The National Cataract Surgery Registry

NCSR INSTRUCTION MANUAL

(Edition 2, 2003)

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INSTRUCTION MANUAL

National Cataract Surgery Registry

Introduction

The National Cataract Surgery Registry (NCSR), a Ministry of Health (MOH) supported service, collects information about cataract surgeries in Malaysia. This information will be analysed and published in annual reports available to MOH, all participating centres and other users. The information is needed for the estimation of cataract surgery treatment rates, and to evaluate cataract surgery outcomes in the country.

Objectives:

1. To determine the frequency (cataract surgery rate) and distribution of cataract surgery in Malaysia. These are useful measures of the health burden arising of cataract and its treatment provision in the country.
2. To determine the outcomes, and factors influencing outcomes of cataract surgery. This serves the needs of outcome assessment.
3. To evaluate cataract surgery services. This serves the need of accountability.
4. To stimulate and facilitate research on cataract and its management.

Sponsors

The NCSR is co-sponsored by:

1. Ophthalmology service, MOH
2. Clinical Research Centre (CRC), MOH

Governing Body

The NCSR is governed by an advisory committee, consisting of Director of Development Division Hospital Services Department Ministry of Health, Ophthalmologist from public, universities and private hospitals and Private Eye clinics, and doctors from the Clinical Research Centre.

Participating Centre

1. MOH Ophthalmology Departments.
2. Army Hospitals.
3. University Hospitals.
4. Private Ophthalmologists / Hospitals.

Requirement of Participating Centres

Participating centres should have a doctor in charge and a site coordinator to coordinate the data collection process and communicate with data manager at CRC.

Personnel:

a) Doctor in charge: her/his duties areas are to:

i. Give a briefing to new doctors and paramedical staff about the National Cataract Surgery Registry as stated in this manual.
ii. Ensure and monitor that the data collection process follow the methodology as stated in the instruction manual.
iii. Emphasize to doctors about the nature of 'carbon' on the Case Report Forms (CRF). The carbon is on the first page of CRF. Thus when filling in the back page section 4 and 5 of Pre- Clerking form and section 3 and 4 of Operative Record, please separate or put a paper between the pages.
iv. Ensure the eligibility of writing.

b) Site Coordinator (Paramedics) whose duties are :

i. Request Clinical Record Forms (CRF) from data manager of NCSR.
ii. Ensure that CRFs are adequate for continuous data collection. (At least 100 set in stock).
iii. Check that the data are complete before sending to Cataract Surgery Registry Unit at CRC.
iv. Counter check completed CRF with the operation list or operation record book before sending them to NCSR.
v. Pre Clerking and Operative Records to submit monthly. (eg. all cataract operations performed in January to be submitted by 2nd week of the following month, February.
vi. Cataract Surgery Outcomes Through 12 Weeks Post –Op to be submitted +/- 12 weeks post operatively
vii. Delivery of completed CRF to NCSR unit:
    - For security and safe delivery please double wrap the CRF before sending and you may send by register mail, courier or via IOL sales representative.
    - If the CRF are bulky, please tie up with parcel string.

Participating Patients

Inclusion Criteria:

1. All patients who undergo cataract surgery.
2. Cataract extractions combined with other surgical procedures such as:
    i. Pterygium surgery
    ii. Filtering surgery
    iii. Vitreo-retinal surgery
    iv. Penetrating Keratoplasty
    v. Any other ophthalmic procedure.

Exclusion Criteria:

1. Patients who need to have lens removal, decided ("on the table") by surgeons while performing the surgeries, usually Vitreo- retinal surgery.
2. Secondary implantation of an intraocular lens in an eye previously operated for cataract before the year 2003.

Case Record Forms (CRF)
Example of CRF is in appendix 1

Data definition
Definition of all the variables is in Appendix 2

Data Collection Process
The data collection process of the registry is incorporated into the routine clinical work process in the individual Eye Department.

