	2.3	0	0.0
KK-KKM Sabah	274	268	97.8	2	0.7	0	0.0	467	436	93.4	11	2.4	1	0.2
KK-KKM Sarawak	903	895	99.1	6	0.7	0	0.0	873	867	99.3	3	0.3	0	0.0
KK-KKM Terengganu	49	45	91.8	0	0.0	0	0.0	275	266	96.7	5	1.8	0	0.0

2.4 Intra-operative Complications

2.4.1 Intra-operative Complications

Table 2.4.1-1: Distribution of Type of Intra-operative Complications, CSR 2013-2017

Year	2013		2014		2015		2016		2017	
No. of patients (N)	140		1055		1704		2159		2993	
	n	%	n	%	n	%	n	%	n	%
Patient with intra-op complication	10	7.1	52	4.9	84	4.9	84	3.9	186	6.2
Types of complications										
PCR	2	1.4	28	2.7	47	2.8	43	2.0	94	3.1
Zonular dehiscence	2	1.4	7	0.7	15	0.9	23	1.1	48	1.6
Vitreous loss	3	2.1	11	1.0	17	1.0	26	1.2	45	1.5
Drop nucleus	0	0.0	4	0.4	3	0.2	1	0.0	5	0.2
Central corneal oedema	0	0.0	0	0.0	2	0.1	1	0.0	2	0.1
Suprachoroidal haemorrhage	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0
Others	6	4.3	12	1.1	22	1.3	21	1.0	56	1.9

Table 2.4.1-2: Distribution of Type of Intra-operative Complications – Posterior Capsule Rupture, CSR 2013-2017

Year	2013		2014		2015		2016		2017	
No. of patients (N)	140		1055		1704		2159		2993	
	n	%	n	%	n	%	n	%	n	%
Patient with intra-op complication	10	7.1	52	4.9	84	4.9	84	3.9	186	6.2
Types of complications										
PCR and Others	1	0.7	7	0.7	12	0.7	19	0.9	41	1.4
PCR Only	1	0.7	21	2.0	35	2.1	24	1.1	53	1.8

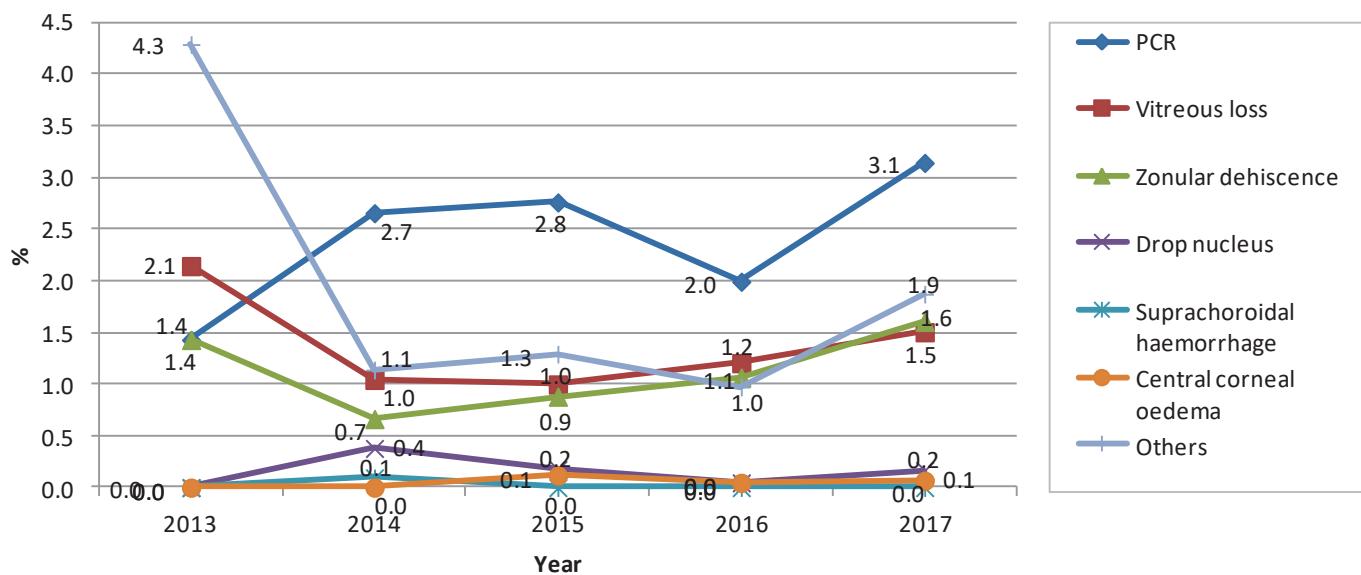


Figure 2.4.1-1: Distribution of Specific Type of Intra-operative Complications, CSR 2013-2017

Table 2.4.1-3: Distribution of Types of Intra-operative Complications, CSR 2013-2017

Year	No. of patients (N)	Any intra-op complication		PCR	Vitreous loss	Zonular Dehiscence	Nucleus drop (or dropped nucleus)	Suprachoroidal Haemorrhage	Central Corneal Edema	Others
		n	%							
2013										
KK-KKM Pahang	64	10	15.6	2	3.1	3	4.7	2	3.1	0
KK-KKM Sarawak	76	0	0.0	0	0.0	0	0.0	0	0.0	6
2014										
KK-KKM Kelantan	186	13	7.0	8	4.3	6	3.2	1	0.5	0
KK-KKM Sarawak	831	35	4.2	20	2.4	5	0.6	5	0.6	1
KK-KKM Terengganu	38	4	10.5	0	0.0	0	0.0	0	0.0	4
2015										
KK-KKM Kedah	209	4	1.9	2	1.0	1	0.5	0	0.0	0
KK-KKM Kelantan	2	0	0.0	0	0.0	0	0.0	0	0.0	0
KK-KKM Neg. Sembilan	4	0	0.0	0	0.0	0	0.0	0	0.0	0
KK-KKM Pahang	187	15	8.0	7	3.7	1	0.5	0	0.0	10
KK-KKM Sabah	131	12	9.2	2	1.5	5	3.8	6	4.6	3
KK-KKM Sarawak	1131	51	4.5	36	3.2	10	0.9	8	0.7	5
KK-KKM Terengganu	40	2	5.0	0	0.0	0	0.0	1	2.5	1

2016													
KK-KKM Johor	93	1	1.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
KK-KKM Kedah	339	11	3.2	5	1.5	4	1.2	3	0.9	0	0.0	0	0.0
KK-KKM Kelantan	62	1	1.6	1	1.6	1	1.6	0	0.0	0	0.0	0	0.0
KK-KKM Neg. Sembilan	220	19	8.6	7	3.2	9	4.1	6	2.7	0	0.0	0	0.0
KK-KKM Pahang	119	4	3.4	3	2.5	2	1.7	0	0.0	0	0.0	0	0.0
KK-KKM Pulau Pinang	84	2	2.4	2	2.4	1	1.2	0	0.0	0	0.0	0	0.0
KK-KKM Sabah	275	14	5.1	5	1.8	3	1.1	4	1.5	0	0.0	0	0.0
KK-KKM Sarawak	917	28	3.1	18	2.0	4	0.4	9	1.0	0	0.0	0	0.0
KK-KKM Terengganu	50	4	8.0	2	4.0	2	4.0	1	2.0	0	0.0	0	0.0
2017													
KK-KKM Neg. Sembilan	444	44	9.9	21	4.7	7	1.6	13	2.9	1	0.2	0	0.0
KK-KKM Terengganu	277	26	9.4	12	4.3	4	1.4	4	1.4	0	0.0	0	0.0
KK-KKM Pahang	294	21	7.1	12	4.1	5	1.7	4	1.4	1	0.3	0	0.0
KK-KKM Sabah	480	35	7.3	17	3.5	9	1.9	8	1.7	0	0.0	0	0.0
KK-KKM Kelantan	138	7	5.1	4	2.9	3	2.2	1	0.7	0	0.0	0	0.0
KK-KKM Kedah	352	16	4.5	8	2.3	9	2.6	8	2.3	1	0.3	0	0.0
KK-KKM Pulau Pinang	90	6	6.7	2	2.2	3	3.3	3	3.3	0	0.0	0	0.0
KK-KKM Sarawak	885	31	3.5	18	2.0	5	0.6	7	0.8	2	0.2	0	0.0
KK-KKM Johor	33	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

2.4.2 PCR

Table 2.4.2-1: PCR, CSR 2013-2017

Hospital	2013			2014			2015			2016			2017		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
KK-KKM Neg. Sembilan	-	-	-	-	-	-	4	0	0.0	220	7	3.2	444	21	4.7
KK-KKM Terengganu	-	-	-	38	0	0.0	40	0	0.0	50	2	4.0	277	12	4.3
KK-KKM Pahang	64	2	3.1	-	-	-	187	7	3.7	119	3	2.5	294	12	4.1
KK-KKM Sabah	-	-	-	-	-	-	131	2	1.5	275	5	1.8	480	17	3.5
KK-KKM Kelantan	-	-	-	186	8	4.3	2	0	0.0	62	1	1.6	138	4	2.9
KK-KKM Kedah	-	-	-	-	-	-	209	2	1.0	339	5	1.5	352	8	2.3
KK-KKM Pulau Pinang	-	-	-	-	-	-	-	-	-	84	2	2.4	90	2	2.2
KK-KKM Sarawak	76	0	0.0	831	20	2.4	1131	36	3.2	917	18	2.0	885	18	2.0
KK-KKM Johor	-	-	-	-	-	-	-	-	-	93	0	0.0	33	0	0.0

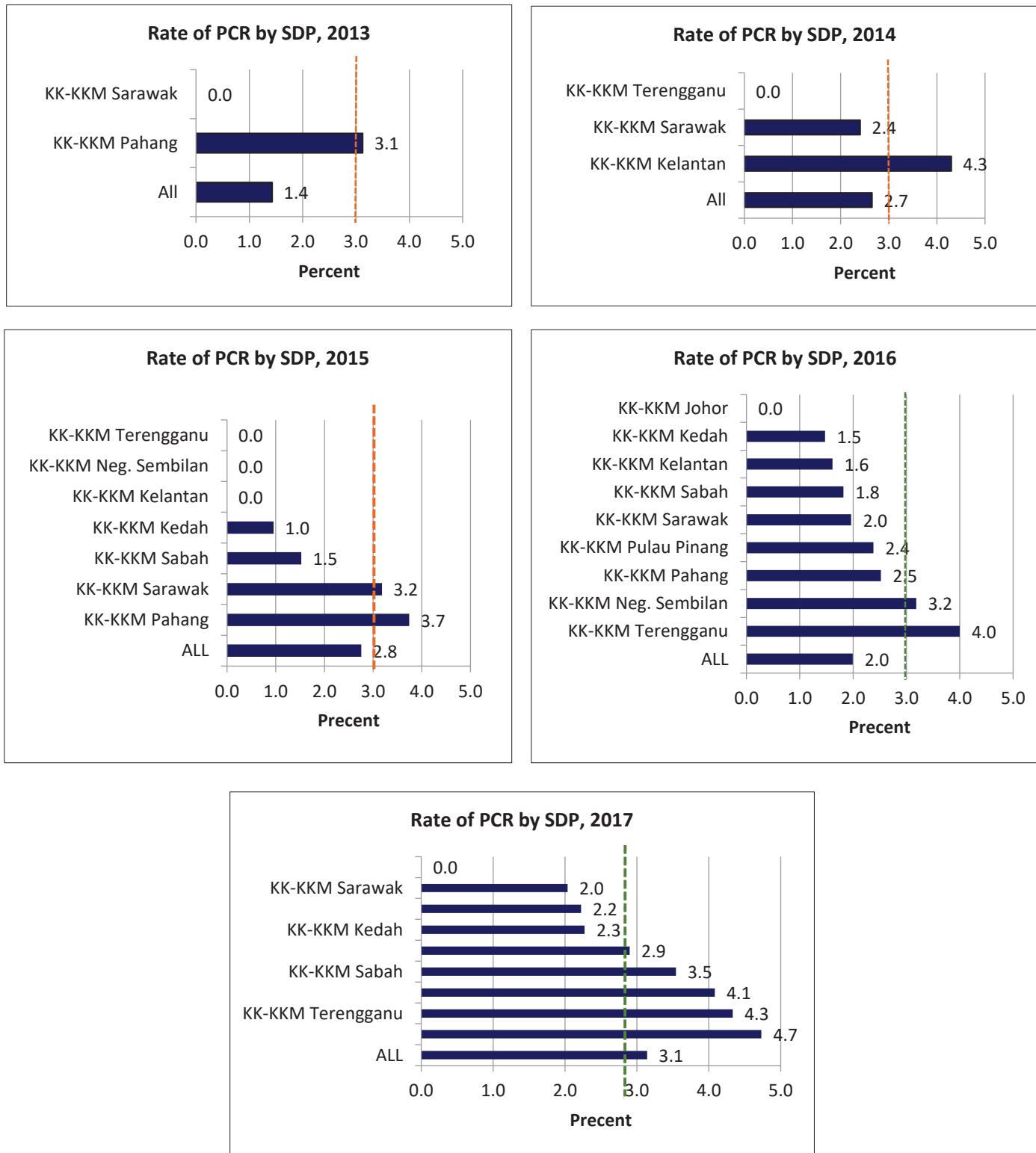


Figure 2.4.2-1: PCR (all surgeries) (National standard set at <3.0%), CSR 2013-2017

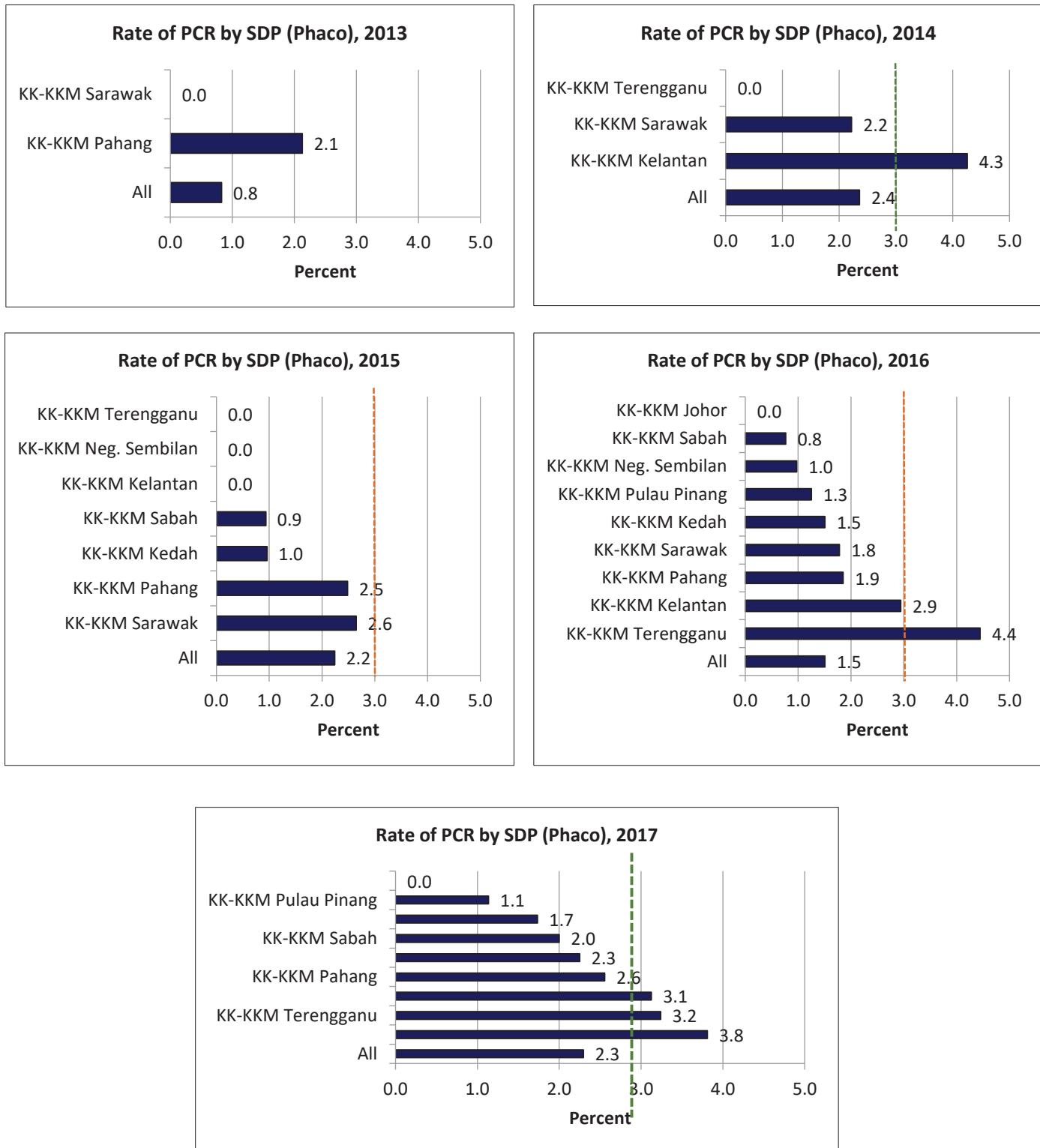


Figure 2.4.2-2: PCR (Phaco only) (National standard set at <3.0%), CSR 2013-2017

2.4.3 PCR by Type of Cataract Surgery

Table 2.4.3-1: PCR by Type of Cataract Surgery, CSR 2013-2017

Year	2013			2014			2015			2016			2017		
No. of patients	140			1055			1704			2159			2993		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
Phaco	121	1	0.8	934	22	2.4	1608	36	2.2	2055	31	1.5	2789	64	2.3
ECCE	12	0	0.0	100	3	3.0	57	2	3.5	54	2	3.7	183	28	15.3
Lens Aspiration	0	0	0.0	0	0	0.0	0	0	0.0	1	0	0.0	4	0	0.0
ICCE	1	0	0.0	1	0	0.0	4	0	0.0	3	0	0.0	9	0	0.0
Phaco converted to ECCE	6	1	16.7	18	3	16.7	35	9	25.7	45	10	22.2	-	-	-

2.5 Cataract Surgery Outcome

2.5.1 Post-operative Complication Record and Ascertainment

Table 2.5.1-1: Distribution of Cataract Surgery with Post-operative Complication Record, CSR 2013-2017

Year	2013	2014	2015	2016	2017
Total number of cataract surgery registered to CSR	140	1055	1704	2159	2993
Cataract surgery with post-operative complication record	115	981	1650	1935	2648
Ascertainment on post-operative complication (%)	(82.1)	(93.0)	(96.8)	(89.6)	(88.5)
Cataract surgery with visual outcome record	98	863	1455	1765	2496
Ascertainment on visual outcome (%)	(70.0)	(81.8)	(85.4)	(81.8)	(83.4)

2.5.2 Post-operative Infectious Endophthalmitis

Table 2.5.2-1: Post-operative Infectious Endophthalmitis, CSR 2013-2017

Year	2013	2014	2015	2016	2017
Eyes with post-operative complication records (N)	115	981	1650	1935	2648
Eyes with post-operative infectious endophthalmitis (n)	0	0	0	0	2
Percentage of eyes with post-operative endophthalmitis (%)	0.0	0.0	0.0	0.0	0.1

2.5.3 Post-operative Follow-up Period

Table 2.5.3-1: Median Follow-up Period for Eyes with Unaided Vision (in weeks) by Types of Surgery, CSR 2013-2017 –

Types of surgery	2013					2014				
	N	n	Median	25 th percentile	75 th percentile	N	n	Median	25 th percentile	75 th percentile
All surgeries	98	98	5	5	6	863	861	5	5	6
Phaco	88	88	5	4	6	799	797	5	5	6

ECCE	4	4	6	5.5	6	55	55	8	6	13
Phaco → ECCE	6	6	6	6	7	8	8	8.5	6.5	12
ICCE	0	0	-	-	-	0	0	-	-	-
Lens aspiration	0	0	-	-	-	0	0	-	-	-

Types of surgery	2015					2016				
	N	n	Median	25 th percentile	75 th percentile	N	n	Median	25 th percentile	75 th percentile
All surgeries	1455	1453	6	5	7	1769	1769	5	5	7
Phaco	1383	1381	6	5	7	1694	1694	5	4	6
ECCE	38	38	9	6	12	42	42	8.5	5	11
Phaco → ECCE	30	30	6.5	5	12	30	30	6	5	11
ICCE	4	4	8	5	11.5	1	1	11	11	11
Lens aspiration	0	0	0	0	0	1	1	3	3	3

Types of surgery	2017				
	N	n	Median	25 th percentile	75 th percentile
All surgeries	2500	2499	6	5	8
Phaco	2342	2341	6	5	7
Lens aspiration	3	3	6	6	8
ECCE	144	144	7	6	10
ICCE	5	5	7	5	10
Phaco → ECCE	-	-	-	-	-

n = No. of available information

Table 2.5.3-2: Median Follow-up Period for Eyes with Refracted Vision (in weeks) by Types of Surgery, CSR 2013-2017 –

Types of surgery	2013					2014				
	N	n	Median	25 th percentile	75 th percentile	N	n	Median	25 th percentile	75 th percentile
All surgeries	99	99	6	5	6	843	841	5	5	6
Phaco	88	88	5	4	6	787	785	5	5	6
ECCE	4	4	6	5.5	6	48	48	9	6	13
Phaco → ECCE	6	6	6	6	7	7	7	9	6	12
ICCE	1	1	6	-	-	0	0	-	-	-
Lens aspiration	0	0	-	-	-	0	0	-	-	-

Types of surgery	2015					2016				
	N	n	Median	25 th percentile	75 th percentile	N	n	Median	25 th percentile	75 th percentile
All surgeries	1397	1395	6	5	7	1708	1708	5	5	7
Phaco	1330	1328	6	5	7	1634	1634	5	5	6
ECCE	35	35	9	6	12	42	42	8.5	5	11
Phaco → ECCE	28	28	6.5	5	12	29	29	6	5	11
ICCE	4	4	8	5	11.5	1	1	11	11	11
Lens aspiration	0	0	0	0	0	1	1	3	3	3