1. Pre-clerking Records (Blue Form)

    1.1. To be filled in on the day of preclerking , patients information needed for the registry are:-
        - Hospital/clinic
        - Data of pre-clerking
        - Patient particulars
        - Medical history-
            - Surgery on -First or Second eye
            - Prior Intraocular surgery
            - Cause of cataract
            - Ocular Co-morbidity
            - Systemic Co-morbidity
        - Visual Acuity Measurement

    1.2. Only the first page needs to be returned to the cataract surgery registry unit (CSRU) at CRC.

2. Operative Record (Red Form)

    2.1. The operative record is filled in after the surgery. The information needed for the registry are:-
        - Hospital/clinic
        - Patient Name

- I/C No
- Operative Data
    - Surgery.
    - Type of anaesthesia
    - IOL.
    - Viscoelastic material

- Findings- Intra - Operative Complication.

2.2. Only the first page required by NCSR.

2.3. Please place IOL Sticker on NCSR Form also.

3. Cataract surgery outcomes through 12 weeks post-op . (Green Form)

It is filled in on the last follow-up visit or by 10- 14 weeks post-operation. The information needed is:

i. Post op complication as it occurs at any time during the post-operative period till 14 weeks.

ii. Fill in the unaided and refracted visual acuity at 12+/- 2 weeks .

iii. Record of refractive status in dioptre, e.g. 1.00/2.0 x 90° is optional.

iv. **If visual acuity at 12(+/-2) weeks is not available either because patient has been lost for follow-up or patient has been discharged by doctor, fill in visual acuity at second row in section 2 and state the reason why visual acuity at 12+-2 weeks is not available in the third row.(Refer Green form).**

v. The maximum endpoint of follow-up is 14 weeks after surgery. This means that forms should be completed at the latest 14 weeks after surgery and send back to CSRU soon after that. However, there is no minimum end point, i.e. green form can be completed at any stage of post-operative period when the doctors feel that patients can be discharged because of stable good visual acuity (better than 6/12) even though it is before 14 weeks. .

Data collection clarification in some exceptional cases

Scenario 1.

Patient who had complicated cataract operation where IOL was not inserted The same patient then underwent a second operation for IOL implantation on the same eye.

e.g. Rt. eye

1st operation - Rt ECCE without IOL implantation on 12/01/03 followed by
2nd operation -Rt. 2° 10L implantation on14/03/03

Therefore CRF to be sent to NCSR are:

- Pre clerking and Operative records for the 1ST Operation and separate sets of Pre clerking and Operative records for the 2nd operation to be submitted by 2nd week of the following month.
- Cataract surgery outcome 12+/- 2 weeks for the 1st and 2nd operation to be submitted separately.

* If the secondary IOL implant is performed in another centre, the centre which perform the secondary IOL implant to fill in the operative record and write the note about the date of first cataract operation and centre which perform the first operation.

Scenario 2.

The same patient had cataract operations on both the eyes

e.g. 1st eye Rt. ECCE / 10L done on 15/01/02.
2nd eye Lt. ECCE / 10L done on 17/01/02.

Therefore two separate sets of CRF should be sent to NCSR.

1st Eye

- Pre clerk Record
- Operative Record
- Cataract Surgery Outcome

2nd Eye. (Separate set of CRF)

- Pre clerk Record
- Operative Record
- Cataract Surgery Outcome.

Further Information: Contact → LEE POE POAY
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Cataract Surgery Registry Unit

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OR Visit Cataract Surgery Registry Website: http://www.crc.gov.my/ncsr/

APPENDIX 1

CASE REPORT FORM (CRF)

PRE-CLERKING RECORD

Hospital / Clinic: _____ **Date (dd/mm/yy):** ☐☐ ☐☐ ☐☐ Office use: ☐☐ / ☐☐☐ Centre ☐☐☐

SECTION 1 : PATIENT PARTICULARS

Name : _____

IC (old) : _____ **(new) :** _____

Address: _____

_____

Postcode: _____ **Town/City:** _____ **State:** _____

Homephone: _____ **Workphone:** _____ **Ext:** _____ **Hand-phone:** _____

Age (in years): ☐☐

Gender:
- ☐ Male
- ☐ Female

Ethnic group:
- ☐ Malay
- ☐ Chinese
- ☐ Indian
- ☐ Orang Asli
- ☐ Melanau
- ☐ Kadazan
- ☐ Murut
- ☐ Bajau
- ☐ Bidayuh
- ☐ Iban
- ☐ Other, specify: _____

SECTION 2: MEDICAL HISTORY

(check ☑ one box as appropriate)

Surgery On:

- ☐ First eye
- ☐ Second eye

If Second eye:

Date of first surgery: _____

Intra-op complications: ☐ Yes ☐ No

Prior Intraocular Surgery

- ☐ None
- ☐ Vitreoretinal Surgery
- ☐ Penetrating Keratoplasty
- ☐ Filtering Surgery
- ☐ Pterygium Excision
- ☐ Other, specify: _____

Cause Of Cataract

☐ Primary **OR** ☐ Secondary

If primary:
- ☐ Senile/age related
- ☐ Congenital
- ☐ Developmental
- ☐ Other _____

If Secondary:
- ☐ Trauma
- ☐ Drug Induced
- ☐ Surgery Induced
- ☐ Other _____

Ocular Comorbidity

(check ☑ one or more boxes below if present)

☐ **None**

ANTERIOR SEGMENT:
- ☐ Pterygium involving the cornea
- ☐ Corneal Opacity
- ☐ Glaucoma
- ☐ Chronic Uveitis
- ☐ Pseudoexfoliation

Lens Related Complication
- ☐ Phacomorphic
- ☐ Phacolytic
- ☐ Subluxated / Dislocated

MISCELLANEOUS:
- ☐ Amblyopia
- ☐ Significant previous eye trauma
- ☐ Pre-existing non glaucoma field defect (eg. CVA)

POSTERIOR SEGMENT:

Diabetic Retinopathy
- ☐ Non Proliferative
- ☐ Proliferative
- ☐ CSME
- ☐ Vitreous haemorrhage

- ☐ ARMD
- ☐ Other macular disease (includes hole or scar)
- ☐ Optic nerve disease, any type
- ☐ Retinal detachment
- ☐ Cannot be assessed
- ☐ Other ocular comorbidity, specify: _____

Systemic Comorbidity

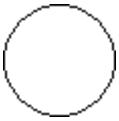
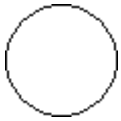
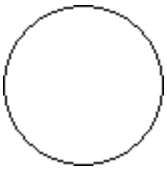
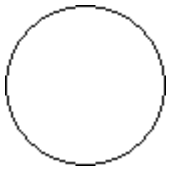
(check ☑ one or more boxes below if present)
- ☐ None
- ☐ Hypertension
- ☐ Diabetes Mellitus
- ☐ Ischaemic Heart Disease
- ☐ Renal Failure
- ☐ Cerebrovascular accident
- ☐ COAD / Asthma
- ☐ Hansen's Disease
- ☐ Allergies
- ☐ Other, specify: _____

SECTION 3: VISUAL ACUITY MEASUREMENT

Vision	Right	Left
Presenting Visual Acuity (with / without glasses):		
Pin Hole Visual Acuity (with / without glasses):		
Refracted Visual Acuity		

SECTION 4: OPHTHALMIC EXAMINATION

(This page is not required by NCSR)

Right	Left
Cornea: 	
A	
Fundus: 	

Physical Examination	Investigation Results (as ordered)	Medication (Topical and Systemic)
BP: _____	**RBS:** _____	**Topical:**
Pulse Rate: _____	**FBS:** _____	
Lungs: _____	**2HPP:** _____	**Systemic:**
CVS: _____	**Renal Profile:** _____	
Others:	**FBC:** _____	
	ECG: _____	
	Chest X-Ray: _____	
	Other, specify: _____	

Diagnosis	
Ocular:	**Systemic:**

SECTION 5: PLAN

Operation Date(dd/mm/yy): | | | **Admission Date(dd/mm/yy):** | | |

Proposed Admission: ☐ Day Care ☐ Not Day Care

Cataract Surgery	Eye:	Type:	Type of Anaesthesia:
	☐ Right ☐ Left	☐ ECCE ☐ Phacoemulsification ☐ ICCE ☐ Combined surgery, state: _____	☐ General ☐ Local