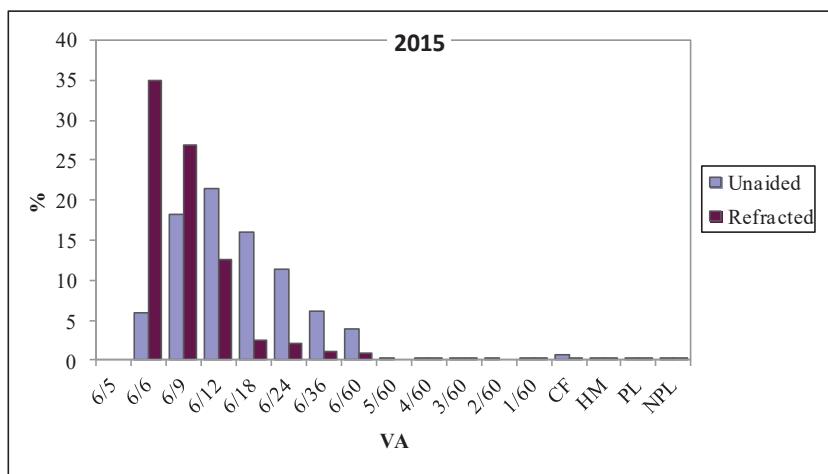
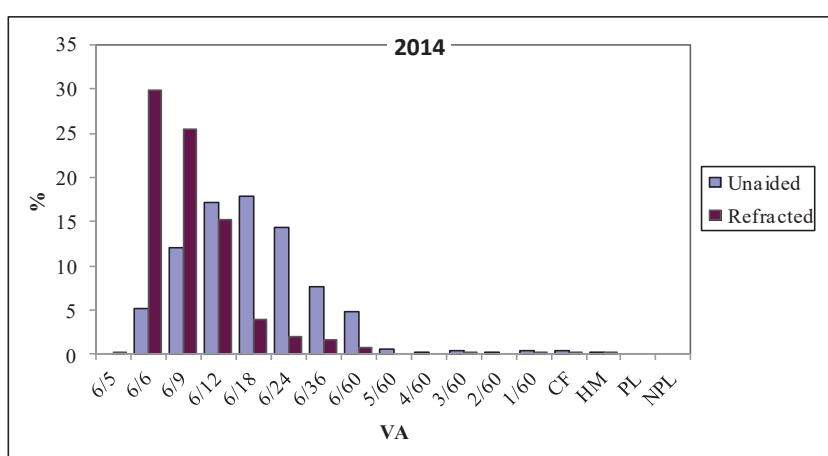
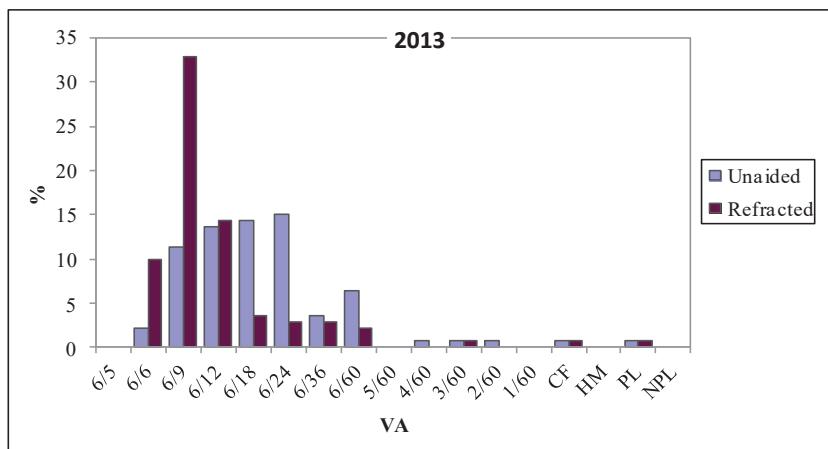
Types of surgery	2017				
	N	n	Median	25 th percentile	75 th percentile
All surgeries	2382	2382	6	5	8
Phaco	2235	2235	6	5	7
Lens aspiration	3	3	6	6	8
ECCE	133	133	7	6	10
ICCE	5	5	7	5	10
Phaco → ECCE	-	-	-	-	-

n = No. of available information

2.5.4 Post-operative Visual Acuity

Table 2.5.4-1:Post-operative Visual Acuity, All Eyes, CSR 2013-2017

Year	2013				2014				2015				2016				2017					
	VA		Unaided		Refracted																	
			n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
6/5	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	1	0.0	2	0.1	4	0.1	9	0.3		
6/6	3	2.1	14	10.0	54	5.1	315	29.9	101	5.9	597	35.0	160	7.4	682	31.6	168	5.6	863	28.8		
6/9	16	11.4	46	32.9	128	12.1	268	25.4	310	18.2	458	26.9	410	19.0	584	27.0	462	15.4	653	21.8		
6/12	19	13.6	20	14.3	182	17.3	161	15.3	367	21.5	214	12.6	396	18.3	243	11.3	490	16.4	343	11.5		
6/18	20	14.3	5	3.6	189	17.9	42	4.0	273	16.0	44	2.6	319	14.8	78	3.6	406	13.6	168	5.6		
6/24	21	15.0	4	2.9	151	14.3	22	2.1	195	11.4	34	2.0	199	9.2	40	1.9	300	10.0	111	3.7		
6/36	5	3.6	4	2.9	81	7.7	17	1.6	105	6.2	18	1.1	117	5.4	28	1.3	241	8.1	64	2.1		
6/60	9	6.4	3	2.1	51	4.8	8	0.8	66	3.9	15	0.9	76	3.5	16	0.7	164	5.5	50	1.7		
5/60	0	0.0	0	0.0	6	0.6	0	0.0	2	0.1	0	0.0	9	0.4	2	0.1	21	0.7	2	0.1		
4/60	1	0.7	0	0.0	2	0.2	0	0.0	3	0.2	3	0.2	5	0.2	2	0.1	10	0.3	5	0.2		
3/60	1	0.7	1	0.7	5	0.5	2	0.2	5	0.3	2	0.1	21	1.0	6	0.3	51	1.7	26	0.9		
2/60	1	0.7	0	0.0	1	0.1	0	0.0	4	0.2	0	0.0	15	0.7	3	0.1	39	1.3	16	0.5		
1/60	0	0.0	0	0.0	5	0.5	3	0.3	6	0.4	4	0.2	14	0.6	6	0.3	30	1.0	19	0.6		
CF	1	0.7	1	0.7	5	0.5	2	0.2	11	0.6	4	0.2	12	0.6	7	0.3	64	2.1	28	0.9		
HM	0	0.0	0	0.0	3	0.3	2	0.2	4	0.2	2	0.1	9	0.4	6	0.3	34	1.1	17	0.6		
PL	1	0.7	1	0.7	0	0.0	0	0.0	2	0.1	1	0.1	5	0.2	3	0.1	8	0.3	4	0.1		
NPL	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1	1	0.0	0	0.0	8	0.3	4	0.1		
Missing	42	30.0	41	29.3	192	18.2	212	20.1	249	14.6	307	18.0	390	18.1	451	20.9	493	16.5	611	20.4		
Total	140	100	140	100	1055	100	1055	100	1704	100	1704	100	2159	100	2159	100	2993	100	2993	100		



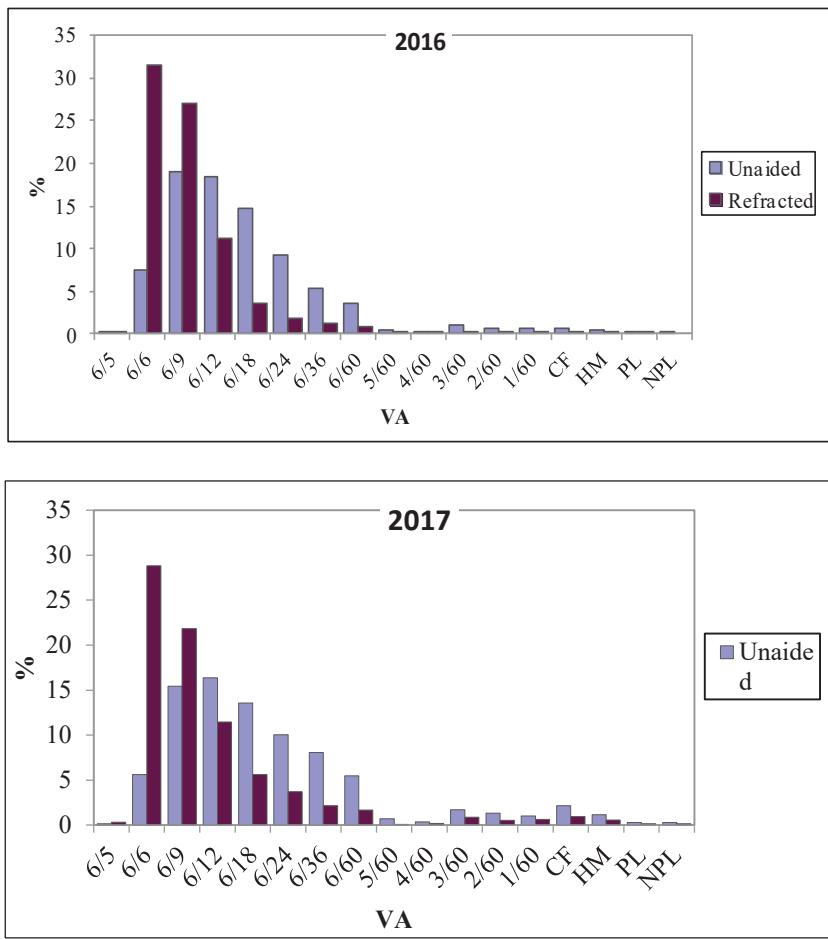
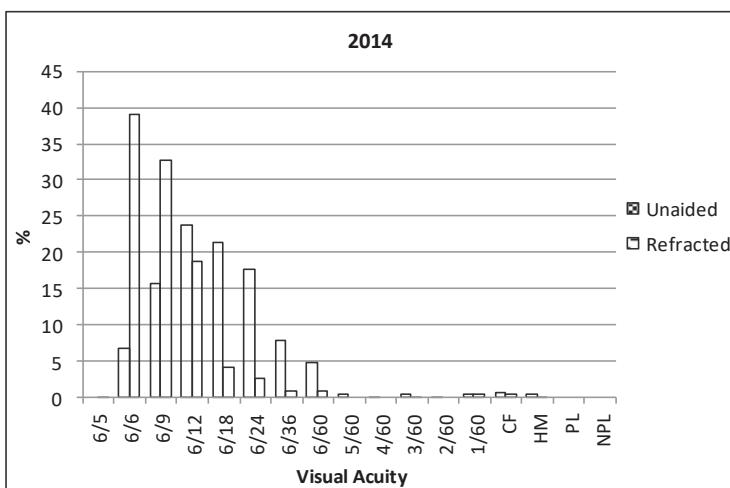
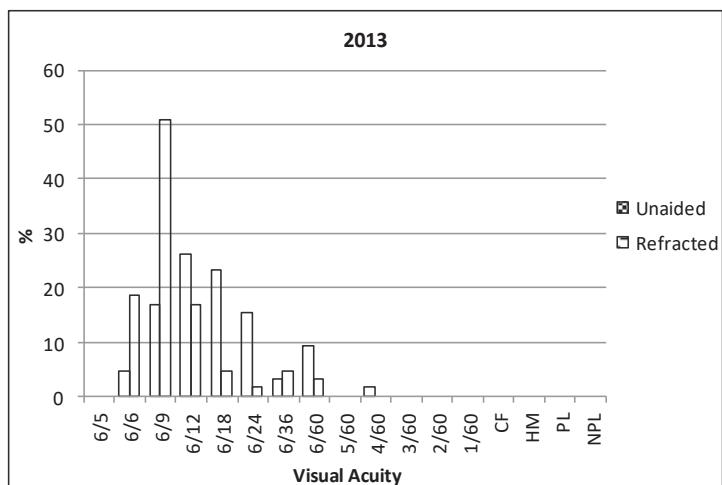


Figure 2.5.4-1: Distribution of Post-operative Unaided and Refracted Visual Acuity, All Eyes, CSR 2013-2017

Table 2.5.4-2: Post-Operative Visual Acuity for Eyes without Ocular Co-morbidity, CSR 2013-2017

Year	2013		2014		2015		2016		2017			
	VA	Unaided n	Refracted n									
6/5	0	0.0	0	0.0	0	0.0	1	0.2	0	0.0	0	0.0
6/6	3	4.6	12	18.5	45	6.7	254	39.0	94	7.5	536	44.4
6/9	11	16.9	33	50.8	105	15.7	212	32.6	273	21.9	402	33.3
6/12	17	26.2	11	16.9	158	23.7	122	18.7	321	25.7	173	14.3
6/18	15	23.1	3	4.6	142	21.3	27	4.1	239	19.2	32	2.7
6/24	10	15.4	1	1.5	117	17.5	17	2.6	161	12.9	30	2.5
6/36	2	3.1	3	4.6	52	7.8	6	0.9	85	6.8	14	1.2
6/60	6	9.2	2	3.1	32	4.8	6	0.9	52	4.2	10	0.8
5/60	0	0.0	0	0.0	3	0.4	0	0.0	2	0.2	0	0.0
4/60	1	1.5	0	0.0	1	0.1	0	0.0	3	0.2	2	0.1
3/60	0	0.0	0	0.0	2	0.3	1	0.2	2	0.2	0	0.0
2/60	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	11	0.8

1/60	0	0.0	0	0.0	3	0.4	2	0.3	3	0.2	1	0.1	6	0.4	4	0.3	22	1.1	11	0.6
CF	0	0.0	0	0.0	4	0.6	2	0.3	10	0.8	4	0.3	11	0.8	5	0.4	44	2.2	13	0.7
HM	0	0.0	0	0.0	2	0.3	1	0.2	1	0.1	1	0.1	3	0.2	2	0.1	24	1.2	12	0.6
PL	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	5	0.2	2	0.1
NPL	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1	1	0.1	0	0.0	4	0.2	2	0.1
Total	65	100	65	100	667	100	651	100	1248	100	1206	100	1428	100	1385	100	2002	100	1925	100



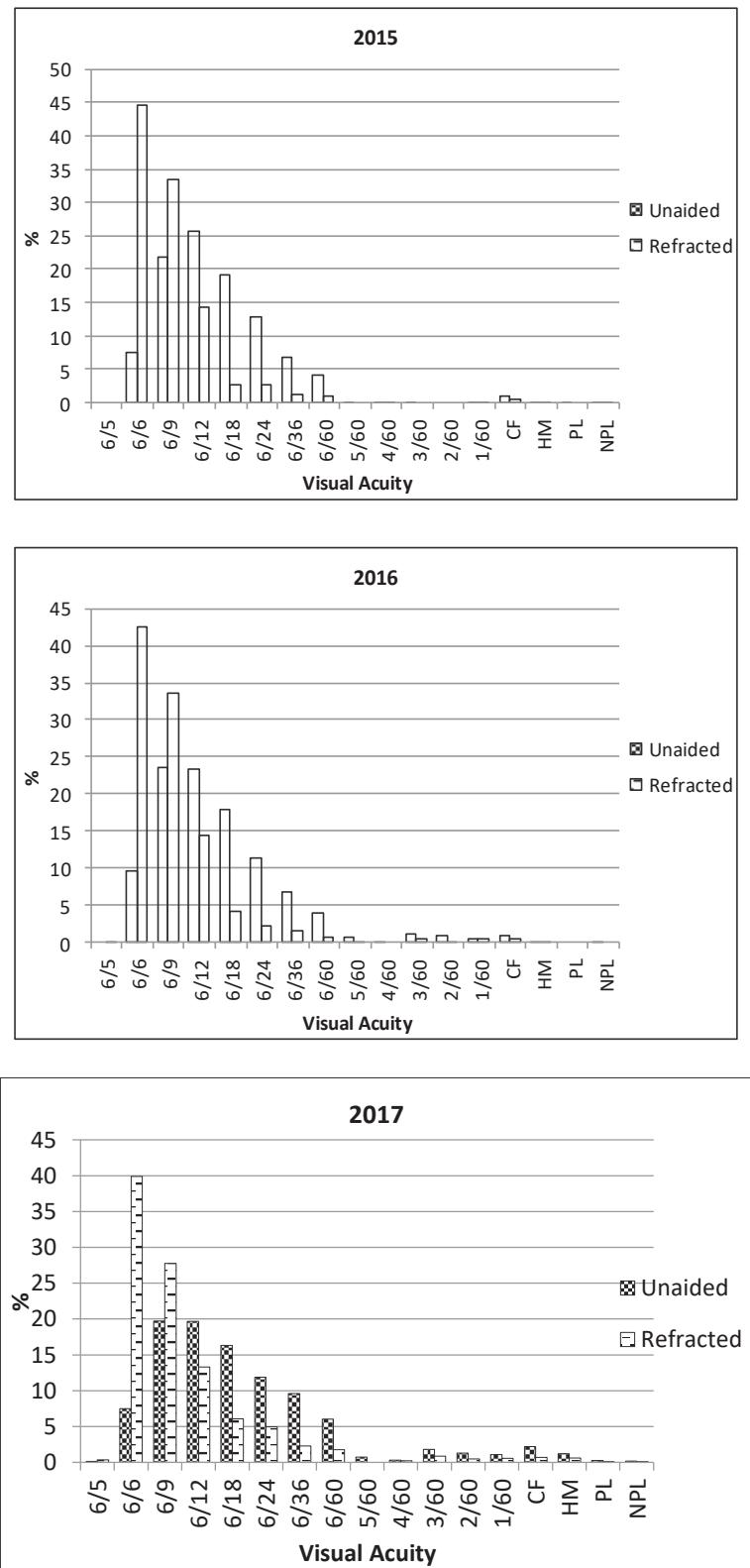


Figure 2.5.4-2:Post-Operative Visual Acuity for Eyes without Ocular Co-morbidity, CSR 2013-2017

2.5.5 Post-operative Visual Acuity 6/12 or Better Among Eyes without Ocular Co-morbidity

Table 2.5.5-1: Post-operative Visual Acuity 6/12 or Better for Eyes without Ocular Co-morbidities by Types of Surgery, CSR 2013-2017

	2013						2014					
	Unaided			Refracted			Unaided			Refracted		
	N	n	%	N	n	%	N	n	%	N	n	%
All Surgeries	65	31	47.7	65	56	86.2	667	308	46.2	651	589	90.5
Phaco	60	30	50.0	60	54	90.0	622	292	46.9	612	555	90.7
ECCE	2	1	50.0	2	1	50.0	40	13	32.5	35	31	88.6
Lens Aspiration	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
ICCE	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
Phaco → ECCE	3	0	0.0	3	1	33.3	4	2	50.0	3	2	66.7

	2015						2016					
	Unaided			Refracted			Unaided			Refracted		
	N	n	%	N	n	%	N	n	%	N	n	%
All Surgeries	1248	688	55.1	1206	1111	92.1	1428	804	56.3	1385	1255	90.6
Phaco	1189	679	57.1	1150	1072	93.2	1375	786	57.2	1332	1219	91.5
ECCE	30	8	26.7	28	21	75.0	33	12	36.4	33	22	66.7
Lens Aspiration	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
ICCE	3	0	0.0	3	2	66.7	1	1	100.0	1	1	100.0
Phaco → ECCE	26	1	3.8	28	16	57.1	18	5	27.8	18	13	72.2

	2017					
	Unaided			Refracted		
	N	n	%	N	n	%
All Surgeries	2002	942	47.1	1925	1565	81.3
Phaco	1900	920	48.4	1830	1506	82.3
ECCE	97	21	21.6	90	56	62.2
Lens Aspiration	1	1	100.0	1	1	100.0
ICCE	2	0	0.0	2	1	50.0
Phaco → ECCE	-	-	-	-	-	-

Table 2.5.5-2: Post-operative Visual Acuity 6/18 or Better for Eyes without Ocular Co-morbidities by Types of Surgery, CSR 2013-2017 (WHO classification)

	2013						2014					
	Unaided			Refracted			Unaided			Refracted		
	N	n	%	N	n	%	N	n	%	N	n	%
All Surgeries	65	46	70.8	65	59	90.8	667	450	67.5	651	616	94.6

Phaco	60	45	75.0	60	56	93.3	622	425	68.3	612	580	94.8
ECCE	2	1	50.0	2	2	100.0	40	22	55.0	35	33	94.3
Lens Aspiration	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
ICCE	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
Phaco → ECCE	3	0	0.0	3	1	33.3	4	2	50.0	3	2	66.7

	2015						2016					
	Unaided			Refracted			Unaided			Refracted		
	N	n	%	N	n	%	N	n	%	N	n	%
All Surgeries	1248	927	74.3	1206	1143	94.8	1428	1060	74.2	1385	1312	94.7
Phaco	1189	909	76.5	1150	1097	95.4	1375	1037	75.4	1332	1271	95.4
ECCE	30	13	43.3	28	23	82.1	33	17	51.5	33	26	78.8
Lens Aspiration	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
ICCE	3	1	33.3	3	3	100.0	1	1	100.0	1	1	100.0
Phaco → ECCE	26	4	15.4	28	20	71.4	18	5	27.8	18	14	77.8

	2017					
	Unaided			Refracted		
	N	n	%	N	n	%
All Surgeries	2002	1269	63.4	1925	1682	87.4
Phaco	1900	1232	64.8	1830	1612	88.1
ECCE	97	35	36.1	90	66	73.3
Lens Aspiration	1	1	100.0	1	1	100.0
ICCE	2	0	0.0	2	1	50.0
Phaco → ECCE	-	-	-	-	-	-

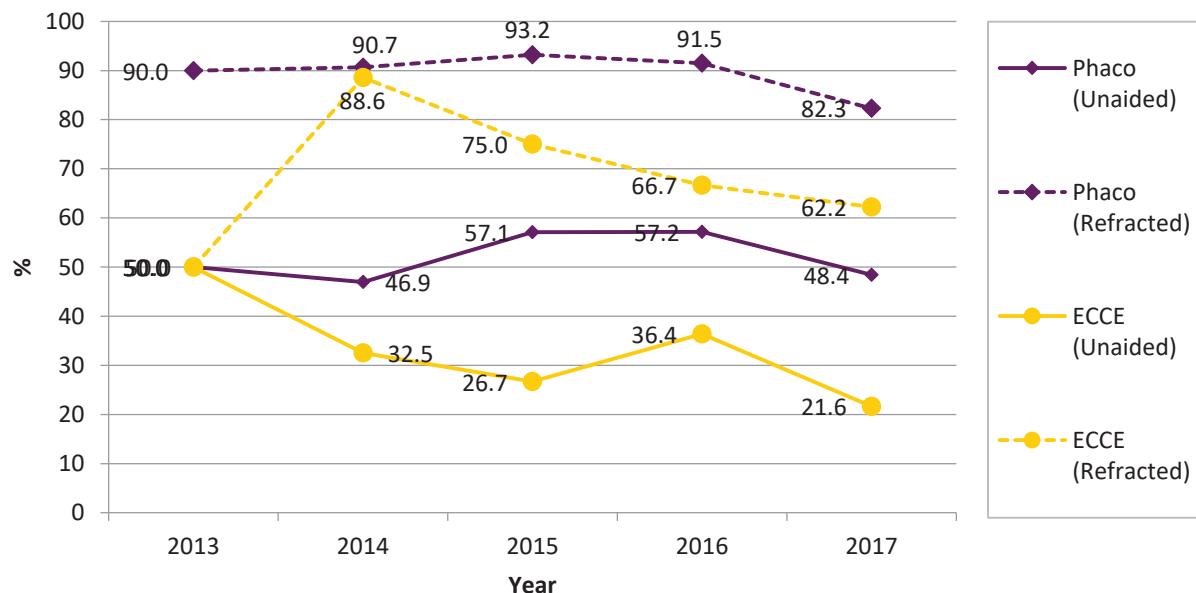


Figure 2.5.5-1: Post-operative Visual Acuity 6/12 or Better for Eyes without Ocular Co-morbidities by ECCE and Phaco, CSR 2013-2017

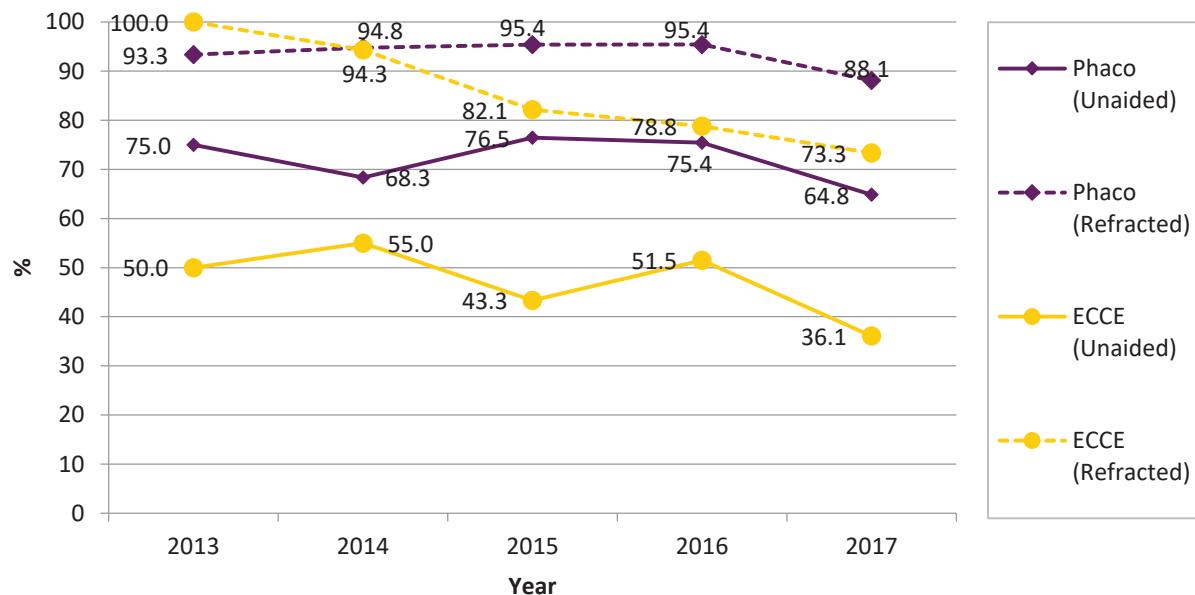


Figure 2.5.5-2: Post-operative Visual Acuity 6/18 or Better for Eyes without Ocular Co-morbidities by ECCE and Phaco (WHO Classification) CSR 2013-2017