IOL		IOL Details:	Power:	A-Constant:	IOL Brand:
	☐ Yes ☐ No				

Pre-operative Instruction:	Pupil Dilatation Regime	Pre Operative Sedation	Other

Name of Doctor: _____ **Signature:** _____ **Date(dd/mm/yy):** | | |

OPERATIVE RECORD

Hospital / Clinic : _____

Patient Name : _____

I/C No. (old) : _____ **(new):** _____

Office use: ____ / ____

Centre: ____

SECTION 1 : OPERATIVE DATA

1.Name of Surgeon: _____

Surgeon status: ☐ Specialist ☐ Gazetting specialist ☐ Medical officer

2.Name of Assistant: _____

3.Name of Scrub Nurse: _____

4.Name of Anaesthetist: _____

5.Date Of Cataract Operation(dd/mm/yy): ____ ____ ____

6.Time: Start: _____ hours **End:** _____ hours

7.Pre-op Diagnosis: _____

8.Post-op Diagnosis: _____

9.Type of Admission: ☐ Day Care ☐ Not Day Care

SURGERY

10. Urgency of operation:

☐ Elective ☐ Emergency

11.Operative Eye:

☐ Right ☐ Left

12.Type:

☐ Lens aspiration
☐ ECCE
☐ Phaco
☐ Phaco converted to ECCE
☐ ICCE
☐ Secondary IOL implant

13.Combined:

(check ☑ one or more boxes below if perform)

☐ Pterygium surgery
☐ Filtering surgery
☐ Vitreo-retinal surgery
☐ Penetrating Keratoplasty
☐ Other, specify: _____

ANAESTHESIA

14.Type of Anaesthesia:

☐ General
☐ Local

⇓ **If local**

(check ☑ one or more boxes below)

Type:

☐ retrobulbar
☐ peribulbar
☐ subtenon
☐ subconjunctival
☐ facial block
☐ topical

Type of sedation:

☐ None
☐ Oral
☐ Intravenous
☐ Intramuscular

IOL

15. IOL:

If Yes ->
☐ Posterior chamber IOL
☐ Anterior chamber IOL
☐ Scleral fixated PCIOL

If No ->
☐ IOL planned, but not implanted
☐ No IOL was planned or implanted
☐ Other, specify: _____

16.Material:

☐ PMMA ☐ Other, specify: _____
☐ Silicone _____
☐ Acrylic _____

17.Type:

☐ Foldable
☐ Non-Foldable

18.Brand:

☐ Alcon ☐ Other, specify: _____
☐ Allergan _____
☐ Pharmacia _____
☐ Corneal _____
☐ Storz _____

VISCOELASTIC MATERIAL

19. Viscoelastic Material:

(check ☑ one or more boxes below)

☐ Healon plain
☐ Healon GV
☐ Healon 5
☐ Viscoat
☐ Provisc
☐ Duovisc
☐ Other, specify: _____

SECTION 2: FINDINGS

Intra-Operative Complications *(check ☑ one or more boxes below if present)*

☐ **None**
☐ **Posterior capsule rupture with vitreous loss**
☐ **Posterior capsule rupture without vitreous loss**
☐ **Zonular dialysis with vitreous loss**
☐ **Zonular dialysis without vitreous loss**
☐ **Loss of nucleus material into vitreous**
☐ **Choroidal / suprachoroidal haemorrhage**
☐ **Significant trauma to cornea or iris**
☐ **Other, specify:** _____

Finding Details ***(Optional)***

(Description on preexisting abnormal ocular conditions and intraoperative complications, if any. May include drawings.)

IOL Sticker:

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SECTION 3: OPERATIVE PROCEDURES

(This page is not required by NCSR)

		If combined surgery, other operative procedures:
Incision:	☐ limbal ☐ scleral ☐ corneal	
Anterior capsulectomy:	☐ continuous curvilinear capsulorrhexis ☐ endocapsular ☐ can opener	
Paracentesis:	☐ *(check ☑ if yes)*	
Viscoelastic:	☐ *(check ☑ if use)*	
Hydrodissection / Hydrodelineation:	☐ Hydrodissection ☐ Hydrodelineation	
Nucleus removal:	☐ Aspiration ☐ Manual extraction(ECCE) ☐ Phacoemulsification ☐ Lens cryoprobe (ICCE)	
Details (Optional)		
Cortical matter removal:	☐ manual (simcoe) ☐ automated I/A	
8. IOL Implantation:	☐ in the bag ☐ in the sulcus ☐ scleral fixated ☐ ACIOL	
Complication and its management, if any:		
Iridectomy:	☐ *(check ☑ if yes)*	
Miostat:	☐ *(check ☑ if yes)*	
Viscoelastic aspirated:	☐ *(check ☑ if yes)*	
Wound closure:	Suture ☐ *(check ☑ if yes)*	
Subconjunctival injection?	☐ *(check ☑ if yes)*	
If Yes -->	Antibiotic: _____ Steroid: _____	