Table 2.5.5-3: Post-operative Refracted Visual Acuity 6/12 or Better in Eyes without Ocular Co-morbidities by Complications and Types of Surgery, CSR 2013-2017

2013	Types of Cataract Surgery																	
	All Surgeries			Phaco			ECCE			Lens Aspiration			ICCE			Phaco → ECCE		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
With intra-op complications	5	2	40.0	3	2	66.7	0	0	0.0	0	0	0.0	0	0	0.0	2	0	0.0
No intra-op complications	60	54	90.0	57	52	91.2	2	1	50.0	0	0	0.0	0	0	0.0	1	1	100.0

2014	Types of Cataract Surgery																	
	All Surgeries			Phaco			ECCE			Lens Aspiration			ICCE			Phaco → ECCE		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
With intra-op complications	21	17	81.0	15	12	80.0	4	4	100.0	0	0	0.0	0	0	0.0	2	1	50.0
No intra-op complications	630	572	90.8	597	543	91.0	31	27	87.1	0	0	0.0	0	0	0.0	1	1	100.0

2015	Types of Cataract Surgery																	
	All Surgeries			Phaco			ECCE			Lens Aspiration			ICCE			Phaco → ECCE		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
With intra-op complications	46	33	71.7	31	26	83.9	5	2	40.0	0	0	0.0	1	1	100.0	9	4	44.4
No intra-op complications	1160	1078	92.9	1119	1046	93.5	23	19	82.6	0	0	0.0	2	1	50.0	16	12	75.0

2016	Types of Cataract Surgery																	
	All Surgeries			Phaco			ECCE			Lens Aspiration			ICCE			Phaco → ECCE		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
With intra-op complications	42	29	69.0	30	24	80.0	3	0	0.0	0	0	0.0	1	1	100.0	7	4	57.1
No intra-op complications	1343	1226	91.3	1302	1195	91.8	30	22	73.3	0	0	0.0	0	0	0.0	11	9	81.8

2017	Types of Cataract Surgery																	
	All Surgeries			Phaco			ECCE			Lens Aspiration			ICCE			Phaco → ECCE		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
With intra-op complications	97	63	64.9	72	49	68.1	23	12	52.2	0	0	0.0	1	1	100.0	-	-	-
No intra-op complications	1828	1502	82.2	1758	1457	82.9	67	44	65.7	1	1	100.0	1	0	0.0	-	-	-

Table 2.5.5-4: Post-operative Refracted Visual Acuity 6/18 or Better in Eyes without Ocular Co-morbidities by Complications and Types of Surgery, CSR 2013-2016 (WHO Classification)

2013	Types of Cataract Surgery																	
	All Surgeries			Phaco			ECCE			Lens Aspiration			ICCE			Phaco → ECCE		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
With intra-op complications	5	2	40.0	3	2	66.7	0	0	0.0	0	0	0.0	0	0	0.0	2	0	0.0
No intra-op complications	60	57	95.0	57	54	94.7	2	2	100.0	0	0	0.0	0	0	0.0	1	1	100.0

2014	Types of Cataract Surgery																	
	All Surgeries			Phaco			ECCE			Lens Aspiration			ICCE			Phaco → ECCE		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
With intra-op complications	21	18	85.7	15	13	86.7	4	4	100.0	0	0	0.0	0	0	0.0	2	1	50.0
No intra-op complications	630	598	94.9	597	567	95.0	31	29	93.5	0	0	0.0	0	0	0.0	1	1	100.0

2015	Types of Cataract Surgery																	
	All Surgeries			Phaco			ECCE			Lens Aspiration			ICCE			Phaco → ECCE		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
With intra-op complications	46	36	78.3	31	27	87.1	5	3	60.0	0	0	0.0	1	1	100.0	9	5	55.6
No intra-op complications	1160	1107	95.4	1119	1070	95.6	23	20	87.0	0	0	0.0	2	2	100.0	16	15	93.8

2016	Types of Cataract Surgery																	
	All Surgeries			Phaco			ECCE			Lens Aspiration			ICCE			Phaco → ECCE		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
With intra-op complications	42	33	78.6	30	26	86.7	3	2	66.7	0	0	0.0	1	1	100.0	7	4	57.1
No intra-op complications	1343	1279	95.2	1302	1245	95.6	30	24	80.0	0	0	0.0	0	0	0.0	11	10	90.9

2017	Types of Cataract Surgery																	
	All Surgeries			Phaco			ECCE			Lens Aspiration			ICCE			Phaco → ECCE		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
With intra-op complications	97	77	79.4	72	59	81.9	23	16	69.6	0	0	0.0	1	1	100.0	-	-	-
No intra-op complications	1828	1605	87.8	1758	1553	88.3	67	50	74.6	1	1	100.0	1	0	0.0	-	-	-

2.5.6 Factors Contributing to Post-operative Refracted Visual Acuity of Worse than 6/12

Table 2.5.6-1: Factors Contributing to Post-operative Refracted VA of Worse than 6/12 in All Eyes, CSR 2013-2017

Year	2013	2014	2015	2016	2017					
Factors	n	%	n	%	n	%	n	%	n	%
N (total no. of post-op refracted vision worse than 6/12)	19		98		128		197		514	
Preexisting ocular co-morbidity	3	15.8	12	12.2	20	15.6	44	22.3	58	11.3
High astigmatism	5	26.3	15	15.3	15	11.7	18	9.1	39	7.6
Posterior capsular opacity	0	0.0	1	1.0	4	3.1	3	1.5	8	1.6
Corneal decompensation	0	0.0	0	0.0	1	0.8	2	1.0	6	1.2
Cystoid macular oedema	0	0.0	0	0.0	1	0.8	4	2.0	1	0.2
Endophthalmitis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Decentered IOL	1	5.3	0	0.0	0	0.0	0	0.0	0	0.0
Retinal detachment	0	0.0	1	1.0	0	0.0	0	0.0	0	0.0
Others	11	57.9	28	28.6	50	39.1	41	20.8	83	16.1

Table 2.5.6-2: Factors Contributing to Post-operative Refracted VA of Worse than 6/18 in All Eyes, CSR 2013-2017

Year	2013	2014	2015	2016	2017	
Factors	n	%	n	%	n	%
N (total no. of post-op refracted vision worse than 6/18)	14		56		84	
Preexisting ocular co-morbidity	2	14.3	10	17.9	12	14.3
High astigmatism	4	28.6	8	14.3	10	11.9
Posterior capsular opacity	0	0.0	1	1.8	2	2.4
Corneal decompensation	0	0.0	0	0.0	0	0.0
Cystoid macular oedema	0	0.0	0	0.0	1	1.2
Endophthalmitis	0	0.0	0	0.0	0	0.0
Decentered IOL	1	7.1	0	0.0	0	0.0
Retinal detachment	0	0.0	1	1.8	0	0.0
Others	9	64.3	17	30.4	38	45.2
					30	25.2
					60	17.3

Table 2.5.6-3: Factors Contributing to Post-operative Refracted VA of Worse than 6/12 in Eyes without Preexisting Ocular co-morbidity, CSR 2013-2017

Factors	2013		2014		2015		2016		2017	
	n	%	n	%	n	%	n	%	n	%
N	9		62		95		130		360	
High astigmatism	2	22.2	5	8.1	13	13.7	14	10.8	28	7.8
Posterior capsular opacity	0	0.0	1	1.6	2	2.1	3	2.3	8	2.2
Preexisting ocular co-morbidity (not detected pre-operatively)	0	0.0	6	9.7	6	6.3	9	6.9	7	1.9
Corneal decompensation	0	0.0	0	0.0	1	1.1	2	1.5	6	1.7
Cystoid macular oedema	0	0.0	0	0.0	1	1.1	3	2.3	1	0.3
Endophthalmitis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Decentered IOL	1	11.1	0	0.0	0	0.0	0	0.0	0	0.0
Retinal detachment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Others	5	55.6	20	32.3	41	43.2	36	27.7	65	18.1

Table 2.5.6-4: Factors Contributing to Post-operative Refracted VA of Worse than 6/18 in Eyes without Preexisting Ocular co-morbidity, CSR 2013-2017 (WHO Classification)

Factors	2013		2014		2015		2016		2017	
	n	%	n	%	n	%	n	%	n	%
N	6		35		63		73		243	
High astigmatism	1	16.7	1	2.9	8	12.7	9	12.3	15	6.2
Posterior capsular opacity	0	0.0	1	2.9	0	0.0	0	0.0	5	2.1
Preexisting ocular co-morbidity (not detected pre-operatively)	0	0.0	5	14.3	4	6.3	5	6.8	4	1.6
Corneal decompensation	0	0.0	0	0.0	0	0.0	2	2.7	3	1.2
Cystoid macular oedema	0	0.0	0	0.0	1	1.6	1	1.4	1	0.4
Endophthalmitis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Decentered IOL	1	16.7	0	0.0	0	0.0	0	0.0	0	0.0
Retinal detachment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Others	4	66.7	13	37.1	30	47.6	26	35.6	46	18.9

2.5.7 Actual or Residual Refractive Power (in Spherical Equivalent)

Table 2.5.7-1: Distribution of Target and Actual Refractive Power in ECCE and Phaco, CSR 2013-2017

	Target Refraction					Actual-Target Refraction					Actual Refraction									
	All Patient					All Patient					ECCE					Phaco				
	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017
N	139	894	1598	2090	2751	86	649	1039	1244	1815	4	41	29	35	117	76	705	1060	1184	1846
Mean	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	-0.8	-0.3	-0.5	-0.1	-0.4	-1.2	-1.1	-0.9	-0.8	-0.7	-1.0	-0.6	-0.5	-0.5
SD	0.2	0.2	0.2	0.2	0.3	0.9	1.0	0.9	0.9	0.9	1.4	1.1	1.1	1.1	1.5	0.9	0.9	0.8	0.9	0.8
Median	-0.3	-0.2	-0.3	-0.4	-0.4	-0.5	-0.7	-0.3	-0.5	-0.1	-0.4	-1.3	-1.0	-1.0	-0.9	-0.8	-0.9	-0.5	-0.5	-0.5
Minimum	-0.8	-1.6	-2.1	-3.2	-2.3	-3.2	-4.5	-3.6	-6.5	-6.1	-2.0	-4.0	-3.0	-3.0	-4.5	-3.3	-5.4	-3.8	-6.5	-6.5

Maximum	0.0	0.5	1.3	0.7	2.8	1.8	3.3	8.3	8.8	10.3	0.0	0.8	2.5	1.0	9.8	1.6	3.0	7.5	8.8	3.0
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Note: Eyes with actual refractive power (SE) of more than +10.0D and -10.0D were excluded from analysis

Table 2.5.7-2: Percentage Distribution of Target and Actual Refractive Power in ECCE and Phaco, CSR 2013-2017

Dioptrre (D)	Target Refraction										Actual Refraction																			
	All Patients										ECCE					Phaco														
	2013	n	%	2014	n	%	2015	n	%	2016	n	%	2017	n	%	2013	n	%	2014	n	%	2015	n	%	2016	n	%	2017	n	%
-10.0-<(-9.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0		
-9.5-<(-9.0)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0		
-9.0-<(-8.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0		
-8.5-<(-8.0)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0		
-8.0-<(-7.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0		
-7.5-<(-7.0)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0		
-7.0-<(-6.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0		
-6.5-<(-5.0)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	1	0.1	2	0.1		
-5.0-<(-4.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	0.2		
-4.5-<(-4.0)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.9	0	0.0	2	0.3	0	0.0	0	0.0	1	0.1				
-4.0-<(-3.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	4.9	0	0.0	0	0.0	0	0.0	0	0.0	5	0.7	1	0.1	2	0.2	5	0.3		
-3.5-<(-3.0)	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	1	2.4	0	0.0	0	0.0	3	2.6	1	1.3	8	1.1	1	0.1	4	0.3	1	0.1		
-3.0-<(-2.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	2.4	2	6.9	3	8.6	3	2.6	1	1.3	25	3.5	4	0.4	7	0.6	8	0.4		
-2.5-<(-2.0)	0	0.0	0	0.0	1	0.1	0	0.0	1	0.0	0	0.0	3	7.3	3	10.3	1	2.9	10	8.5	3	3.9	46	6.5	13	1.2	10	0.8	15	0.8
-2.0-<(-1.5)	0	0.0	1	0.1	1	0.1	3	0.1	0	0.0	1	25.0	7	17.1	3	10.3	5	14.3	15	12.8	5	6.6	72	10.2	54	5.1	52	4.4	73	4.0
-1.5-<(-1.0)	0	0.0	0	0.0	2	0.1	4	0.2	8	0.3	1	25.0	8	19.5	6	20.7	6	17.1	12	10.3	12	15.8	120	17.0	133	12.5	139	11.7	204	11.1
-1.0-<(-0.5)	18	12.9	67	7.5	130	8.1	404	19.3	792	28.8	1	25.0	7	17.1	4	13.8	5	14.3	24	20.5	21	27.6	179	25.4	307	29.0	307	25.9	453	24.5
-0.5-<0.0	120	86.3	822	91.9	1454	91.0	1665	79.7	1903	69.2	0	0.0	4	9.8	8	27.6	6	17.1	24	20.5	16	21.1	126	17.9	331	31.2	359	30.3	604	32.7
0.0-<0.5	1	0.7	3	0.3	5	0.3	9	0.4	8	0.3	0	0.0	7	17.1	2	6.9	4	11.4	9	7.7	7	9.2	80	11.3	146	13.8	186	15.7	339	18.4
0.5-<1.0	0	0.0	1	0.1	2	0.1	4	0.2	4	0.1	0	0.0	1	2.4	0	0.0	4	11.4	7	6.0	6	7.9	32	4.5	45	4.2	65	5.5	84	4.6
1.0-<1.5	0	0.0	0	0.0	3	0.2	0	0.0	2	0.1	1	25.0	0	0.0	0	0.0	1	2.9	6	5.1	2	2.6	6	0.9	16	1.5	21	1.8	37	2.0
1.5-<2.0	0	0.0	0	0.0	0	0.0	5	0.2	0	0.0	0	0.0	0	0.0	0	0.0	1	0.9	2	2.6	1	0.1	2	0.2	11	0.9	11	0.6		
2.0-<2.5	0	0.0	0	0.0	0	0.0	0	0.0	20	0.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	0.3	10	0.8	4	0.2
2.5-<3.0	0	0.0	0	0.0	0	0.0	0	0.0	8	0.3	0	0.0	0	0.0	1	3.4	0	0.0	1	0.9	0	0.0	1	0.1	0	0.0	9	0.8	1	0.1
3.0-<3.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1	0	0.0	1	0.1		

3.5-<4.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0
4.0-<4.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
4.5-<5.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0
5.0-<5.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
5.5-<6.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
6.0-<6.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
6.5-<7.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
7.0-<7.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
7.5-<8.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0
8.0-<8.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
8.5-<9.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0
9.0-<9.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9.5-<10.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.9	0	0.0	0	0.0	0	0.0	0	0.0

Eyes with actual refractive power (SE) of more than +10.0D and -10.0D were excluded from analysis

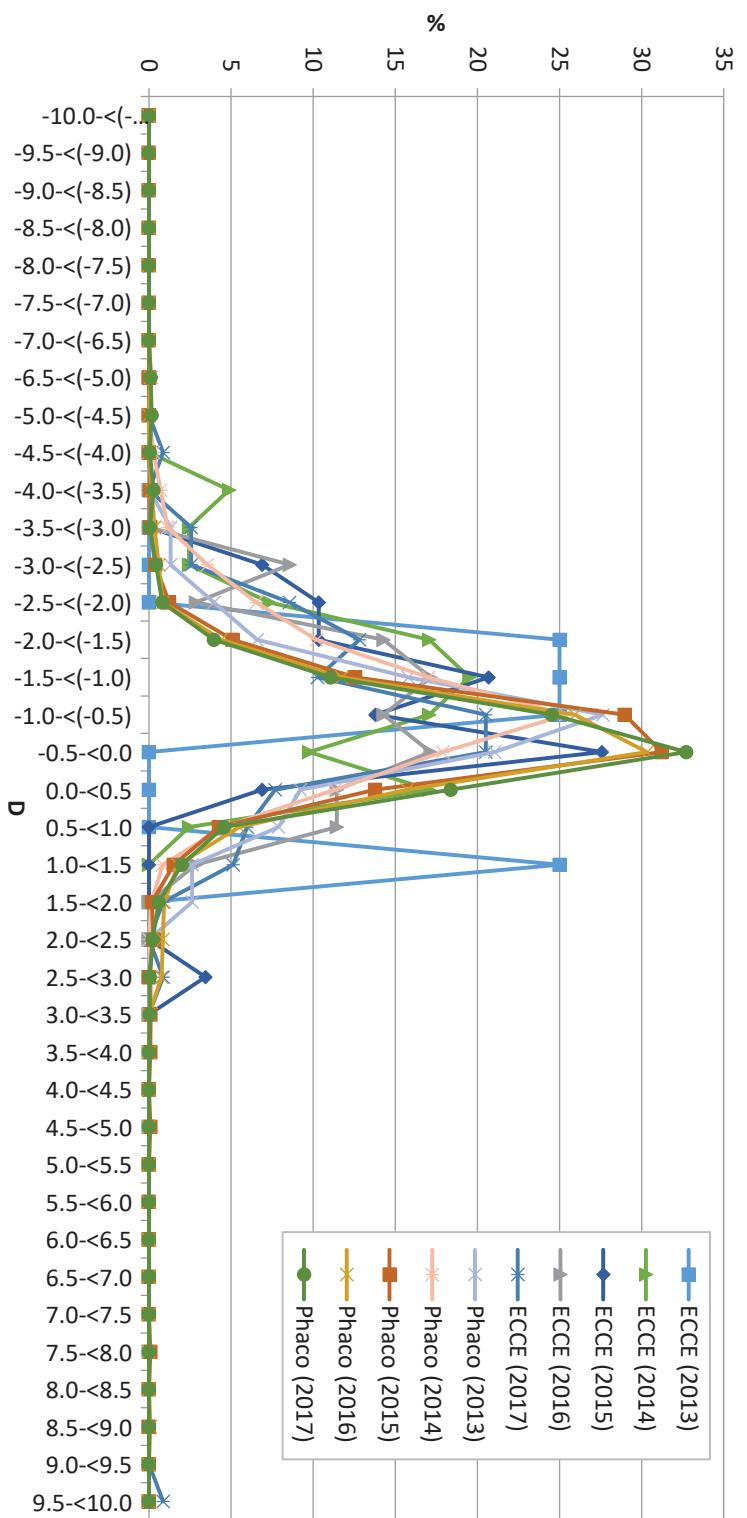


Figure 2.5.7-1: Distribution of Actual Refractive Power in ECCE and Phaco, CSR 2013-2017

Table 2.5.7-3: Difference in Target and Actual Refractive Power for Patients who had Phacoemulsification Only, CSR 2013-2017

Power (D)	Target Refraction										Actual Refraction										Difference between Target and Actual Refraction									
	2013		2014		2015		2016		2017		2013		2014		2015		2016		2017		2013		2014		2015		2016		2017	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
N	120	100	807	100	1507	100	1998	100	2571	100	76	100	705	100	1060	100	1184	100	1846	100	75	100	614	100	985	100	1160	100	1707	100
-10.0-<(-9.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-9.5-<(-9.0)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-9.0-<(-8.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-8.5-<(-8.0)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-8.0-<(-7.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-7.5-<(-7.0)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-7.0-<(-6.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-6.5-<(-5.0)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	1	0.1	2	0.1	0	0.0	0	0.0	0	0.0	1	0.1	2	0.1		
-5.0-<(-4.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	0.2
-4.5-<(-4.0)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.3	0	0.0	0	0.0	1	0.1	0	0.0	1	0.2	0	0.0	0	0.0	2	0.1		
-4.0-<(-3.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	5	0.7	1	0.1	2	0.2	5	0.3	0	0.0	5	0.8	1	0.1	1	0.1	5	0.3		
-3.5-<(-3.0)	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	1	1.3	8	1.1	1	0.1	4	0.3	1	0.1	1	1.3	5	0.8	1	0.1	1	0.1	9	0.5
-3.0-<(-2.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	1.3	25	3.5	4	0.4	7	0.6	8	0.4	1	1.3	16	2.6	1	0.1	5	0.4	7	0.4
-2.5-<(-2.0)	0	0.0	0	0.0	1	0.1	0	0.0	1	0.0	3	3.9	46	6.5	13	1.2	10	0.8	15	0.8	2	2.7	36	5.9	9	0.9	6	0.5	8	0.5
-2.0-<(-1.5)	0	0.0	0	0.0	0	0.0	3	0.2	0	0.0	5	6.6	72	10.2	54	5.1	52	4.4	73	4.0	4	5.3	72	11.7	25	2.5	26	2.2	26	1.5
-1.5-<(-1.0)	0	0.0	0	0.0	1	0.1	3	0.2	8	0.3	12	15.8	120	17.0	133	12.5	139	11.7	204	11.1	8	10.7	87	14.2	93	9.4	69	5.9	89	5.2
-1.0-<(-0.5)	9	7.5	40	5.0	117	7.8	371	18.6	723	28.1	21	27.6	179	25.4	307	29.0	307	25.9	453	24.5	20	26.7	140	22.8	227	23.0	227	19.6	262	15.3
-0.5-<0.0	110	91.7	764	94.7	1379	91.5	1610	80.6	1794	69.8	16	21.1	126	17.9	331	31.2	359	30.3	604	32.7	15	20.0	133	21.7	321	32.6	344	29.7	525	30.8
0.0-<0.5	1	0.8	3	0.4	5	0.3	7	0.4	7	0.3	7	9.2	80	11.3	146	13.8	186	15.7	339	18.4	13	17.3	67	10.9	206	20.9	269	23.2	484	28.4
0.5-<1.0	0	0.0	0	0.0	2	0.1	3	0.2	4	0.2	6	7.9	32	4.5	45	4.2	65	5.5	84	4.6	7	9.3	42	6.8	66	6.7	128	11.0	196	11.5
1.0-<1.5	0	0.0	0	0.0	2	0.1	0	0.0	2	0.1	2	2.6	6	0.9	16	1.5	21	1.8	37	2.0	1	1.3	8	1.3	21	2.1	44	3.8	53	3.1
1.5-<2.0	0	0.0	0	0.0	0	0.0	5	0.2	2	2.6	1	0.1	2	0.2	11	0.9	11	0.6	3	4.0	0	0.0	0	0.0	3	0.3	13	1.1	4	0.2
2.0-<2.5	0	0.0	0	0.0	0	0.0	19	0.7	0	0.0	0	0.0	3	0.3	10	0.8	4	0.2	0	0.0	0	0.0	3	0.3	13	1.1	4	0.2		
2.5-<3.0	0	0.0	0	0.0	0	0.0	8	0.3	0	0.0	1	0.1	0	0.0	9	0.8	1	0.1	0	0.0	1	0.2	0	0.0	9	0.8	4	0.2		
3.0-<3.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1	0	0.0	1	0.1	0	0.0	1	0.2	1	0.1	7	0.6	2	0.1		