SECTION 4: POST OPERATIVE INSTRUCTIONS

Vital signs: _____

Medication: Analgesic: _____

Antibiotic: _____

Other, specify: _____

Special Order: _____

_____

_____

Discharge instructions: _____

_____

_____

_____

Name of Doctor: _____ **Signature:** _____ **Date(dd/mm/yy):** | | |

CATARACT SURGERY OUTCOMES THROUGH 12 WEEKS POST-OP

Hospital / Clinic : _____

Patient Name : _____

I/C No. (old) : _____ **(new):** _____

Date of Cataract Operation _____

Office use: ____ / ____

Centre: ____

SECTION 1 : POST-OP COMPLICATIONS

(check ☑ if any of the complication is noted during the first 12 weeks post-operative period)

- ☐ **Central cornea edema within 4mm of visual axis**
- ☐ **Raised IOP of more than 30 mmHg**
- ☐ **Suture abscess**
- ☐ **Severe iritis with fibrin**
- ☐ **Iris prolapsed / wound dehiscence**
- ☐ **Vitreous incarceration into wound**
- ☐ **Vitreous in AC touching cornea**
- ☐ **IOL decentration / dislocation**
- ☐ **Cystoid macular edema**
- ☐ **Endophthalmitis**
- ☐ **New retinal break**
- ☐ **Retinal detachment**
- ☐ **Astigmatism of > 3 diopters**
- ☐ **Posterior capsule opacification**
- ☐ **Other, specify:** _____

SECTION 2 : VISUAL ACUITY MEASUREMENT

	UNAIDED		**REFRACTED** (Reporting of refractive power in diopters is optional)	
	Right	**Left**	**Right**	**Left**
At 12 (±2) weeks post-op: Date (dd/mm/yy):				
If VA at 12 (±2)weeks post-op is not available, please provide the final available VA measurement: Date (dd/mm/yy):				
Reasons VA not determined at 12 (±2)weeks (e.g lost to follow-up, discharged by doctor. etc)				

SECTION 3 : POSSIBLE FACTORS IF POST-OP REFRACTED VA WORSE THAN 6/12

- ☐ **High astigmatism**
- ☐ **Posterior capsular opacity**
- ☐ **Cystoid macular edema**
- ☐ **Endophthalmitis**
- ☐ **Preexisting ocular comorbidity, state what:** _____
- ☐ **Other, specify:** _____
- ☐ **Cornea decompensation**
- ☐ **Decentered IOL**
- ☐ **Retinal detachment**

Name: _____

Signature: _____ **Date(dd/mm/yy):** ____ ____ ____

(Date when form is completed)

version 1.3

Data Definition

SECTION 1 : POST-OP COMPLICATIONS

Data items	Definition
Central cornea edema within 4mm of visual	Presence of epithelial or stromal edema within 4 mm diameter area of the visual axis
Raised IOP of more than 30 mmHg	Elevation in the intraocular pressure of more than 30 mmHg measured by applanation tonometer
Suture abscess	Presence of abscess at any part of the sutures
Severe iritis with fibrin	Presence of fibrin in the anterior chamber
Iris prolapse / wound dehiscence	Presence of iris at the wound
Vitreous incarceration into wound	Presence of vitreous in the anterior chamber, which is being tracked to the wound site
IOL decentration / dislocation	Decentration – malposition of the IOL, which may be associated with optical and structural complication Dislocation – dislocation of the IOL into the anterior chamber or into the vitreous cavity
Cystoid macular edema	Presence of macular edema with the sign of irregularity and blurring of the foveal reflex, thickening with or without small intraretinal cyst in the foveal region
Endophthalmitis	Inflammation of one or more coats of the eye and adjacent intraocular spaces
New retinal break	Presence of retinal break, which was not seen preoperatively
Retinal detachment	Presence of retinal detachment, which was not seen preoperatively
High astigmatism of >3 diopters	Presence of astigmatism of more than 3 diopters which was not noted preoperatively
Posterior capsule opacification	Presence of posterior capsule opacification which lead to reduction in visual acuity and impaired visualization of the fundus