3.5-<4.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0
4.0-<4.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
4.5-<5.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
5.0-<5.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0
5.5-<6.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
6.0-<6.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
6.5-<7.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
7.0-<7.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
7.5-<8.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0
8.0-<8.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
8.5-<9.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9.0-<9.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
9.5-<10.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

NOTE: Formula of SE = Sp + $(\frac{C_y}{2})$

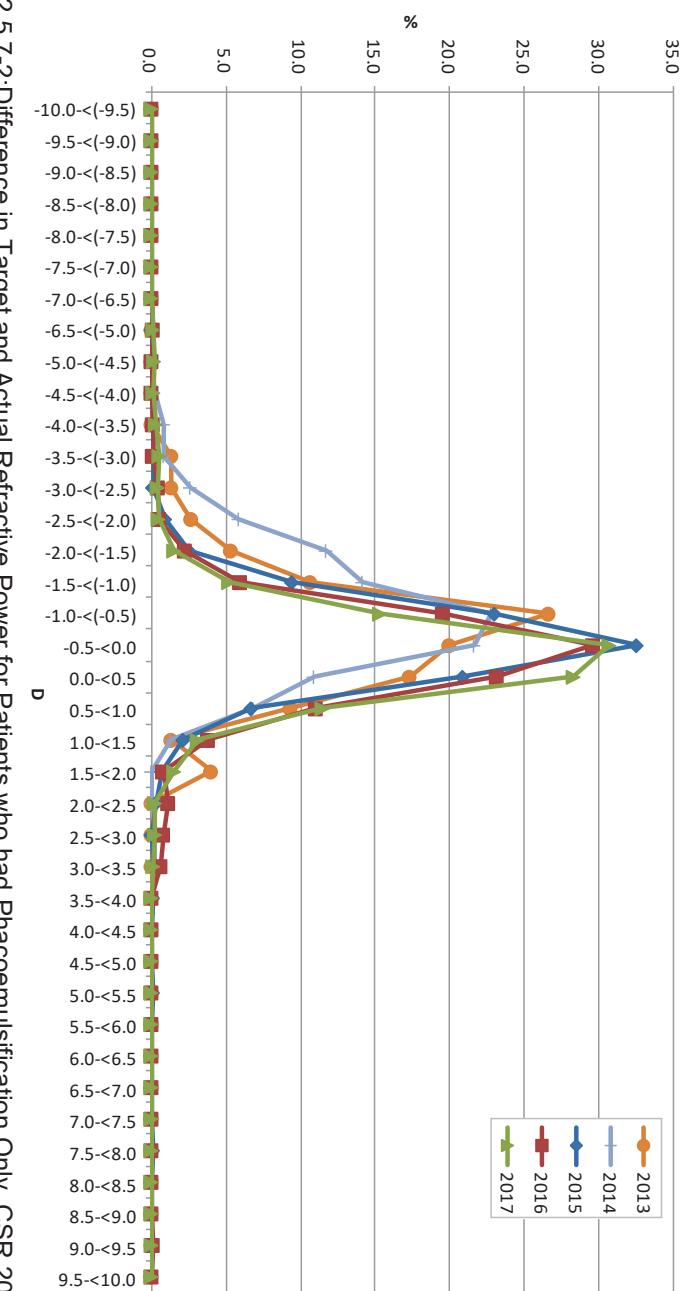


Figure 2.5.7-2: Difference in Target and Actual Refractive Power for Patients who had Phacoemulsification Only, CSR 2013-2017

Table 2.5.7-4: Percentage of Difference in Target and Actual Refractive Power within ±1.0D by SDP, CSR 2013-2017

2013	All			By Phacoemulsification			By ECCE		
	No. of patient with refracted VA	Difference between Target and Actual Refraction within ±1.0D		No. of patient with refracted VA	Difference between Target and Actual Refraction within ±1.0D		No. of patient with refracted VA	Difference between Target and Actual Refraction within ±1.0D	
	N	n	%	N	n	%	N	n	%
All Centres	86	61	70.9	75	55	73.3	4	1	25.0
KK-KKM Pahang	34	24	70.6	25	19	76.0	3	1	33.3
KK-KKM Sarawak	52	37	71.2	50	36	72.0	1	0	0.0

2014	All			By Phacoemulsification			By ECCE		
	No. of patient with refracted VA	Difference between Target and Actual Refraction within ±1.0D		No. of patient with refracted VA	Difference between Target and Actual Refraction within ±1.0D		No. of patient with refracted VA	Difference between Target and Actual Refraction within ±1.0D	
	N	n	%	N	n	%	N	n	%
All Centres	649	402	61.9	614	382	62.2	29	18	62.1
KK-KKM Terengganu	22	16	72.7	15	13	86.7	7	3	42.9
KK-KKM Kelantan	62	47	75.8	41	35	85.4	18	11	61.1
KK-KKM Sarawak	565	339	60.0	558	334	59.9	4	4	100.0

2015	All			By Phacoemulsification			By ECCE		
	No. of patient with refracted VA	Difference between Target and Actual Refraction within ±1.0D		No. of patient with refracted VA	Difference between Target and Actual Refraction within ±1.0D		No. of patient with refracted VA	Difference between Target and Actual Refraction within ±1.0D	
	N	n	%	N	n	%	N	n	%
All Centres	1039	845	81.3	985	820	83.2	26	15	57.7
KK-KKM Kedah	134	123	91.8	134	123	91.8	0	0	0.0
KK-KKM Neg. Sembilan	3	2	66.7	2	1	50.0	0	0	0.0
KK-KKM Pahang	113	82	72.6	96	75	78.1	10	6	60.0
KK-KKM Sabah	53	39	73.6	40	34	85.0	9	5	55.6
KK-KKM Sarawak	735	598	81.4	712	586	82.3	7	4	57.1
KK-KKM Terengganu	1	1	100.0	1	1	100.0	0	0	0.0

2016	All			By Phacoemulsification			By ECCE		
	No. of patient with refracted VA	Difference between Target and Actual Refraction within ±1.0D		No. of patient with refracted VA	Difference between Target and Actual Refraction within ±1.0D		No. of patient with refracted VA	Difference between Target and Actual Refraction within ±1.0D	
N	n	%	N	n	%	N	n	%	

	N	n	%	N	n	%	N	n	%
All Centres	1215	1002	82.5	1160	968	83.4	30	17	56.7
KK-KKM Johor	38	32	84.2	37	31	83.8	1	1	100.0
KK-KKM Kedah	220	196	89.1	216	194	89.8	2	1	50.0
KK-KKM Kelantan	33	23	69.7	17	14	82.4	14	7	50.0
KK-KKM Neg. Sembilan	148	103	69.6	139	97	69.8	1	1	100.0
KK-KKM Pahang	91	76	83.5	83	69	83.1	5	4	80.0
KK-KKM Pulau Pinang	60	51	85.0	57	50	87.7	1	0	0.0
KK-KKM Sabah	117	93	79.5	114	92	80.7	3	1	33.3
KK-KKM Sarawak	508	428	84.3	497	421	84.7	3	2	66.7

2017	All			By Phacoemulsification			By ECCE		
	No. of patient with refracted VA	Difference between Target and Actual Refraction within ±1.0D		No. of patient with refracted VA	Difference between Target and Actual Refraction within ±1.0D		No. of patient with refracted VA	Difference between Target and Actual Refraction within ±1.0D	
		N	n		N	n		N	n
All Centres	1815	1531	84.4	1707	1467	85.9	98	60	61.2
KK-KKM Pulau Pinang	76	69	90.8	75	68	90.7	1	1	100.0
KK-KKM Kedah	207	181	87.4	183	169	92.3	24	12	50.0
KK-KKM Pahang	222	194	87.4	211	187	88.6	11	7	63.6
KK-KKM Terengganu	201	174	86.6	179	156	87.2	22	18	81.8
KK-KKM Sarawak	567	487	85.9	558	482	86.4	7	5	71.4
KK-KKM Sabah	223	184	82.5	213	178	83.6	7	4	57.1
KK-KKM Neg. Sembilan	226	176	77.9	216	170	78.7	6	4	66.7
KK-KKM Johor	14	10	71.4	14	10	71.4	0	0	0.0
KK-KKM Kelantan	79	56	70.9	58	47	81.0	20	9	45.0

NOTE: Formula of Actual Refraction, $SE = Sp + (\frac{CY}{2})$

Result is based on available info of target and actual refraction.

Target/Planned refractive power = Section pre-clerking

Actual refractive power, SE = Section post-op visual acuity measurement ($SE=SP+(CY/2)$)

Denominator = patient with refraction = if info available in refracted vision Section post-op visual acuity measurement

CHAPTER 3: PUSAT PEMBEDAHAN KATARAK MAIWP-HOSPITAL SELAYANG (PPKM-HS)

PPKM-HS forms the “static” component of the KK-KKM Strategy to address issue of cataract blindness within the urban population. It is a community based one-stop center for cataract surgery, has two fully functioning operating theatres and includes all other cataract care pathways under one roof. It opens for clinic and surgery sessions daily from Monday to Friday.

Consistent with its aim to maximise output at the same time to produce high quality good outcome surgery, the scheduled surgical cases are low risks and performed by fully certified surgeons from all over the country in particular from hospitals in the Klang Valley. Its location within the commercial area facilitates population access to the center. Cataract surgical data are entered into the local Eye Clinic Management System (ECMS) which synchronises with NED database at regular intervals.

3.1 Stock and Flow

3.1.1 Stock and Flow

Table 3.1.1-1: Stock and Flow, CSR 2013-2017

Year	2013	2014	2015	2016	2017
Total no. of cataract surgery registered to CSR	1506	2266	1824	2900	3507
	n %	n %	n %	n %	n %
Cataract surgery with visual outcome records	1441 95.7	2183 96.3	1500 82.2	2215 76.4	3159 90.1

3.2 Characteristics of Patients

3.2.1 Patient Demography

Table 3.2.1-1: Age and Gender Distributions, CSR 2013-2017

Year	2013	2014	2015	2016	2017
Total number of cataract surgery	1506	2266	1824	2900	3507
Age					
Mean (years)	65.3	65.2	65	65.3	65.8
Median (years)	66	66	66	66	66
Minimum (year)	19	1	32	21	21
Maximum (years)	93	98	86	86	90
% Distribution					
Age group, years	n %				
0-4	0 0.0	1 0.0	0 0.0	0 0.0	0 0.0

5-9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
10-14	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
15-19	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0
20-24	3	0.2	1	0.0	0	0.0	1	0.0	3	0.1
25-29	0	0.0	0	0.0	0	0.0	4	0.1	5	0.1
30-34	1	0.1	4	0.2	4	0.2	1	0.0	14	0.4
35-39	4	0.3	3	0.1	11	0.6	13	0.5	19	0.5
40-44	17	1.1	23	1.0	20	1.1	27	0.9	29	0.8
45-49	36	2.4	65	2.5	50	2.7	66	2.3	62	1.8
50-54	108	7.2	134	5.0	124	6.8	180	6.2	186	5.3
55-59	177	11.8	317	12.3	227	12.5	320	11.0	411	11.7
60-64	294	19.5	430	17.9	363	19.9	643	22.2	727	20.7
65-69	343	22.8	541	23.6	466	25.6	758	26.1	855	24.4
70-74	320	21.3	435	19.6	315	17.3	527	18.2	629	17.9
75-79	156	10.4	261	12.7	219	12.0	284	9.8	399	11.4
≥80	46	3.1	51	5.2	25	1.4	76	2.6	168	4.8
Missing	0	0	0	0	0	0.0	0	0.0	0	0.0
Gender										
Male	684	45.4	1077	47.5	865	47.4	1341	46.2	1569	44.7
Female	822	54.6	1189	52.5	959	52.6	1559	53.8	1938	55.3
Missing	0	0	0	0	0	0.0	0	0.0	0	0.0

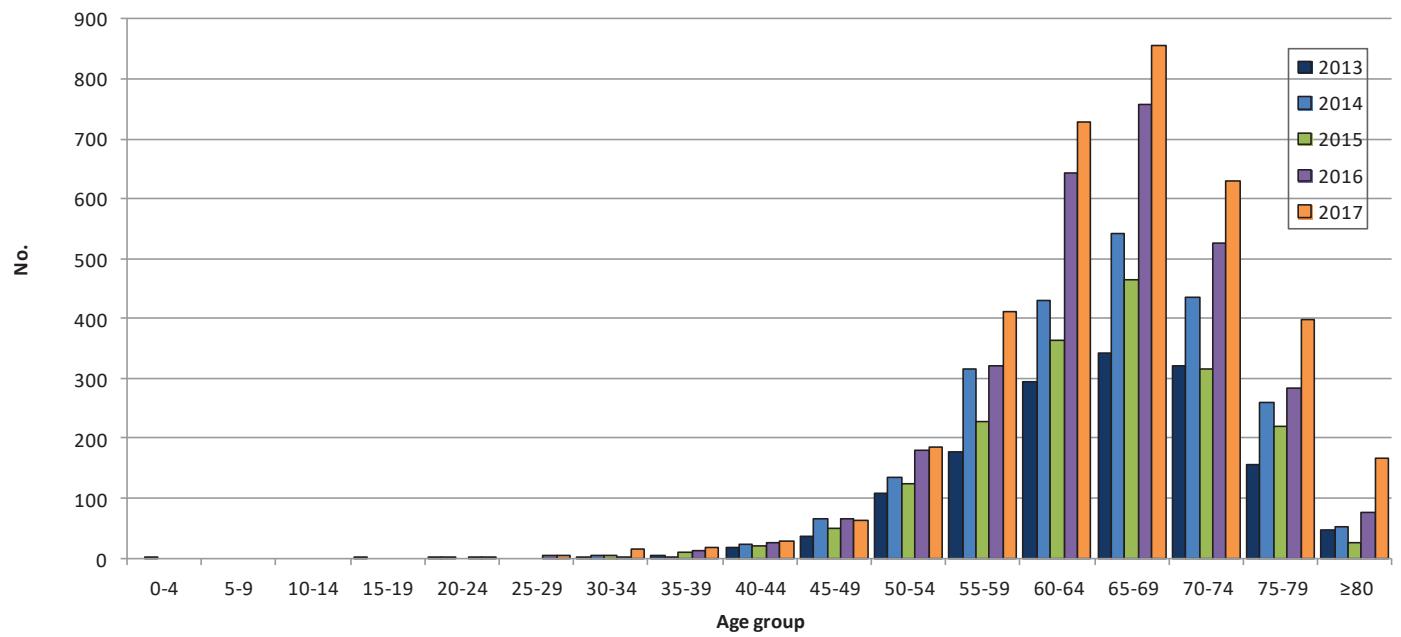


Figure 3.2.1-1: Age Distribution, CSR 2013-2017

3.2.2 Systemic co-morbidity

Table 3.2.2-1: Distribution of Systemic Co-Morbidity, CSR 2013-2017

Year	2013	2014	2015	2016	2017	
No of patients (N)	1506	2266	1824	2900	3507	
Percentage of patients with any systemic co-morbidity	81.9	77.3	78.0	80.6	79.9	
Percentage of patients with specific systemic co-morbidity						
	n	%	n	%	n	%
1. Hypertension	984	62.2	1405	62.0	1156	63.4
2. Diabetes Mellitus	679	42.9	1042	46.0	807	44.2
3. Ischaemic Heart Disease	76	4.8	110	4.9	65	3.6
4. COAD/Asthma	66	4.2	87	3.8	46	2.5
5. Renal Failure	13	0.8	35	1.5	21	1.2
6. Cerebrovascular accident	21	1.3	16	0.7	12	0.7
7. Others	525	33.2	974	43.0	798	43.8
					1310	45.2
					1420	40.5

Number or percentage may be more than total or 100% as patients might have more than one systemic co-morbidity

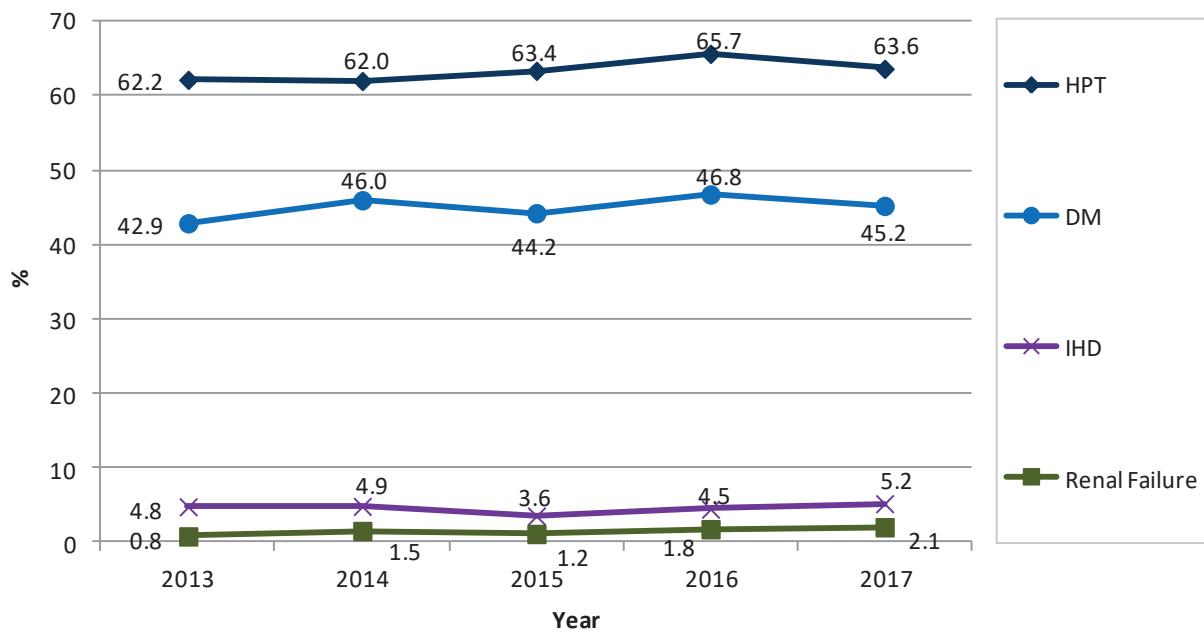


Figure 3.2.2-1: Percentage of Patients with Specific Systemic Co-morbidity, CSR 2013-2017

3.1.2 Causes of cataract

Table 3.1.2-1: Causes of Cataract, CSR 2013-2017

Year	2013		2014		2015		2016		2017	
No of patients (N)	1506		2266		1824		2900		3507	
	n	%	n	%	n	%	n	%	n	%
Primary cataract	1214	80.6	1722	76.0	1410	77.3	2332	80.4	2258	64.4
Secondary cataract	9	0.6	8	0.4	13	0.7	12	0.4	20	0.6
Missing value	283	18.8	536	23.7	401	22.0	556	19.2	1229	35.0
Primary Cataract (N)	1067		1467		1410		2332		2258	
	n	%	n	%	n	%	n	%	n	%
Senile/age related	1064	99.7	1463	99.7	1191	84.5	2132	91.4	1772	78.5
Development	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0
Congenital	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Others	3	0.3	4	0.3	219	15.5	199	8.5	1	0.0
Secondary Cataract (N)	5		2		13		12		20	
	n	%	n	%	n	%	n	%	n	%
Trauma	1	20.0	0	0.0	3	23.1	3	25.0	7	35.0
Drug induced	1	20.0	1	50.0	1	7.7	3	25.0	6	30.0
Surgery induced	2	40.0	0	0.0	2	15.4	2	16.7	2	10.0
Others	1	20.0	1	50.0	7	53.8	4	33.3	3	15.0

3.1.3 First or Second Eye Surgery

Table 3.1.3-1: First or Second Eye Surgery, CSR 2013-2017

Year	2013		2014		2015		2016		2017	
No of patients (N)	1506		2266		1824		2900		3507	
	n	%	n	%	n	%	n	%	n	%
First eye surgery	894	59.4	1212	53.5	1088	59.6	1771	61.1	2101	59.9
Fellow eye surgery	612	40.6	913	40.3	704	38.6	1080	37.2	1388	39.6
Missing	0	0.0	141	6.2	32	1.8	49	1.7	18	0.5
Patients who had second surgery in the same year	0	0.0	449	19.8	343	18.8	547	18.9	617	17.6
Period of time between first and fellow eye surgery (months)										
N	611		913		704		1080		1381	
Mean	17.3		13.9		12.6		17.6		17.3	
SD	27.3		27.2		22.8		33.9		34.1	
Median	6.8		4.3		4.9		4.9		5.0	
Patients who had cataract surgery before	612		913		704		1080		1388	
Eyes with intra-operative complications during surgery in the first eye	36	5.9	33	3.6	30	4.3	28	2.6	49	3.5

3.1.4 Past Ocular Surgery of the Operated Eye

Table 3.1.4-1: Past Ocular Surgery of the Operated Eye, CSR 2013-2017

Year	2013		2014		2015		2016		2017	
	n	%	n	%	n	%	n	%	n	%
No. of patients	1506		2266		1824		2900		3507	
No. of eyes with past ocular surgery record (N)	1424		2031		1694		2701		3294	
Patients with no past ocular surgery	1362	95.6	1986	97.8	1655	97.7	2661	98.5	3239	98.3
Vitreoretinal surgery	33	2.3	26	1.3	29	1.7	25	0.9	19	0.6
Pterygium excision	12	0.8	20	1.0	7	0.4	6	0.2	11	0.3
Filtering surgery	0	0.0	0	0.0	0	0.0	4	0.1	2	0.1
Penetrating keratoplasty	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Others	22	1.5	20	1.0	10	0.6	9	0.3	25	0.8

Number or percentage may be more than total or 100% as patients might have more than one past ocular surgery

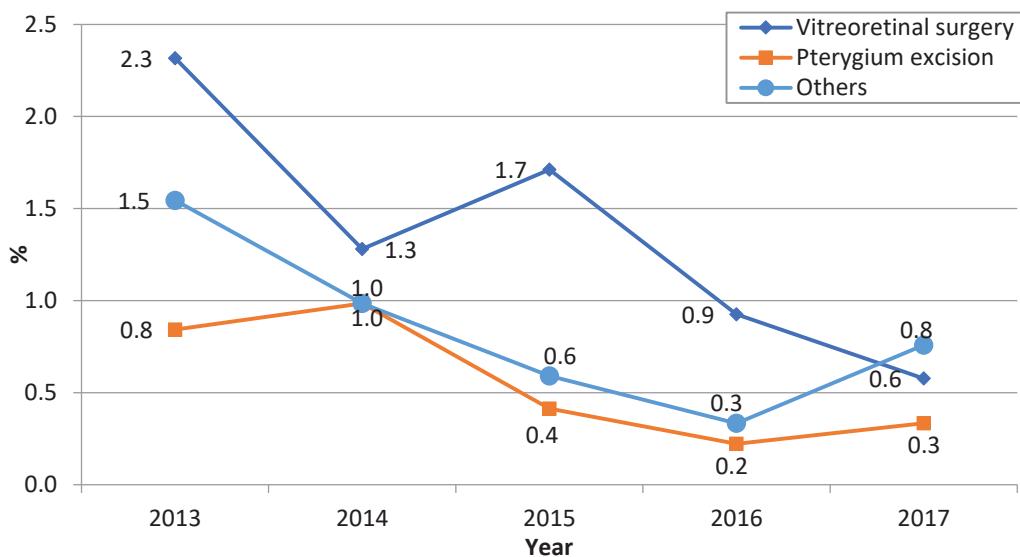


Figure 3.1.4-1: Distribution of Past Ocular Surgery of the Operated Eye, CSR 2013-2017

3.1.5 Pre-existing Ocular Co-morbidity

Table 3.1.5-1: Distribution of Pre-existing Ocular Co-Morbidity, CSR 2013-2017

Year	2013		2014		2015		2016		2017	
	n	%	n	%	n	%	n	%	n	%
No of patients (N)	1506		2266		1824		2900		3507	
Patients with any ocular co-morbidity	253	16.8	384	16.9	217	11.9	444	15.3	461	13.1
Patients with specific ocular co-morbidity										
Anterior segment										
1. Glaucoma	31	2.1	45	2.0	29	1.6	91	3.1	90	2.6

2. Pterygium involving the cornea	14	0.9	16	0.7	9	0.5	14	0.5	16	0.5
3. Pseudoexfoliation	4	0.3	5	0.2	6	0.3	4	0.1	14	0.4
4. Chronic uveitis	0	0.0	0	0.0	0	0.0	7	0.2	10	0.3
5. Corneal opacity	2	0.1	5	0.2	3	0.2	6	0.2	5	0.1
Len related complication										
1. Phacomorphic	0	0.0	1	0.0	0	0.0	2	0.1	3	0.1
2. Phacolytic	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
3. Subluxated/Disclosed	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Posterior segment										
1. Diabetic Retinopathy: Non Proliferative	70	4.6	115	5.1	55	3.0	118	4.1	141	4.0
2. Diabetic Retinopathy: Proliferative	31	2.1	33	1.5	15	0.8	37	1.3	44	1.3
3. ARMD	13	0.9	19	0.8	7	0.4	27	0.9	31	0.9
4. Diabetic Retinopathy: CSME*	6	0.4	13	0.6	8	0.4	19	0.7	25	0.7
5. Cannot be assessed	9	0.6	84	3.7	58	3.2	36	1.2	20	0.6
6. Other macular disease (includes hole or scar)	6	0.4	13	0.6	4	0.2	7	0.2	11	0.3
7. Retinal detachment	11	0.7	5	0.2	4	0.2	6	0.2	8	0.2
8. Diabetic Retinopathy: Vitreous haemorrhage	4	0.3	2	0.1	4	0.2	1	0.0	3	0.1
9. Optic nerve disease, any type	0	0.0	2	0.1	1	0.1	4	0.1	2	0.1
Miscellaneous										
1. Amblyopia	0	0.0	1	0.0	0	0.0	4	0.1	3	0.1
2. Significant previous eye trauma	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
3. Pre-existing non glaucoma field defect	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
4. Others	88	5.8	65	2.9	36	2.0	120	4.1	106	3.0

*CSME=Clinically Significant Macular Oedema

Number or percentage may be more than total or 100% as patients might have more than one ocular co-morbidity

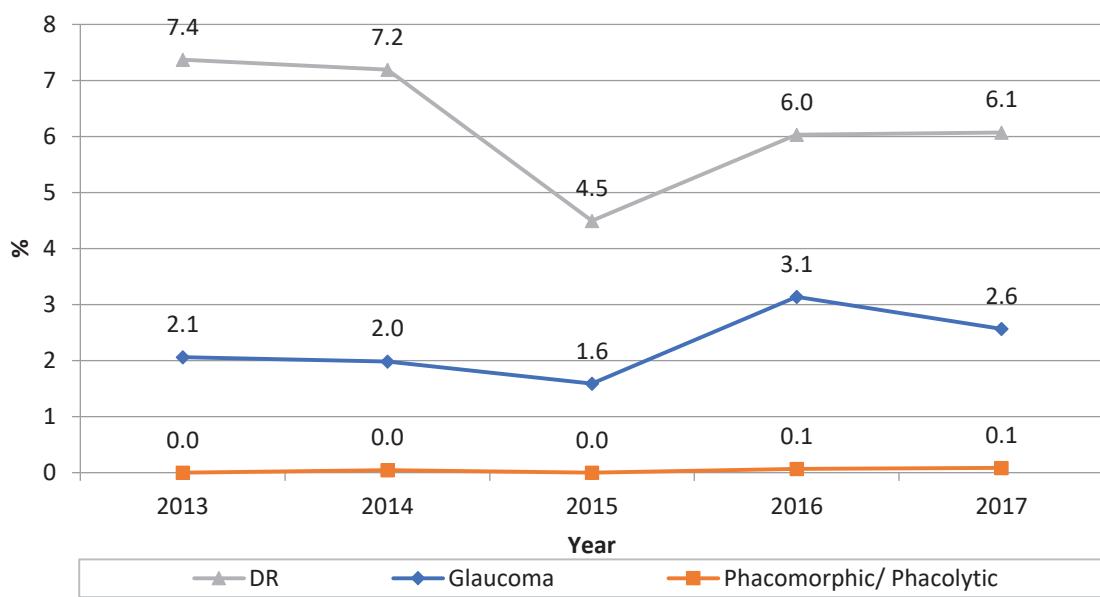


Figure 3.1.5-1: Distribution of Eyes with Specific Ocular Co-morbidity, CSR 2013-2017

3.1.6 Pre-operative Vision

Table 3.1.6-1: Distribution of Pre-Operative Vision, CSR 2013-2017

Year	2013		2014		2015		2016		2017		
No. of patients (N)	1506		2266		1824		2900		3507		
	n	%	n	%	n	%	n	%	n	%	
Patients with unaided VA	1148	76.2	1662	73.3	1394	76.4	2668	92.0	3400	96.9	
Patients with pinhole VA	367	24.4	347	15.3	426	23.4	1721	59.3	3282	93.6	
Patients with refracted VA	6	0.4	10	0.4	0	0.0	101	3.5	1614	46.0	
Patients with no refraction	1191	79.1	1652	72.9	1394	76.4	2567	88.5	1800	51.3	
6/12 and better	Unaided	58	5.1	79	4.8	68	4.9	112	4.2	165	4.9
	Pinhole	50	13.6	54	15.6	53	12.4	186	10.8	342	10.4
	Refracted	2	33.3	0	0.0	0	0.0	25	24.8	171	10.6
<6/12 - 6/18	Unaided	91	7.9	156	9.4	158	11.3	303	11.4	396	11.6
	Pinhole	74	20.2	53	15.3	82	19.2	294	17.1	506	15.4
	Refracted	0	0.0	2	20.0	0	0.0	18	17.8	270	16.7
<6/18 - 6/60	Unaided	506	44.1	680	40.9	551	39.5	1104	41.4	1341	39.4
	Pinhole	188	51.2	155	44.7	199	46.7	626	36.4	1164	35.5
	Refracted	4	66.7	3	30.0	0	0.0	28	27.7	493	30.5
<6/60 - 3/60	Unaided	135	11.8	194	11.7	167	12.0	302	11.3	388	11.4
	Pinhole	20	5.4	27	7.8	28	6.6	144	8.4	288	8.8
	Refracted	0	0.0	0	0.0	0	0.0	1	1.0	154	9.5
<3/60	Unaided	358	31.2	553	33.3	450	32.3	847	31.7	1110	32.6
	Pinhole	35	9.5	58	16.7	64	15.0	471	27.4	982	29.9
	Refracted	0	0.0	5	50.0	0	0.0	29	28.7	526	32.6
Unaided VA for patient with no refraction											
	n	1145		1652		1394		2567		1800	
6/12 and better		58	5.1	79	4.8	68	4.9	105	4.1	91	5.1
<6/12 - 6/18		91	7.9	154	9.3	158	11.3	292	11.4	222	12.3
<6/18 - 6/60		503	43.9	677	41.0	551	39.5	1056	41.1	739	41.1
<6/60 - 3/60		135	11.8	194	11.7	167	12.0	296	11.5	201	11.2
<3/60		358	31.3	548	33.2	450	32.3	818	31.9	547	30.4

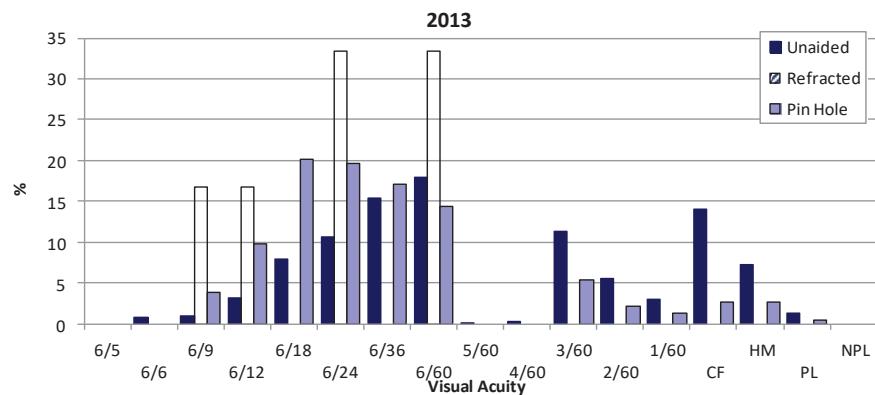


Figure 3.1.6-1: Distribution of Pre-Operative Vision (Unaided/presenting and refracted), CSR 2013

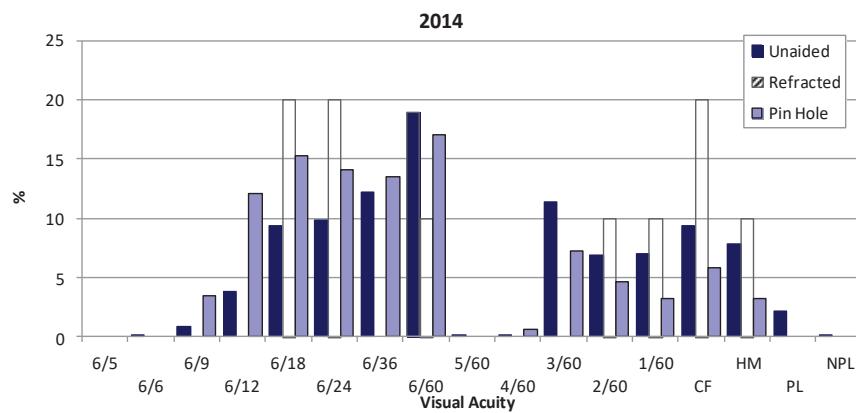


Figure 3.1.6-2: Distribution of Pre-Operative Vision (Unaided/presenting and refracted), CSR 2014

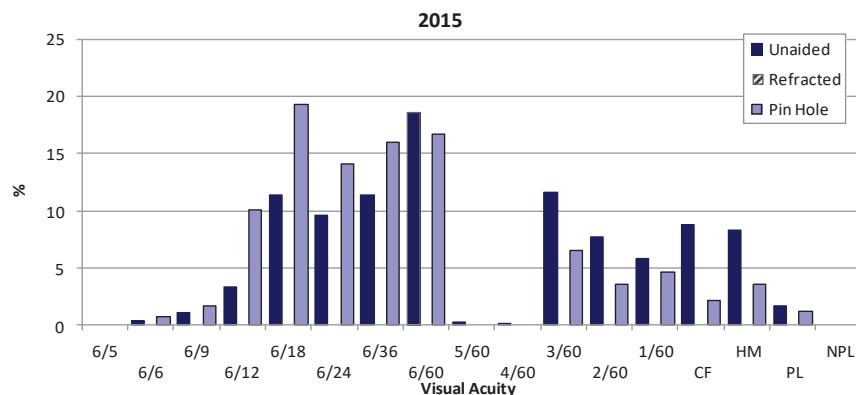


Figure 3.1.6-3: Distribution of Pre-Operative Vision (Unaided/presenting and refracted), CSR 2015

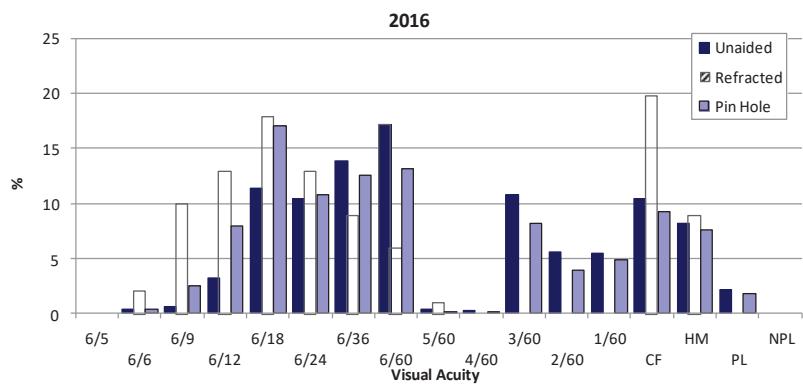


Figure 3.1.6-4: Distribution of Pre-Operative Vision (Unaided/presenting and refracted), CSR 2016

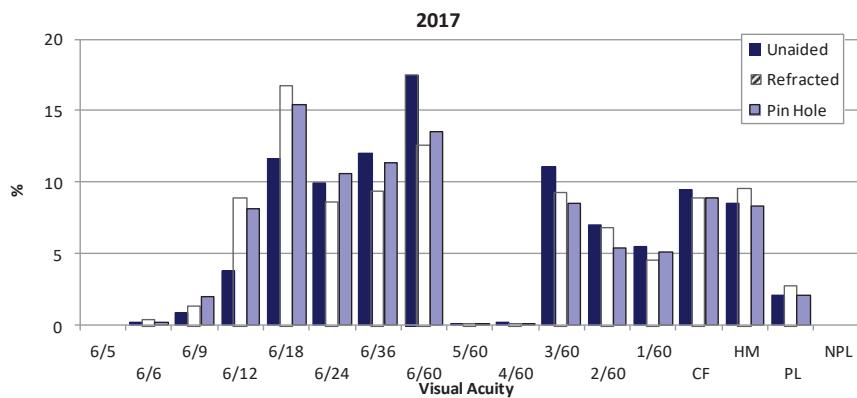


Figure 3.1.6-5: Distribution of Pre-Operative Vision (Unaided/presenting and refracted), CSR 2017

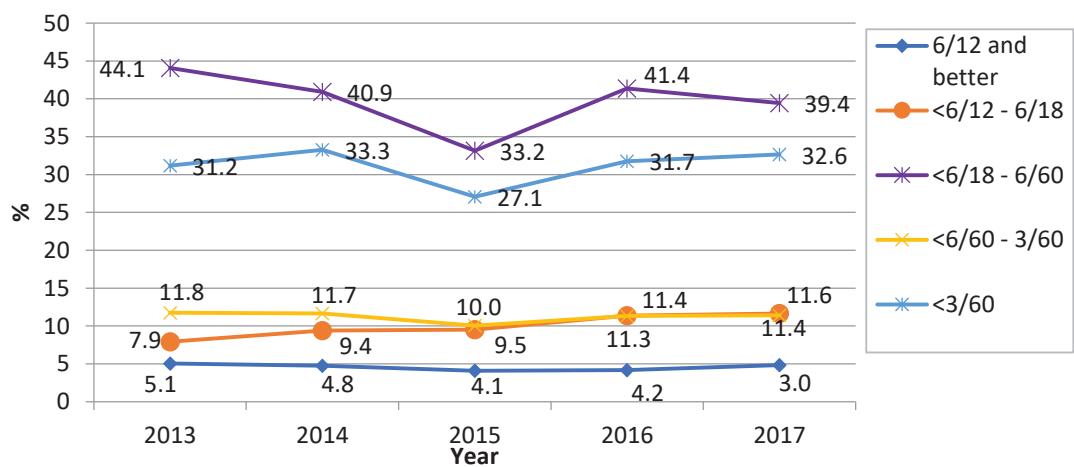


Figure 3.1.6-6: Distribution of Pre-Operative Vision (Unaided/presenting), CSR 2013-2017

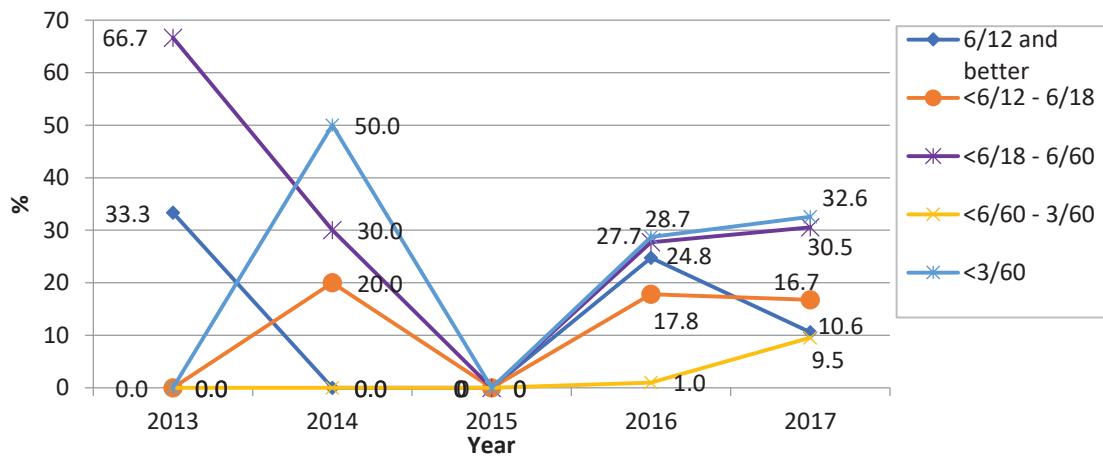


Figure 3.1.6-7: Distribution of Pre-Operative Vision (Refracted), CSR 2013-2016

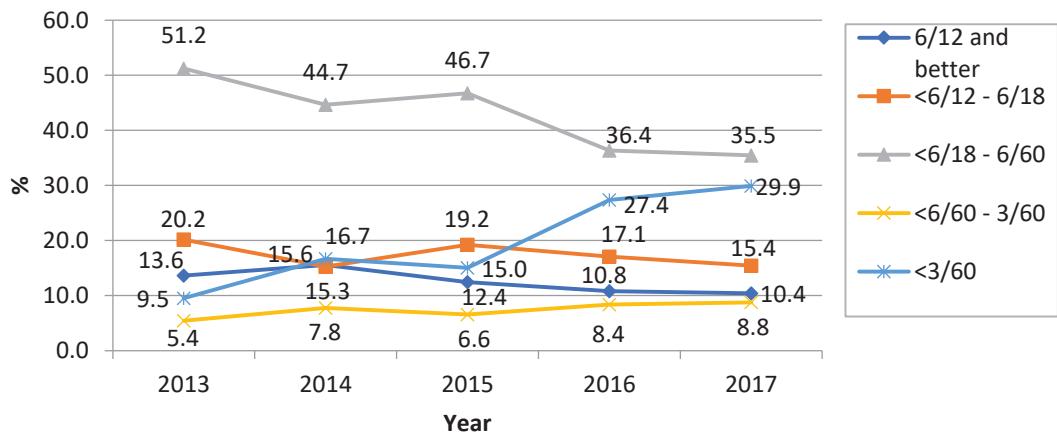


Figure 3.1.6-8: Distribution of Pre-Operative Vision (Pin Hole), CSR 2013-2016

3.1.7 Target Refractive Power

Table 3.1.7-1: Distribution of Target Refractive Power, CSR 2013-2017

Year	2013	2014	2015	2016	2017
Operated eye (N)	985	859	255	2062	3395
Mean	-0.3	-0.3	-0.4	-0.3	-0.3
SD	0.4	0.1	0.6	0.2	0.2
Median	-0.3	-0.3	-0.4	-0.3	-0.3
Minimum	-6.2	-1.3	-9.9	-1.5	-5.7
Maximum	0.01	0.20	1.82	2.25	1.75

Table 3.1.7-2: Distribution of Target Refractive Power, CSR 2013-2017

Year	2013		2014		2015		2016		2017	
	Target refractive power (Dioptries)	Operated eye N=985	Operated eye N=859	Operated eye N=255	Operated eye N=2062	Operated eye N=3395	n	%	n	%
-10-<(-9.5)	0	0.0	0	0.0	1	0.4	0	0.0	0	0.0
-9.5-<(-9)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-9-<(-8.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-8.5-<(-8)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-8-<(-7.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-7.5-<(-7)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-7-<(-6.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-6.5-<(-5)	4	0.4	0	0.0	0	0.0	0	0.0	1	0.0
-5-<(-4.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-4.5-<(-4)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-4-<(-3.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-3.5-<(-3)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-3-<(-2.5)	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
-2.5-<(-2)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-2-<(-1.5)	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0
-1.5-<(-1)	1	0.1	3	0.4	0	0.0	4	0.2	5	0.2
-1-<(-0.5)	42	4.3	53	6.2	61	23.9	89	4.3	85	2.5
-0.5-<0	936	95.0	802	93.4	192	75.3	1911	92.7	3228	95.1
0-<0.5	1	0.1	1	0.1	0	0.0	52	2.5	66	1.9
0.5-<1	0	0.0	0	0.0	0	0.0	3	0.2	6	0.2
1-<1.5	0	0.0	0	0.0	0	0.0	1	0.1	1	0.0
1.5-<2	0	0.0	0	0.0	1	0.4	0	0.0	2	0.1
2-<2.5	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0
2.5-<3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
3-<3.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
3.5-<4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

4-<4.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
4.5-<5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
5-<5.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
5.5-<6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
6-<6.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
6.5-<7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
7-<7.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
7.5-<8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
8-<8.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
8.5-<9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9-<9.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9.5-10	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Values outside the +10D and -10D were excluded from analysis as they would skew the mean.

3.2 Cataract Surgical Practices

3.2.2 Surgeon Status

Table 3.2.2-1: Surgeon Status, CSR 2013-2017

Year	2013		2014		2015		2016		2017	
	n	%	n	%	n	%	n	%	n	%
No. of patients (N)	1506		2266		1824		2900		3507	
Specialist	1488	98.8	2197	97.0	1714	94.0	2536	87.5	3187	90.9
Gazetting Specialist	7	0.5	2	0.1	6	0.3	6	0.2	9	0.3
Medical Officer	11	0.7	23	1.0	7	0.4	100	3.5	157	4.5
Missing/NA	0	0	44	1.9	97	5.3	258	8.9	154	4.4

3.2.3 Duration of Surgery

Table 3.2.3-1: Duration of Surgery by Types of Cataract Surgery in minutes, CSR 2013-

Year	2013		2014		2015		2016		2017	
	Median	(IQR)	Median	(IQR)	Median	(IQR)	Median	(IQR)	Median	(IQR)
All eyes	22	(18-30)	20	(17-25)	20	(17-25)	20	(17-26)	20	(17, 26)
Phaco	22	(18-29)	20	(17-24)	20	(17-24)	20	(17-26)	20	(17, 26)
Lens Aspiration	27.5	(21-34)	20.5	(17-23)	19	(18-24)	28	(24-34)	20	(17, 26)
ECCE	40	(32-49)	38	(34-45)	52.5	(37-65)	44.5	(37-60)	51.5	(39, 67)
ICCE	45	(30-60)	64	(52.5-69)	50	(40-59)	66.5	(55-68)	59	(57, 62)
Phaco → ECCE	56.5	(45-67)	56.5	(47.5-71)	58	(43-65)	60.5	(51-71)	-	-

Data entered with extreme values i.e. more than 3 hours and less than 15 minutes were not analyzed as it would skew the data

3.2.4 Distribution of Types of Cataract Surgery

Table 3.2.4-1: Distribution of Types of Cataract Surgery, CSR 2013-2017

Year	2013		2014		2015		2016		2017	
No of patients (N)	n	%	n	%	n	%	n	%	n	%
Phacoemulsification	1432	95.1	2196	96.9	1777	97.4	2841	98.0	3419	97.5
ECCE	37	2.5	18	0.8	13	0.7	10	0.3	51	1.5
Lens Aspiration	3	0.2	5	0.2	3	0.2	16	0.6	26	0.7
ICCE	2	0.1	4	0.2	7	0.4	6	0.2	6	0.2
Phaco converted to ECCE	25	1.7	39	1.7	23	1.3	25	0.9	-	-

3.2.5 Anaesthesia in Cataract Surgery

Table 3.2.5-1: Types of Anaesthesia, CSR 2013-2017

Year	2013		2014		2015		2016		2017	
No of patients (N)	n	%	n	%	n	%	n	%	n	%
General Anesthesia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Local Anesthesia	1506	100.0	2266	100.0	1824	100.0	2900	100.0	3507	100.0
Type of local anaesthesia										
Topical	1282	85.1	2171	95.8	1607	88.1	2668	92.0	2981	85.0
Intracameral	287	19.1	494	21.8	870	47.7	1054	36.3	1952	55.7
Combined local anaesthesia	309	20.5	584	25.8	766	42.0	984	33.9	1584	45.2
Subtenon	166	11.0	123	5.4	87	4.8	86	3.0	77	2.2
Subconjunctival	25	1.7	12	0.5	7	0.4	25	0.9	6	0.2
Peribulbar	0	0.0	0	0.0	4	0.2	0	0.0	0	0.0
Retrobulbar	0	0.0	6	0.3	5	0.3	12	0.4	1	0.0
Facial block	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Types of sedation for patients under local anaesthesia										
No sedation	1305	86.7	1565	69.1	1464	80.3	2784	96.0	3295	94.0
Oral sedation alone	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0
Intravenous alone	1	0.1	0	0.0	0	0.0	4	0.1	0	0.0
Intravenous plus oral	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0
Intramuscular alone	0	0.0	0	0.0	0	0.0	4	0.1	1	0.0

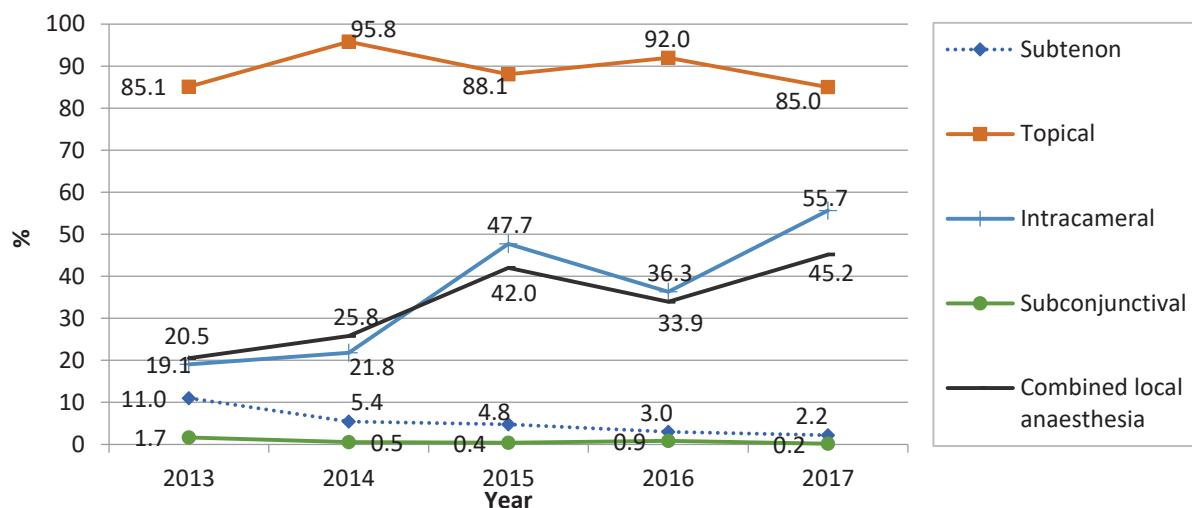


Figure 3.2.5-1: Types of Anaesthesia, CSR 2013-2016

3.2.6 Intraocular Lens Implantation

Table 3.2.6-1: Intraocular Lens Implantation, CSR 2013-2017

Year	2013		2014		2015		2016		2017	
	n	%	n	%	n	%	n	%	n	%
No of patients (N)	1506		2266		1824		2900		3507	
With IOL	1499	99.5	2256	99.6	1820	99.8	2889	99.6	3482	99.3
Without IOL	7	0.5	7	0.3	4	0.2	11	0.4	25	0.7
Not Available	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
IOL Placement										
No of IOL	1499		2259		1820		2889		3482	
PCIOL	1472	98.2	2218	98.2	1798	98.8	2860	99.0	3447	99.0
ACIOL	24	1.6	36	1.6	20	1.1	25	0.9	29	0.8
Scleral Fixedated IOL	0	0.0	2	0.1	0	0.0	0	0.0	1	0.0
Others	3	0.2	3	0.1	2	0.1	4	0.1	5	0.1
Not Available /missing	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Materials of IOL										
No of IOL	1499		2259		1820		2889		3482	
1. Acrylic	1396	93.1	2109	93.4	1643	90.3	2410	83.4	3227	92.7
2. PMMA	23	1.5	26	1.2	13	0.7	13	0.4	66	1.9
3. Silicone	39	2.6	86	3.8	92	5.1	19	0.7	28	0.8
4. Others	9	0.6	12	0.5	7	0.4	431	14.9	141	4.0
Not Available/ missing	32	2.1	26	1.2	65	3.6	16	0.6	20	0.6
Types of IOL										

No of IOL	1499		2259		1820		2889		3482	
1. Foldable	1453	96.9	2210	97.8	1741	95.7	2858	98.9	3438	98.7
2. Non-foldable	21	1.4	25	1.1	15	0.8	16	0.6	28	0.8
Not Available/ missing	25	1.7	24	1.1	64	3.5	15	0.5	16	0.5

Table 3.2.6-2: Distribution of IOL Placement, CSR 2013-2017

Cataract Surgery With IOL							
	N	Posterior Chamber IOL		Anterior Chamber IOL		Scleral Fixed IOL	
		n	%	n	%	n	%
2013	1506	1472	97.7	24	1.6	0	0.0
2014	2259	2218	98.2	36	1.6	2	0.1
2015	1820	1798	98.8	20	1.1	0	0.0
2016	2900	2860	98.6	25	0.9	0	0.0
2017	3507	3447	98.3	29	0.8	1	0.0

3.3 Intra-operative Complications

3.3.1 Intra-operative Complications by Years

Table 3.3.1-1: Distribution of Type of Intra-operative Complications, CSR 2013-2017

Year	2013*	2014	2015	2016	2017
No. of patients (N)	1506 n %	2266 n %	1824 n %	2900 n %	3507 n %
Patient with intra-op complication	52 3.5	61 2.7	53 2.9	53 1.8	92 2.6
Types of complications					
PCR	2 0.1	29 1.3	28 1.5	30 1.0	43 1.2
Zonular dehiscence	11 0.7	20 0.9	16 0.9	11 0.4	35 1.0
Vitreous loss	22 1.5	27 1.2	12 0.7	20 0.7	31 0.9
Others	40 2.7	6 0.3	11 0.6	13 0.4	20 0.6
Drop nucleus	7 0.5	5 0.2	2 0.1	4 0.1	6 0.2
Suprachoroidal haemorrhage	0 0.0	0 0.0	0 0.0	0 0.0	2 0.1
Central corneal oedema	1 0.1	1 0.0	1 0.1	0 0.0	0 0.0

*PCR inaccurate due to data collection error

Table 3.3.1-2: Distribution of Type of Intra-operative Complications – Posterior Capsule Rupture, CSR 2013-2017

Year	2013*	2014	2015	2016	2017
No. of patients (N)	n %	n %	n %	n %	n %
Patient with intra-op complication	52 3.5	61 2.7	53 2.9	53 1.8	92 2.6
Types of complications					
PCR and Others	2 0.1	15 0.7	9 0.5	16 0.6	25 0.7
PCR Only	0 0.0	14 0.6	19 1.0	14 0.5	18 0.5

*PCR inaccurate due to data collection error

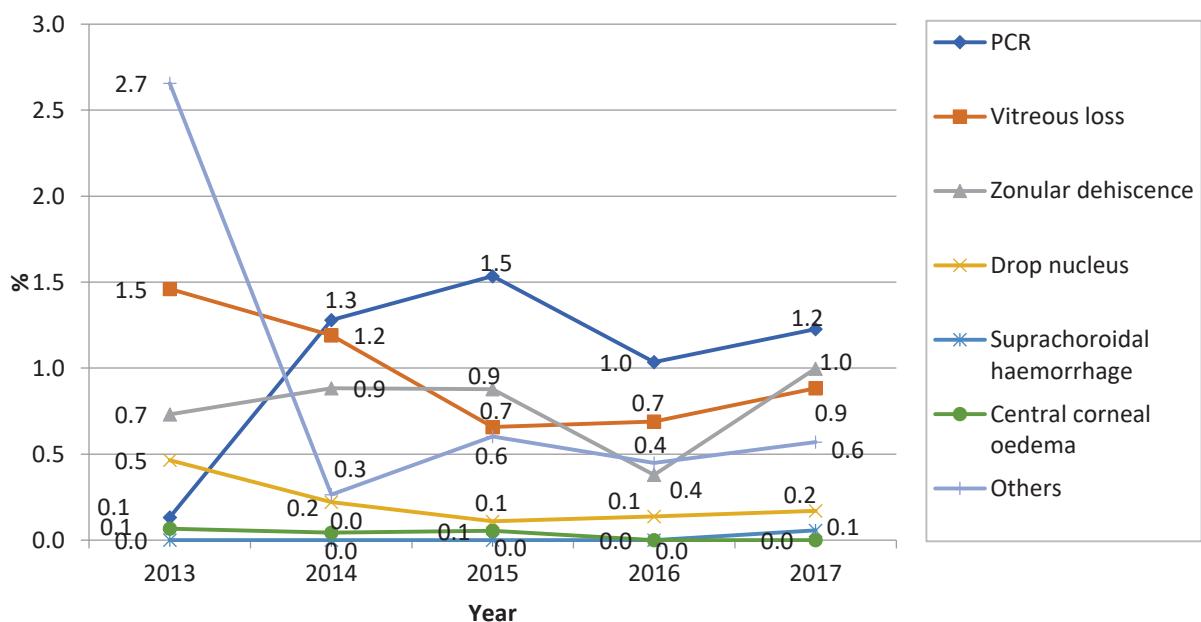


Figure 3.3.1-1: Distribution of Specific Type of Intra-operative Complications, CSR 2013-2017

Table 3.3.1-3: Distribution of Types of Intra-operative Complications, CSR 2013-2017

MAIWP	No. of patients (N)	Any intra-op complication		PCR		Vitreous loss		Zonular Dehiscence		Nucleus drop (or dropped nucleus)		Suprachoroidal Haemorrhage		Central Corneal Edema		Others	
		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
2013	1506	52	3.5	2	0.1	22	1.5	11	0.7	7	0.5	0	0.0	1	0.1	40	2.7
2014	2266	61	2.7	29	1.3	27	1.2	20	0.9	5	0.2	0	0.0	1	0.0	6	0.3
2015	1824	53	2.9	28	1.5	12	0.7	16	0.9	2	0.1	0	0.0	1	0.1	11	0.6
2016	2900	53	1.8	30	1.0	20	0.7	11	0.4	4	0.1	0	0.0	0	0.0	13	0.4
2017	3507	92	2.6	43	1.2	31	0.9	35	1.0	6	0.2	2	0.1	0	0.0	20	0.6

3.4.2 PCR

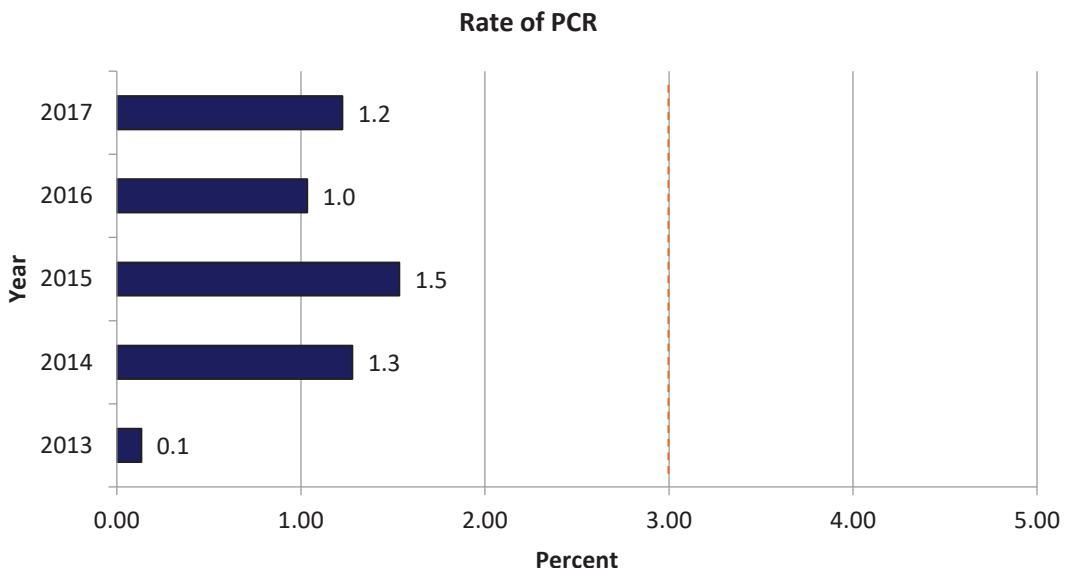


Figure 0-1: PCR (all surgeries) (National standard set at <3.0%), CSR 2013-2017

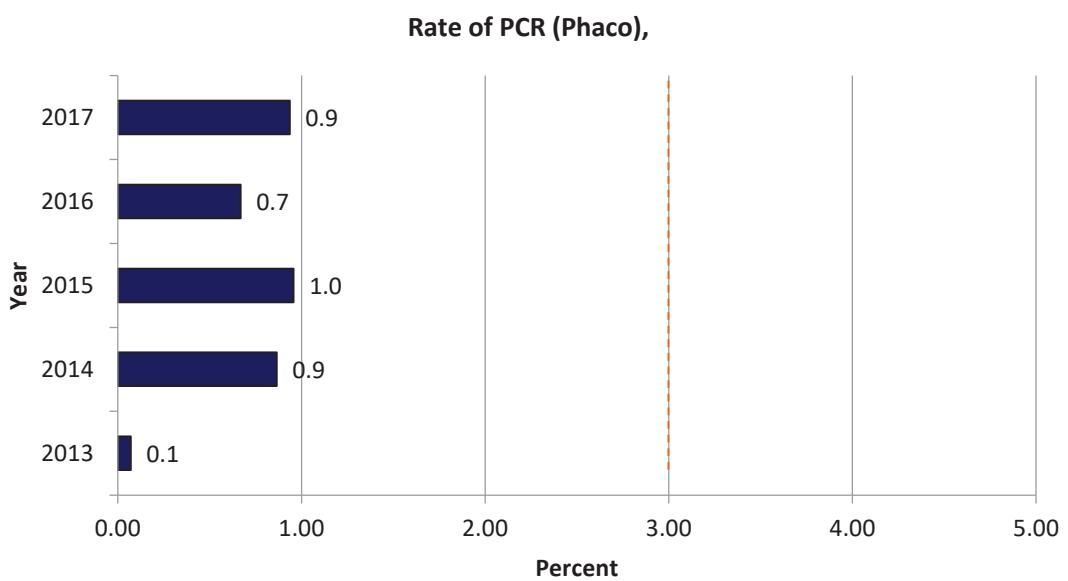


Figure 0-2: PCR (Phaco only) (National standard set at <3.0%), CSR 2013-2017

3.3.2 PCR by Type of Cataract Surgery

Table 3.3.2-1: PCR by Type of Cataract Surgery, CSR 2013-2017

Year	2013			2014			2015			2016			2017		
No. of patients Total PCR	1506 2			2266 29			1824 28			2900 30			3507 43		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
ECCE	37	1	2.7	18	0	0.0	13	1	7.7	10	0	0.0	51	10	19.6
Phaco	1432	1	0.1	2196	19	0.9	1777	17	1.0	2841	19	0.7	3419	32	0.9
Lens Aspiration	3	0	0.0	5	0	0.0	3	0	0.0	16	0	0.0	26	0	0.0
ICCE	2	0	0.0	4	0	0.0	7	0	0.0	6	0	0.0	6	0	0.0
Phaco converted to ECCE	25	0	0.0	39	10	25.6	23	10	43.5	25	11	44.0	-	-	-

3.4 Cataract Surgery Outcome

3.4.1 Post-operative Complications Record and Ascertainment

Table 3.4.1-1: Distribution of Cataract Surgery with Post-operative Complication Record, CSR 2013-2017

Year	2013	2014	2015	2016	2017
Total number of cataract surgery registered to CSR	1506	2266	1824	2900	3507
Cataract surgery with post-operative complication record	1500	2251	1535	2269	3269
Ascertainment on post-operative complication (%)	99.6	99.3	84.2	78.2	93.2
Cataract surgery with visual outcome record	1441	2183	1500	2215	3159
Ascertainment on visual outcome (%)	95.7	96.3	82.2	76.4	90.1

3.4.2 Post-operative Infectious Endophthalmitis

Table 3.4.2-1:Post-operative Infectious Endophthalmitis, CSR 2013-2017

Year	2013	2014	2015	2016	2017
Eyes with post-operative complication records (N)	1506	2251	1535	2269	3269
Eyes with post-operative infectious endophthalmitis (n)	0	0	0	0	0
Percentage of eyes with post-operative endophthalmitis (%)	0.0	0.0	0.0	0.0	0.0

3.4.3 Post-operative Follow-up Period

Table 3.4.3-1: Median Follow-up Period for Eyes with Unaided Vision (in weeks) by Types of Surgery, CSR 2013-2017

Types of surgery	2013					2014				
	N	n	Median	25 th percentile	75 th percentile	N	n	Median	25 th percentile	75 th percentile
All surgeries	1445	1443	9	6	12	2189	2187	7	6	10
Phaco	1377	1375	9	6	12	2122	2120	7	6	11
ECCE	35	35	12	7	17	18	18	11.5	10	13
Phaco → ECCE	23	23	17	11	21	37	37	11	7	12
ICCE	1	1	11	-	-	3	3	10	1	14
Lens aspiration	3	3	12	6	12	5	5	7	3	7

Types of surgery	2015					2016				
	N	n	Median	25 th percentile	75 th percentile	N	n	Median	25 th percentile	75 th percentile
All surgeries	1509	1509	7	7	11	2215	2215	7	7	11
Phaco	1479	1479	7	7	11	2179	2179	7	7	10
ECCE	9	9	9	6	17	5	5	11	10	11
Phaco → ECCE	16	16	12	9	16.5	17	17	11	9	12
ICCE	3	3	11	6	12	2	2	9	7	11
Lens aspiration	2	2	9.5	7	12	11	11	7	5	7

Types of surgery	2017				
	N	n	Median	25 th percentile	75 th percentile
All surgeries	3160	3159	7	6	9
Phaco	3091	3090	7	6	9
Lens aspiration	20	20	7	6.5	9
ECCE	42	42	10	7	12
ICCE	4	4	23.5	15.5	30
Phaco → ECCE	-	-	-	-	-

n = No. of available information

Table 3.4.3-2: Median Follow-up Period for Eyes with Refracted Vision (in weeks) by Types of Surgery, CSR 2013-2017

Types of surgery	2013					2014				
	N	n	Median	25 th percentile	75 th percentile	N	n	Median	25 th percentile	75 th percentile
All surgeries	1377	1375	10	6	12	2048	2048	8	7	11
Phaco	1318	1316	10	6	12	1989	1989	7	7	11
ECCE	29	29	12	8	15	18	18	11.5	10	13
Phaco → ECCE	21	21	17	12	21	33	33	11	10	13
ICCE	2	2	13.5	11	16	2	2	12	10	14
Lens aspiration	3	3	12	6	12	2	2	8	7	9

Types of surgery	2015					2016				
	N	n	Median	25 th percentile	75 th percentile	N	n	Median	25 th percentile	75 th percentile
All surgeries	1520	1520	7	7	11	2206	2206	7	7	11
Phaco	1493	1493	7	7	11	2169	2169	7	7	10
ECCE	8	8	8	5.5	14	5	5	11	10	11
Phaco → ECCE	15	15	12	9	17	16	16	11	9.5	12.5
ICCE	3	3	11	6	12	2	2	9	7	11
Lens aspiration	1	1	7	7	7	12	12	7	5.5	7

Types of surgery	2017				
	N	n	Median	25 th percentile	75 th percentile
All surgeries	3035	3035	7	6	9
Phaco	2973	2973	7	6	9
Lens aspiration	20	20	7	6.5	9
ECCE	36	36	11.5	8	13
ICCE	4	4	23.5	15.5	30
Phaco → ECCE	-	-	-	-	-

n = No. of available information

3.4.4 Visual Acuity

Table 3.4.4-1: Post-operative Visual Acuity, All Eyes, and CSR 2013-2017

Year	2013				2014				2015				2016				2017					
	VA		Unaided		Refracted																	
			n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
6/5	1	0.1	1	0.1	1	0.0	1	0.0	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	3	0.1		
6/6	210	13.9	938	62.3	396	17.5	1339	59.1	267	14.6	980	53.7	384	13.2	1516	52.3	594	16.9	1840	52.5		
6/9	448	29.8	267	17.7	710	31.3	469	20.7	555	30.4	409	22.4	825	28.4	474	16.3	986	28.1	658	18.8		
6/12	212	14.1	65	4.3	342	15.1	113	5.0	205	11.2	85	4.7	283	9.8	111	3.8	417	11.9	160	4.6		
6/18	222	14.7	38	2.5	254	11.2	40	1.8	214	11.7	26	1.4	273	9.4	48	1.7	448	12.8	130	3.7		
6/24	81	5.4	21	1.4	126	5.6	25	1.1	96	5.3	13	0.7	128	4.4	18	0.6	170	4.8	63	1.8		
6/36	89	5.9	11	0.7	128	5.6	20	0.9	48	2.6	1	0.1	93	3.2	15	0.5	156	4.4	49	1.4		
6/60	81	5.4	18	1.2	91	4.0	20	0.9	51	2.8	1	0.1	91	3.1	10	0.3	140	4.0	51	1.5		
5/60	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1	1	0.0	3	0.1	1	0.0		
4/60	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	2	0.1	0	0.0		
3/60	37	2.5	8	0.5	52	2.3	10	0.4	17	0.9	1	0.1	55	1.9	3	0.1	79	2.3	29	0.8		
2/60	15	1.0	1	0.1	28	1.2	1	0.0	19	1.0	0	0.0	22	0.8	1	0.0	47	1.3	14	0.4		
1/60	7	0.5	2	0.1	20	0.9	1	0.0	16	0.9	1	0.1	22	0.8	2	0.1	39	1.1	11	0.3		
CF	30	2.0	5	0.3	25	1.1	5	0.2	10	0.5	1	0.1	21	0.7	3	0.1	49	1.4	16	0.5		
HM	11	0.7	2	0.1	10	0.4	4	0.2	6	0.3	2	0.1	12	0.4	3	0.1	21	0.6	7	0.2		
PL	1	0.1	0	0.0	2	0.1	0	0.0	3	0.2	0	0.0	0	0.0	0	0.0	4	0.1	2	0.1		
NPL	0	0.0	0	0.0	4	0.2	0	0.0	2	0.1	0	0.0	2	0.1	0	0.0	5	0.1	1	0.0		
Missing	61	4.05	129	8.57	77	3.4	218	9.6	315	17.3	304	16.7	685	23.6	694	23.9	347	9.9	472	13.5		
Total	1506	100	1506	100	2266	100	2266	100	1824	100	1824	100	2900	100	2900	100	3507	100	3507	100		

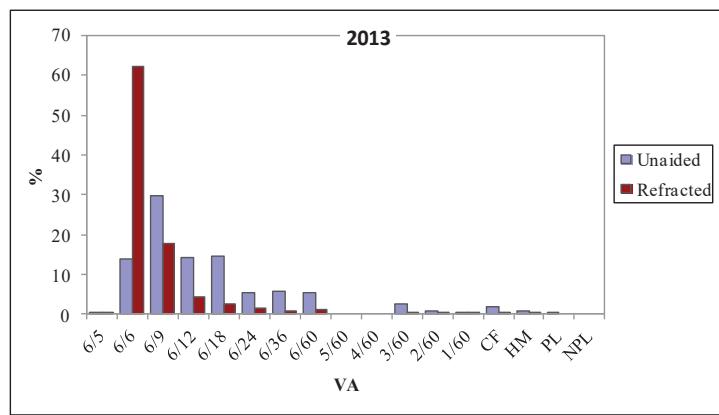


Figure 3.4.4-1: Distribution of Post-operative Unaided and Refracted Visual Acuity, All Eyes, CSR 2013

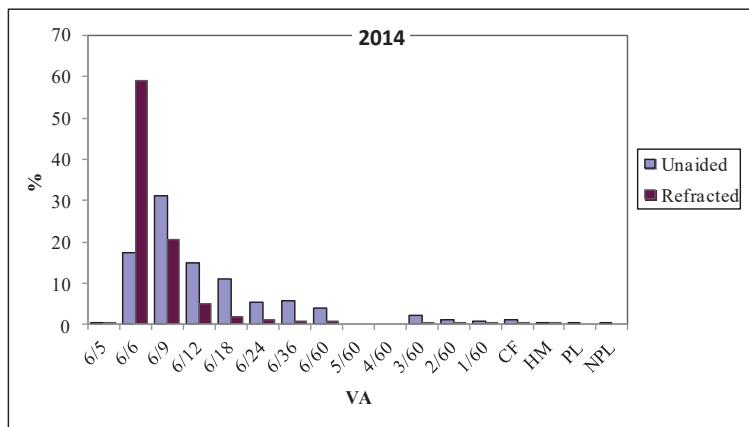


Figure 3.4.4-2: Distribution of Post-operative Unaided and Refracted Visual Acuity, All Eyes, CSR 2014

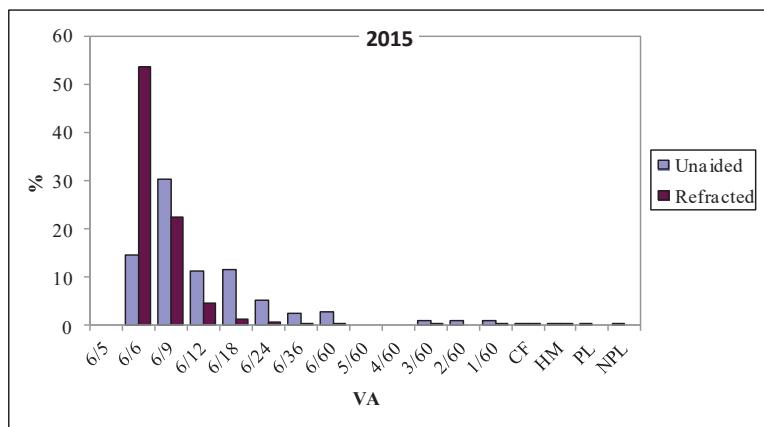


Figure 3.4.4-3: Distribution of Post-operative Unaided and Refracted Visual Acuity, All Eyes, CSR 2015

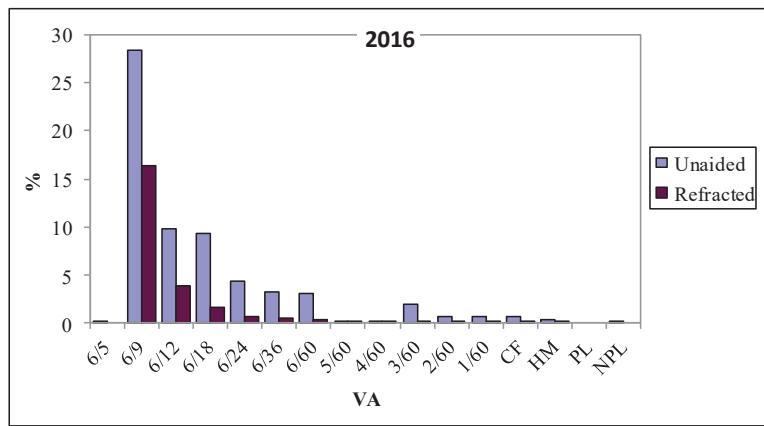


Figure 3.4.4-4: Distribution of Post-operative Unaided and Refracted Visual Acuity, All Eyes, CSR 2016

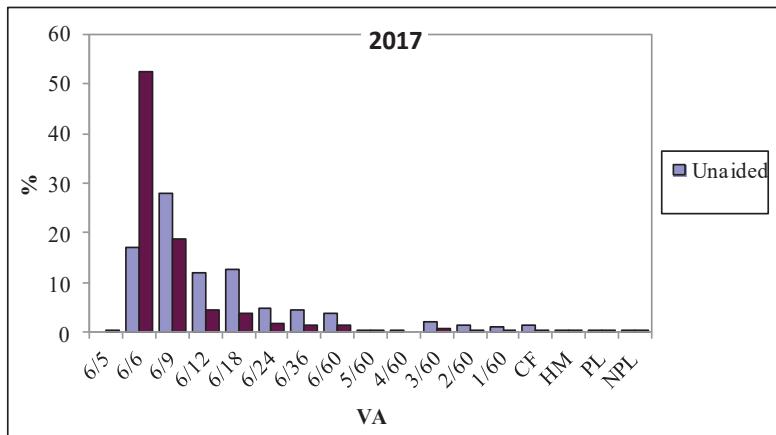


Figure 3.4.4-5: Distribution of Post-operative Unaided and Refracted Visual Acuity, All Eyes, CSR 2017

Table 3.4.4-2: Post-Operative Visual Acuity for Eyes without Ocular Co-morbidity, CSR 2013-2017

Year	2013		2014		2015		2016		2017			
	VA	Unaided n	Refracted %									
6/5	1	0.1	0.1	0	0.0	0	0	0.0	0	0	0.0	0.1
6/6	188	15.6	834	72.5	337	20.1	1125	71.6	246	18.9	884	67.3
6/9	384	31.9	213	18.5	564	33.6	328	20.9	486	37.3	346	26.3
6/12	179	14.9	47	4.1	268	16.0	65	4.1	164	12.6	59	4.5
6/18	178	14.8	19	1.7	172	10.2	23	1.5	188	14.4	16	1.2
6/24	65	5.4	12	1.0	88	5.2	13	0.8	78	6.0	8	0.6
6/36	69	5.7	7	0.6	89	5.3	9	0.6	38	2.9	0	0.0
6/60	63	5.2	10	0.9	65	3.9	2	0.1	44	3.4	0	0.0
5/60	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.1
4/60	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
3/60	25	2.1	3	0.3	38	2.3	3	0.2	13	1.0	0	0.0
2/60	12	1.0	1	0.1	21	1.3	0	0	16	1.2	0	0.0
1/60	6	0.5	0	0.0	16	1.0	0	0.0	14	1.1	0	0.0
CF	26	2.2	3	0.3	13	0.8	2	0.1	7	0.5	0	0.0
HM	8	0.7	1	0.1	7	0.4	1	0.1	5	0.4	1	0.1
PL	0	0.0	0	0.0	0	0.0	2	0.2	0	0.0	0	0.0
NPL	0	0.0	0	0.0	2	0.1	0	0	1	0.1	0	0.0
Total	1204	100	1151	100	1680	100	1571	100	1302	100	1314	100
											1839	100
											1832	100
											2742	100
												2633
												100

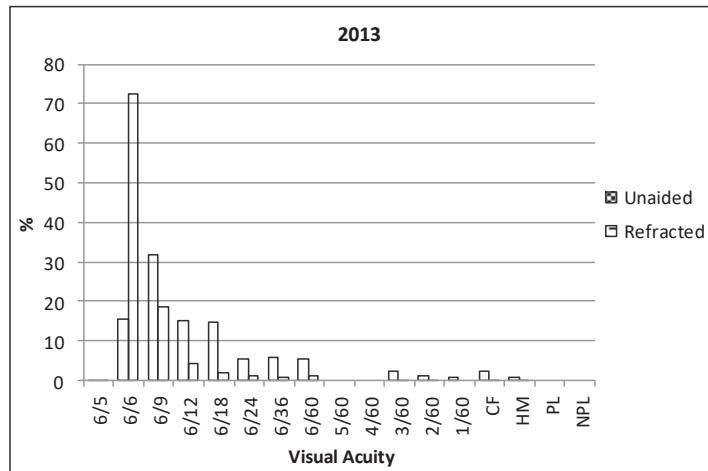


Figure 3.4.4-6:Post-Operative Visual Acuity for Eyes without Ocular Co-morbidity, CSR 2013

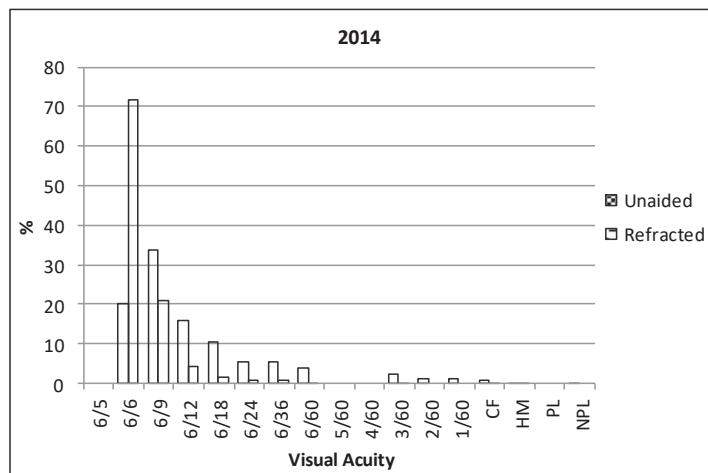


Figure 3.4.4-7:Post-Operative Visual Acuity for Eyes without Ocular Co-morbidity, CSR 2014

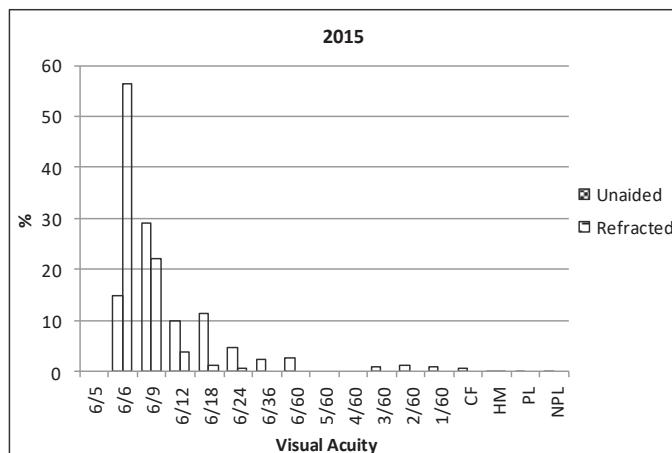


Figure 3.4.4-8:Post-Operative Visual Acuity for Eyes without Ocular Co-morbidity, CSR 2015

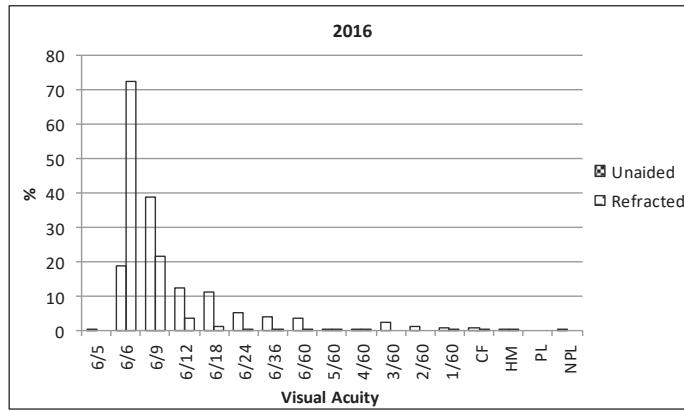


Figure 3.4.4-9:Post-Operative Visual Acuity for Eyes without Ocular Co-morbidity, CSR 2016

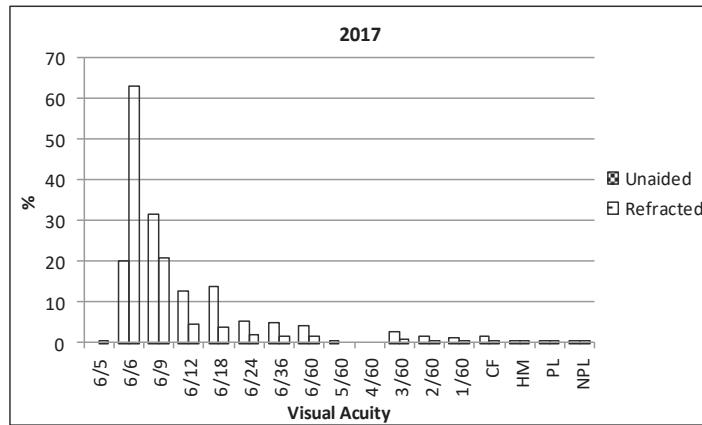


Figure 3.4.4-10: Post-Operative Visual Acuity for Eyes without Ocular Co-morbidity, CSR 2017

3.4.5 Post-operative Visual Acuity 6/12 or Better Among Eyes without Ocular Co-morbidity

Table 3.4.5-1:Post-operative Visual Acuity 6/12 or Better for Eyes without Ocular Co-morbidities by Types of Surgery, CSR 2013-2017

	2013						2014					
	Unaided			Refracted			Unaided			Refracted		
	N	n	%	N	n	%	N	n	%	N	n	%
All Surgeries	1204	752	62.5	1151	1095	95.1	1680	1169	69.6	1571	1518	96.6
Phaco	1147	729	63.6	1101	1057	96.0	1645	1154	70.2	1539	1491	96.9
ECCE	30	11	36.7	26	19	73.1	7	4	57.1	7	6	85.7
Lens Aspiration	2	0	0.0	2	2	100.0	2	2	100.0	1	1	100.0
ICCE	1	1	100.0	1	0	0.0	2	0	0.0	2	2	100.0
Phaco → ECCE	20	9	45.0	18	14	77.8	24	9	37.5	22	18	81.8

	2015						2016					
	Unaided			Refracted			Unaided			Refracted		
	N	n	%	N	n	%	N	n	%	N	n	%
All Surgeries	1302	896	68.8	1314	1289	98.1	1839	1286	69.9	1832	1788	97.6
Phaco	1282	888	69.3	1296	1277	98.5	1818	1272	70.0	1811	1770	97.7
ECCE	4	1	25.0	3	3	100.0	2	1	50.0	2	2	100.0
Lens Aspiration	2	1	50.0	1	1	100.0	7	6	85.7	8	8	100.0
ICCE	2	1	50.0	2	0	0.0	0	0	0.0	0	0	0.0
Phaco → ECCE	12	5	41.7	12	8	66.7	12	7	58.3	11	8	72.7

	2017					
	Unaided			Refracted		
	N	n	%	N	n	%
All Surgeries	2742	1768	64.5	2633	2336	88.7
Phaco	2685	1743	64.9	2581	2298	89.0
ECCE	36	12	33.3	32	21	65.6
Lens Aspiration	14	12	85.7	14	14	100.0
ICCE	4	1	25.0	4	2	50.0
Phaco → ECCE	-	-	-	-	-	-

Table 3.4.5-2: Post-operative Visual Acuity 6/18 or Better for Eyes without Ocular Co-morbidities by Types of Surgery, CSR 2013-2017 (WHO Classification)

WHO Classification	2013						2014					
	Unaided			Refracted			Unaided			Refracted		
	N	n	%	N	n	%	N	n	%	N	n	%
All Surgeries	1204	930	77.2	1151	1114	96.8	1680	1341	79.8	1571	1541	98.1
Phaco	1147	896	78.1	1101	1070	97.2	1645	1321	80.3	1539	1514	98.4
ECCE	30	15	50.0	26	22	84.6	7	5	71.4	7	6	85.7
Lens Aspiration	2	2	100.0	2	2	100.0	2	2	100.0	1	1	100.0
ICCE	1	1	100.0	1	1	100.0	2	2	100.0	2	2	100.0
Phaco → ECCE	20	13	65.0	18	16	88.9	24	11	45.8	22	18	81.8

WHO Classification	2015						2016					
	Unaided			Refracted			Unaided			Refracted		
	N	n	%	N	n	%	N	n	%	N	n	%
All Surgeries	1302	1084	83.3	1314	1305	99.3	1839	1494	81.2	1832	1809	98.7
Phaco	1282	1072	83.6	1296	1290	99.5	1818	1479	81.4	1811	1791	98.9
ECCE	4	2	50.0	3	3	100.0	2	2	100.0	2	2	100.0
Lens Aspiration	2	1	50.0	1	1	100.0	7	6	85.7	8	8	100.0
ICCE	2	1	50.0	2	1	50.0	0	0	0.0	0	0	0.0
Phaco → ECCE	12	8	66.7	12	10	83.3	12	7	58.3	11	8	72.7

	2017

WHO Classification	Unaided			Refracted		
	N	n	%	N	n	%
All Surgeries	2742	2144	78.2	2633	2438	92.6
Phaco	2685	2112	78.7	2581	2398	92.9
ECCE	36	18	50.0	32	23	71.9
Lens Aspiration	14	13	92.9	14	14	100.0
ICCE	4	1	25.0	4	2	50.0
Phaco → ECCE	-	-	-	-	-	-

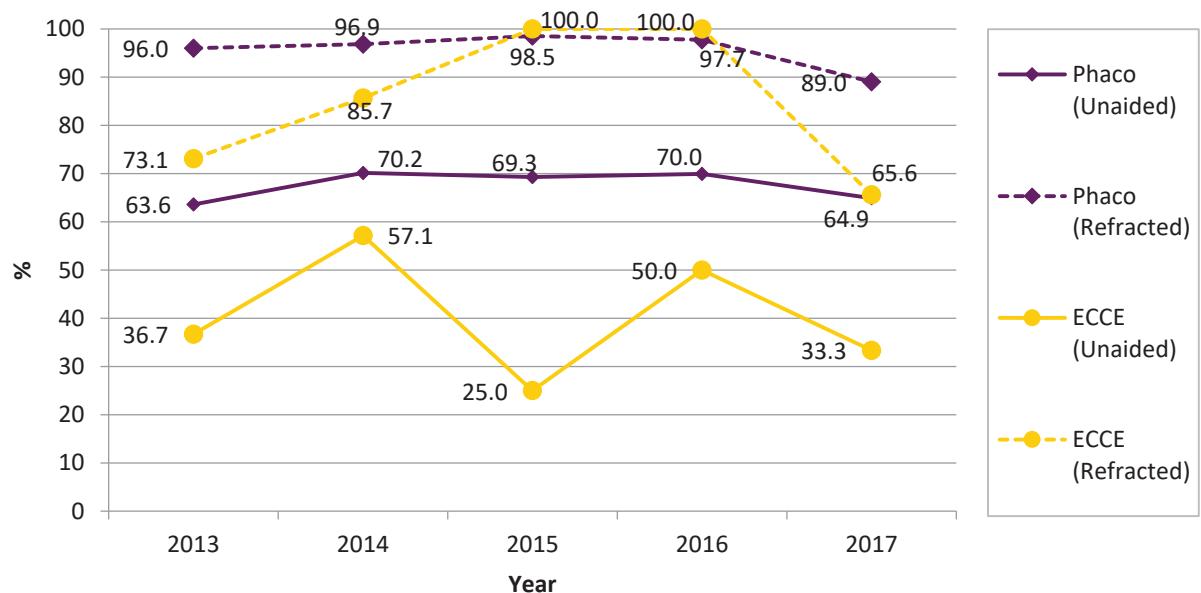


Figure 3.4.5-1: Post-operative Visual Acuity 6/12 or Better for Eyes without Ocular Co-morbidities by ECCE and Phaco, CSR 2013-2017

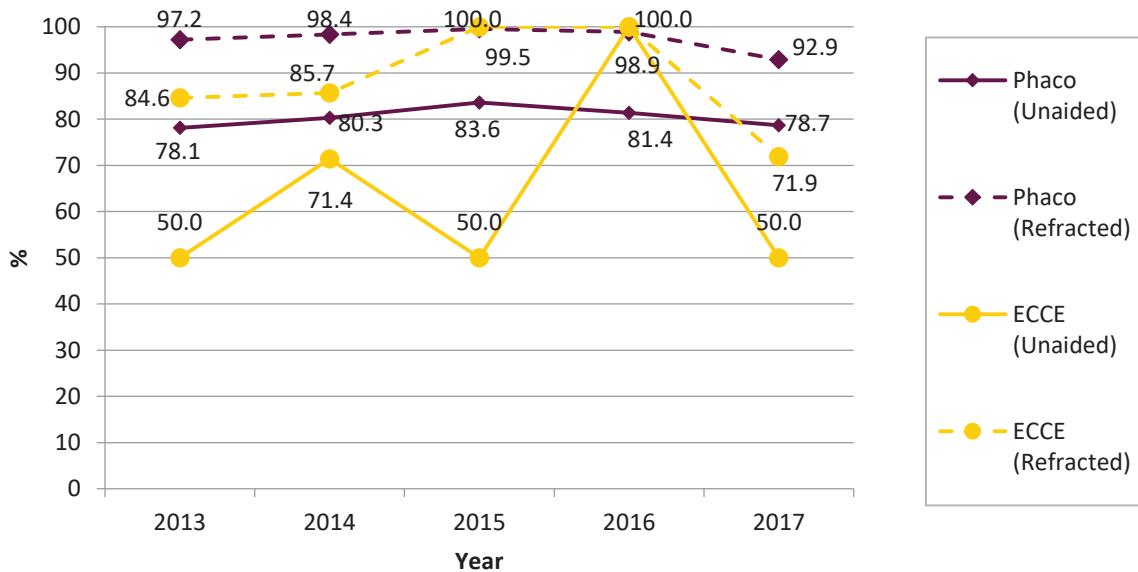


Figure 3.4.5-2: Post-operative Visual Acuity 6/18 or Better for Eyes without Ocular Co-morbidities by ECCE and Phaco, CSR 2013-2017

Table 3.4.5-3: Post-operative Refracted Visual Acuity 6/12 or Better in Eyes without Ocular Co-morbidities by Complications and Types of Surgery, CSR 2013-2017

2013	Types of Cataract Surgery																	
	All Surgeries			Phaco			ECCE			Lens Aspiration			ICCE			Phaco → ECCE		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
With intra-op complications	24	17	70.8	13	11	84.6	2	1	50.0	0	0	0	0	0	0	8	4	50.0
No intra-op complications	1127	1078	95.7	1088	1046	96.1	24	18	75.0	2	2	100.0	1	0	0	10	10	100.0

2014	Types of Cataract Surgery																	
	All Surgeries			Phaco			ECCE			Lens Aspiration			ICCE			Phaco → ECCE		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
With intra-op complications	36	28	77.8	23	19	82.6	0	0	0.0	0	0	0	1	1	100.0	12	8	66.7
No intra-op complications	1535	1490	97.1	1516	1472	97.1	7	6	85.7	1	1	100.0	1	1	100.0	10	10	100.0

2015	Types of Cataract Surgery																	
	All Surgeries			Phaco			ECCE			Lens Aspiration			ICCE			Phaco → ECCE		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
With intra-op complications	28	23	82.1	17	17	100.0	1	1	100.0	0	0	0.0	1	0	0.0	9	5	55.6
No intra-op complications	1286	1266	98.4	1279	1260	98.5	2	2	100.0	1	1	100.0	1	0	0.0	3	3	100.0

2016	Types of Cataract Surgery																	
	All Surgeries			Phaco			ECCE			Lens Aspiration			ICCE			Phaco → ECCE		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
With intra-op complications	17	14	82.4	12	12	100.0	0	0	0.0	0	0	0.0	0	0	0.0	5	2	40.0
No intra-op complications	1815	1774	97.7	1799	1758	97.7	2	2	100.0	8	8	100.0	0	0	0.0	6	6	100.0

2017	Types of Cataract Surgery																	
	All Surgeries			Phaco			ECCE			Lens Aspiration			ICCE			Phaco → ECCE		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
With intra-op complications	58	41	70.7	39	29	74.4	16	9	56.3	0	0	0.0	2	2	100.0	-	-	-
No intra-op complications	2575	2295	89.1	2542	2269	89.3	16	12	75.0	14	14	100.0	2	0	0.0	-	-	-

Table 3.4.5-4: Post-operative Refracted Visual Acuity 6/18 or Better in Eyes without Ocular Co-morbidities by Complications and Types of Surgery, CSR 2013-2017 (WHO Classification)

2013	Types of Cataract Surgery																	
	All Surgeries			Phaco			ECCE			Lens Aspiration			ICCE			Phaco → ECCE		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
With intra-op complications	24	20	83.3	13	11	84.6	2	2	100.0	0	0	0.0	0	0	0.0	8	6	75.0
No intra-op complications	1127	1094	97.1	1088	1059	97.3	24	20	83.3	2	2	100.0	1	1	100.0	10	10	100.0

2014	Types of Cataract Surgery																	
	All Surgeries			Phaco			ECCE			Lens Aspiration			ICCE			Phaco → ECCE		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
With intra-op complications	36	29	80.6	23	20	87.0	0	0	0.0	0	0	0	1	1	100.0	12	8	66.7
No intra-op complications	1535	1512	98.5	1516	1494	98.5	7	6	85.7	1	1	100.0	1	1	100.0	10	10	100.0

2015	Types of Cataract Surgery																	
	All Surgeries			Phaco			ECCE			Lens Aspiration			ICCE			Phaco → ECCE		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
With intra-op complications	28	25	89.3	17	17	100.0	1	1	100.0	0	0	0.0	1	0	0.0	9	7	77.8
No intra-op complications	1286	1280	99.5	1279	1273	99.5	2	2	100.0	1	1	100.0	1	1	100.0	3	3	100.0

2016	Types of Cataract Surgery																	
	All Surgeries			Phaco			ECCE			Lens Aspiration			ICCE			Phaco → ECCE		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
With intra-op complications	17	14	82.4	12	12	100.0	0	0	0.0	0	0	0.0	0	0	0.0	5	2	40.0
No intra-op complications	1815	1795	98.9	1799	1779	98.9	2	2	100.0	8	8	100.0	0	0	0.0	6	6	100.0

2017	Types of Cataract Surgery																	
	All Surgeries			Phaco			ECCE			Lens Aspiration			ICCE			Phaco → ECCE		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
With intra-op complications	58	44	75.9	39	32	82.1	16	9	56.3	0	0	0.0	2	2	100.0	-	-	-
No intra-op complications	2575	2394	93.0	2542	2366	93.1	16	14	87.5	14	14	100.0	2	0	0.0	-	-	-

3.4.6 Factors Contributing to Post-operative Refracted Visual Acuity of Worse than 6/12

Table 3.4.6-1: Factors Contributing to Post-operative Refracted VA of Worse than 6/12 in All Eyes, CSR 2013-2017

Year	2013	2014	2015	2016	2017					
Factors	n	%	n	%	n	%	n	%	n	%
N (total no. of post-op refracted vision worse than 6/12)	106		126		46		105		374	
Preexisting ocular co-morbidity	0	0.0	28	22.2	4	8.7	22	21.0	20	5.3
High astigmatism	0	0.0	2	1.6	3	6.5	2	1.9	3	0.8
Cystoid macular oedema	0	0.0	3	2.4	0	0.0	0	0.0	2	0.5
Corneal decompensation	0	0.0	0	0	0	0.0	0	0.0	1	0.3
Posterior capsular opacity	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Endophthalmitis	0	0.0	0	0	0	0.0	0	0.0	0	0.0
Decentered IOL	0	0.0	0	0	1	2.2	0	0.0	0	0.0
Retinal detachment	0	0.0	1	0.8	0	0.0	0	0.0	0	0.0
Others	2	1.9	6	4.8	6	13.0	8	7.6	7	1.9

Table 3.4.6-2: Factors Contributing to Post-operative Refracted VA of Worse than 6/18 in All Eyes, CSR 2013-2017 (WHO classification)

Year	2013	2014	2015	2016	2017					
Factors	n	%	n	%	n	%	n	%	n	%
N (total no. of post-op refracted vision worse than 6/18)	68		86		20		57		244	
Preexisting ocular co-morbidity	0	0.0	22	25.6	4	20.0	10	17.5	14	5.7
High astigmatism	0	0.0	1	1.2	1	5.0	2	3.5	2	0.8
Cystoid macular oedema	0	0.0	3	3.5	0	0.0	0	0.0	2	0.8
Corneal decompensation	0	0.0	0	0.0	0	0.0	0	0.0	1	0.4
Posterior capsular opacity	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Endophthalmitis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Decentered IOL	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Retinal detachment	0	0.0	1	1.2	0	0.0	0	0.0	0	0.0
Others	2	2.9	6	7.0	2	10.0	5	8.8	5	2.0

Table 3.4.6-3: Factors Contributing to Post-operative Refracted VA of Worse than 6/12 in Eyes without Preexisting Ocular co-morbidity, CSR 2013-2017

Factors	2013		2014		2015		2016		2017	
	n	%	n	%	n	%	n	%	n	%
N	56		53		25		44		297	
High astigmatism	0	0.0	1	1.9	2	8.0	1	2.3	2	0.7
Preexisting ocular co-morbidity (not detected pre-operatively)	0	0.0	6	11.3	1	4.0	0	0.0	1	0.3
Corneal decompensation	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Posterior capsular opacity	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cystoid macular oedema	0	0.0	2	3.8	0	0.0	0	0.0	0	0.0
Endophthalmitis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Decentered IOL	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Retinal detachment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Others	2	3.6	4	7.5	5	20.0	4	9.1	5	1.7

Table 3.4.6-4: Factors Contributing to Post-operative Refracted VA of Worse than 6/12 in Eyes without Preexisting Ocular co-morbidity, CSR 2013-2016 (WHO Classification)

Factors	2013		2014		2015		2016		2016	
	n	%	n	%	n	%	n	%	n	%
N	37		30		9		23		195	
Preexisting ocular co-morbidity (not detected pre-operatively)	0	0.0	3	10.0	1	11.1	0	0.0	1	0.5
High astigmatism	0	0.0	1	3.3	1	11.1	1	4.3	1	0.5
Corneal decompensation	0	0.0	0	0.0	0	0.0	0	0.0	1	0.5
Posterior capsular opacity	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cystoid macular oedema	0	0.0	2	6.7	0	0.0	0	0.0	0	0.0
Endophthalmitis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Decentered IOL	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Retinal detachment	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Others	2	5.4	4	13.3	1	11.1	3	13.0	4	2.1

3.4.7 Actual or Residual Refractive Power (Spherical Equivalent)

Table 3.4.7-1: Distribution of Target and Actual Refractive Power in ECCE and Phaco, CSR 2013-2017

	Target Refraction					Actual-Target Refraction					Actual Refraction									
	All Patient					All Patient					ECCE				Phaco					
	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017
N	990	862	258	2062	3395	870	658	190	1311	2425	29	18	8	5	31	1270	1693	1284	1822	2455
Mean	-0.3	-0.3	-0.4	-0.3	-0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.4	-0.3	-0.7	-1.8	-0.4	-0.5	-0.5	-0.5	-0.4	-0.4
SD	0.4	0.1	0.6	0.2	0.2	0.7	0.7	0.8	0.7	0.6	0.9	0.9	0.6	2.1	1.4	0.7	0.6	0.5	0.6	0.5
Median	-0.3	-0.3	-0.4	-0.3	-0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.5	-0.3	-0.8	-1.0	-0.5	-0.5	-0.5	-0.5	-0.4	-0.4
Minimum	-6.2	-1.3	-9.9	-1.5	-5.7	-7.8	-4.0	-3.3	-6.0	-4.0	-1.8	-2.8	-1.5	-5.0	-3.3	-9	-5.8	-0.4	-6.4	-4.3
Maximum	0.4	0.3	1.8	2.3	1.8	8.3	9.1	9.2	9.1	9.9	2.8	1.8	0.0	0.3	3.8	3.8	8.8	1.5	9.0	2.1

Note: Eyes with actual refractive power (SE) of more than +10.0D and -10.0D were excluded from analysis

Table 3.4.7-2: Percentage Distribution of Target and Actual Refractive Power in ECCE and Phaco, CSR 2013-2017

	Target Refraction										Actual Refraction									
	All Patients					ECCE					Phaco									
	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017
Dioptrē (D)	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
-10.0-<(-9.5)	0	0.0	0	0.0	1	0.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-9.5-<(-9.0)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0
-9.0-<(-8.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-8.5-<(-8.0)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-8.0-<(-7.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0
-7.5-<(-7.0)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-7.0-<(-6.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-6.5-<(-5.0)	4	0.4	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.2	1	0.1
-5.0-<(-4.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	20.0	0	0.0	0	0.0	0	0.0
-4.5-<(-4.0)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0

-4.0-<(-3.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	1	0.1	1	0.1	1	0.0
-3.5-<(-3.0)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	3.2	1	0.1	3	0.2	0	0.0	0	0.0
-3.0-<(-2.5)	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0	1	5.6	0	0.0	0	0.0	0	0.0	4	0.3	3	0.2	0	0.0	2	0.1
-2.5-<(-2.0)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	20.0	1	3.2	5	0.4	4	0.2	7	0.5	6	0.3
-2.0-<(-1.5)	1	0.1	0	0.0	0	0.0	0	0.0	2	6.9	0	0.0	0	0.0	0	0.0	2	6.5	19	1.5	29	1.7	22	1.7	18	1.0
-1.5-<(-1.0)	1	0.1	3	0.3	0	0.0	4	0.2	5	0.1	4	13.8	1	5.6	2	25.0	0	0.0	5	16.1	104	8.2	145	8.6	108	8.4
-1.0-<(-0.5)	42	4.2	53	6.1	61	23.6	89	4.3	85	2.5	8	27.6	4	22.2	3	37.5	2	40.0	6	19.4	339	26.7	474	28.0	362	28.2
-0.5-<0.0	936	94.5	802	93.0	192	74.4	1909	92.6	3228	95.1	6	20.7	4	22.2	1	12.5	0	0.0	10	32.3	522	41.1	683	40.3	565	44.0
0.0-<0.5	6	0.6	4	0.5	2	0.8	54	2.6	66	1.9	3	10.3	6	33.3	2	25.0	1	20.0	0	0.0	209	16.5	275	16.2	185	14.4
0.5-<1.0	0	0.0	0	0.0	1	0.4	3	0.1	6	0.2	4	13.8	1	5.6	0	0.0	0	0.0	2	6.5	46	3.6	55	3.2	27	2.1
1.0-<1.5	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	1	3.4	0	0.0	0	0.0	0	0.0	2	6.5	9	0.7	14	0.8	4	0.3
1.5-<2.0	0	0.0	0	0.0	1	0.4	0	0.0	2	0.1	0	0.0	1	5.6	0	0.0	0	0.0	0	0.0	4	0.3	4	0.2	3	0.2
2.0-<2.5	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0
2.5-<3.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
3.0-<3.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	3.2	1	0.1	0	0.0	0	0.0	0	0.0
3.5-<4.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	3.2	1	0.1	0	0.0	0	0.0	1	0.1
4.0-<4.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
4.5-<5.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
5.0-<5.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
5.5-<6.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
6.0-<6.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
6.5-<7.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
7.0-<7.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
7.5-<8.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
8.0-<8.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0
8.5-<9.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	1	0.1
9.0-<9.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9.5-<10.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Eyes with actual refractive power (SE) of more than +10.0D and -10.0D were excluded from analysis

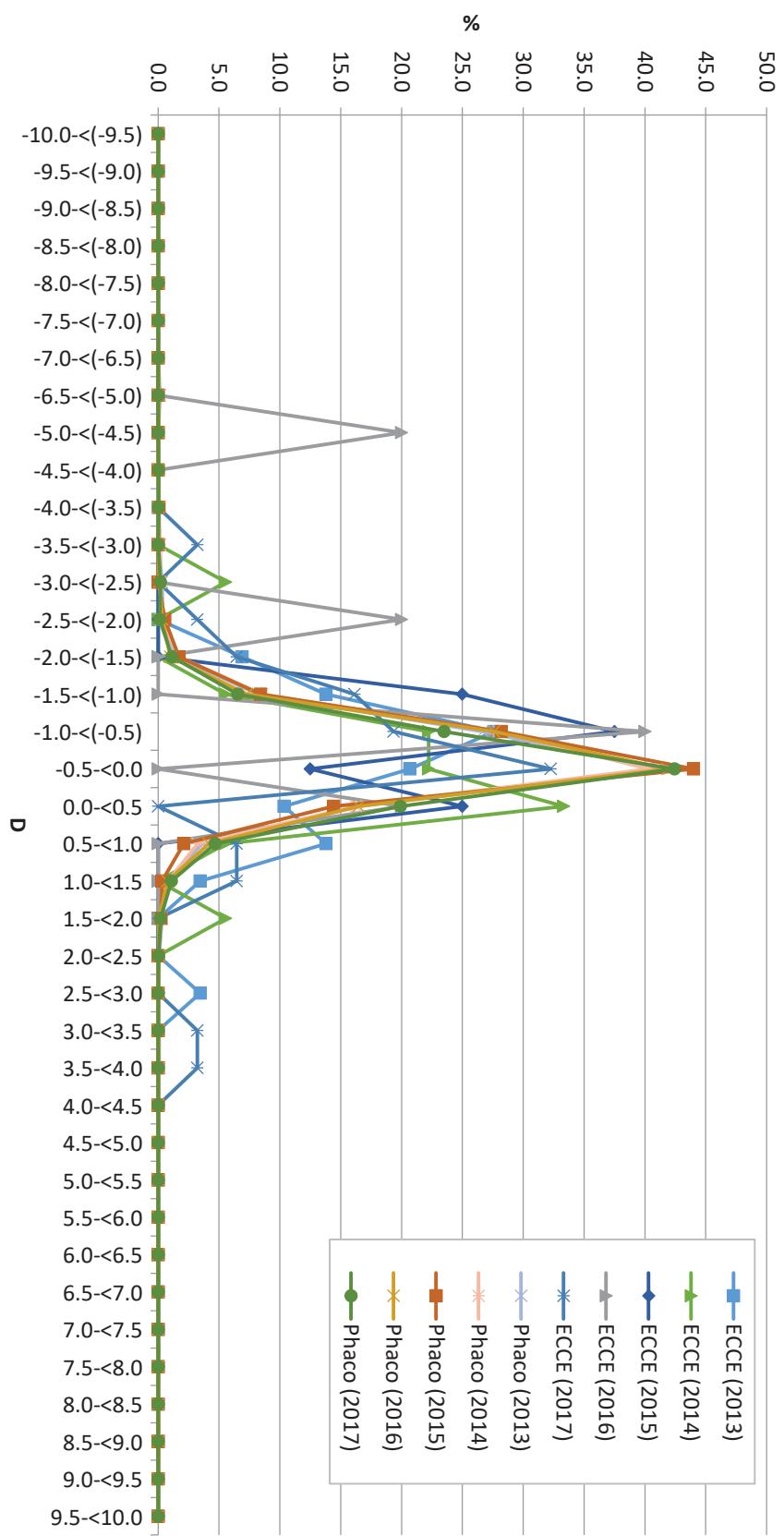


Figure 3.4.7.1: Distribution of Actual Refractive Power in ECCE and Phaco, CSR 2013-2017

Table 3.4.7-3: Difference in Target and Actual Refractive Power for Patients who had Phacoemulsification Only, CSR 2013-2017

Power (D)	Target Refraction					Actual Refraction					Difference between Target and Actual Refraction											
	2013		2014		2015		2016		2017		2013		2014		2015		2016		2017			
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%		
N	936	100	841	100	249	100	2023	100	3315	100	1270	100	1693	100	1284	100	1822	100	2455	100	829	100
-10.0-<(-9.5)	0	0.0	0	0.0	1	0.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-9.5-<(-9.0)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-9.0-<(-8.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-8.5-<(-8.0)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-8.0-<(-7.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-7.5-<(-7.0)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-7.0-<(-6.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
-6.5-<(-5.0)	4	0.4	0	0.0	0	0.0	0	0.0	1	0.0	2	0.2	1	0.1	0	0.0	1	0.1	0	0.0	0	0.0
-5.0-<(-4.5)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0
-4.5-<(-4.0)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	1	0.2	0	0.0	0	0.0
-4.0-<(-3.5)	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	1	0.1	1	0.1	1	0.0	0	0.0	0	0.0
-3.5-<(-3.0)	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	3	0.2	0	0.0	0	0.0	0	0.0	1	0.2	1	0.5
-3.0-<(-2.5)	0	0.0	0	0.0	0	0.0	1	0.0	4	0.3	3	0.2	0	0.0	2	0.1	5	0.2	1	0.1	1	0.2
-2.5-<(-2.0)	0	0.0	0	0.0	0	0.0	0	0.0	5	0.4	4	0.2	7	0.5	6	0.3	3	0.1	6	0.7	1	0.2
-2.0-<(-1.5)	1	0.1	0	0.0	0	0.0	0	0.0	19	1.5	29	1.7	22	1.7	18	1.0	28	1.1	9	1.1	5	0.8
-1.5-<(-1.0)	1	0.1	3	0.4	0	0.0	4	0.2	5	0.2	104	8.2	145	8.6	108	8.4	133	7.3	161	6.6	25	3.0
-1.0-<(-0.5)	39	4.2	50	5.9	57	22.9	85	4.2	81	2.4	339	26.7	474	28.0	362	28.2	503	27.6	577	23.5	145	17.5
-0.5-<0.0	885	94.6	784	93.2	187	75.1	1875	92.7	3153	95.1	522	41.1	683	40.3	565	44.0	763	41.9	1042	42.4	301	36.3
0.0-<0.5	6	0.6	4	0.5	2	0.8	53	2.6	65	2.0	209	16.5	275	16.2	185	14.4	300	16.5	489	19.9	259	31.2
0.5-<1.0	0	0.0	0	0.0	1	0.4	3	0.1	6	0.2	46	3.6	55	3.2	27	2.1	76	4.2	115	4.7	56	6.8
1.0-<1.5	0	0.0	0	0.0	0	0.0	1	0.0	9	0.7	14	0.8	4	0.3	14	0.8	27	1.1	18	2.2	13	2.0
1.5-<2.0	0	0.0	0	0.0	1	0.4	0	0.0	2	0.1	4	0.3	4	0.2	3	0.2	1	0.1	5	0.2	4	0.5
2.0-<2.5	0	0.0	0	0.0	0	0.0	2	0.1	0	0.0	1	0.1	0	0.0	1	0.1	1	0.0	3	0.4	1	0.2
2.5-<3.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
3.0-<3.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

3.5-<4.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0		
4.0-<4.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	1	0.1	0	0.0
4.5-<5.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
5.0-<5.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0
5.5-<6.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
6.0-<6.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
6.5-<7.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
7.0-<7.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
7.5-<8.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
8.0-<8.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	0.2	0	0.0	0	0.0	0	0.0
8.5-<9.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9.0-<9.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	1	0.2	1	0.5	1	0.1	0	0.0
9.5-<10.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

NOTE: Formula of $SE = Sp + \left(\frac{C}{2}\right)$

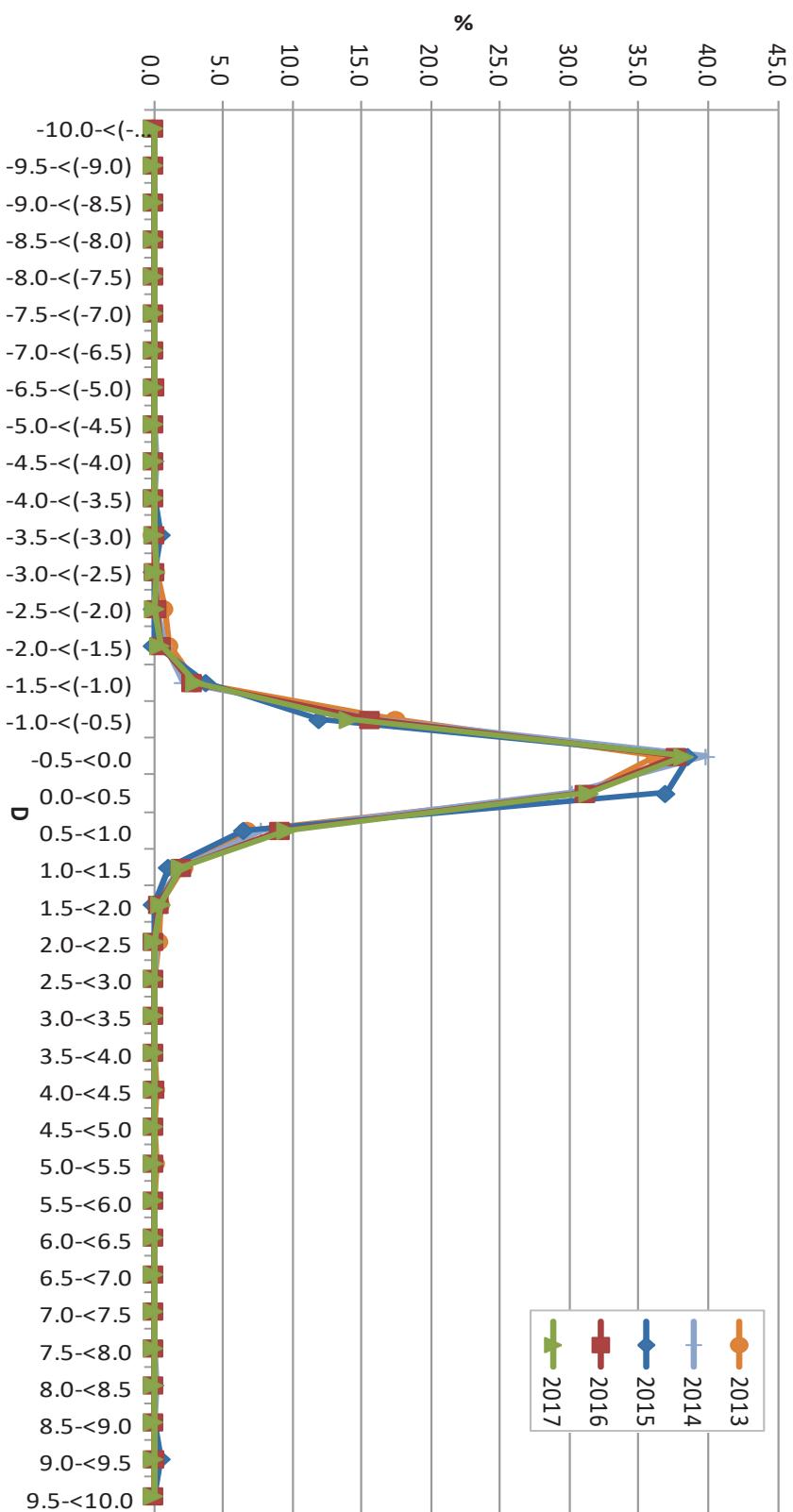


Figure 3.4.7.2:Difference in Target and Actual Refractive Power for Patients who had Phacoemulsification Only, CSR 2013-2017

Table 3.4.7-4: Difference in Target and Actual Refractive Power within ± 1.0 D, CSR 2013-2017

Year	All			By Phacoemulsification			By ECCE		
	No. of patient with refracted VA	Difference between Target and Actual Refraction within ± 1.0 D		No. of patient with refracted VA	Difference between Target and Actual Refraction within ± 1.0 D		No. of patient with refracted VA	Difference between Target and Actual Refraction within ± 1.0 D	
		N	n		n	%		n	%
2013	870	792	91.0	829	761	91.8	19	15	78.9
2014	658	615	93.5	642	603	93.9	6	4	66.7
2015	190	179	94.2	184	173	94.0	2	2	100.0
2016	1311	1224	93.4	1293	1211	93.7	3	2	66.7
2017	2425	2259	93.2	2376	2222	93.5	28	18	64.3

NOTE: Formula of Actual Refraction, $SE = Sp + \left(\frac{CY}{2}\right)$

Result is based on available info of target and actual refraction.

Target/Planned refractive power = Section pre-clerkling

Actual refractive power, SE = Section post-op visual acuity measurement ($SE=SP+(CY/2)$)

Denominator = patient with refraction = if info available in refracted vision Section post-op visual acuity measurement