APPENDIX 2

DATA DEFINITION

Data Definition
National Cataract Surgery Registry

	CRF 1: Pre-Clerking Record (BLUE FORM)	
	Data item **Section1:** **Personal and Demographic**	**Definition: Conceptual and Method**
1.	Hospital/Clinic	
2.	Date (dd.mm/yy)	
3.	Patient Name	
4.	IC_new	
5.	IC_old	
6.	Address, Postcode, Town/City, State	
7.	Homephone, Workphone, Ext, Hand-phone	
8.	Age	
9.	Sex	
10.	Race	
	Data item **Section 2:** **Medical History**	
11.	Surgery on	First eye. No similar operation has been done to the opposite eye. Second eye The opposite eye has had similar operation done before
12.	**If second eye ,** **-date** **-Intra-op complications** **(Yes or No)**	If the cataract operation is for the second eye, give the date of operation for the first eye and any complication during the first eye cataract surgery which might have given rise o any ocular co-morbidity
13.	Cause of cataract	Cataract: Presence of opacity or clouding in any part of the lens (cortex, nuclear, capsule)
14.	Primary cataract	Causes of primary cataract • Senile- Presence of lens opacity that is related to aging process • Congenital-Lens opacity occurring during intrauterine period

		• Developmental cataract-Lens opacity occurring at any age after birth, which is not related to aging
15.	Secondary cataract	Causes of secondary cataract • Traumatic cataract-Cataract caused by any ocular trauma. • Surgically induced cataract - Cataract as a result any ocular surgery • Drug induced cataract-Cataract caused by any pharmacological agents either following ingestion or instillation of topical eye drops. Metabolic cataract-Cataract secondary to any metabolic diseases
	Ocular co-morbidity	**Any ocular diseases, which can lead to reduction in vision and visual function.**
	Anterior segment	
16.	Pterygium involving the cornea	Presence of Pterygium involving the cornea
17.	Corneal opacity	Presence of central corneal opacity within 4 mm diameter area of visual axis.
18.	Glaucoma	As diagnosed by eye doctors with the following criteria: Presence of visual field defect and optic neuropathy with or without increased in intraocular pressure
19.	Chronic uveitis	Evidence of uveitis in anterior or posterior segment, with the following signs of inflammation: cell, flare, keratic precipitate, pigment on lens etc
20.	Pseudoexfoliation	Obvious presence of pseudoexfoliation material in the anterior segment of the eye
	Lens related complication(s):	
21.	Phacomorphic	Phacomorphic glaucoma-Secondary angle closure glaucoma that occurs

		when a swollen intumescent cataract blocks the pupil
22.	Phacolytic	Phacolytic glaucoma -Leakage of denatured lens proteins through an intact capsule and stimulates inflammatory reaction which can leads to secondary open angle glaucoma
23.	Subluxated /dislocated	Subluxated – mal-position of the lens, which may be associated which optical and structural problem. Dislocated – the lens is dislocated anteriorly to the anterior chamber or posteriorly to the vitreous cavity.
	Posterior Segment	
	Diabetic retinopathy (DR)	
24.	Non-Proliferative	Non-proliferative diabetic retinopathy – Background DR
25.	Proliferative	Proliferative diabetic retinopathy- presence of neovascularization at the disc or elsewhere, or presence of vitreous haemorrhage.
26.	CSME	CSME- clinically significant macular edema- Thickening of retina at or within 500 microns of the center of macula, or hard exudates at or within 500 microns of the center of the macula, if associated with thickening of adjacent retina, and a zone or zones of retinal thickening one disc area or larger, any part of which is within one disc diameter of the center of the macula.
27.	Vitreous haemorrhage	Presence of any bleeding in the vitreous cavity
28.	ARMD	Age related macular degeneration- Presence of drusen and /or choroidal neovascularisation within one disc diameter from the center of fovea.
29.	Other macular disease(includes hole or scar)	
30.	Optic nerve disease, any type	Presence of non-glaucomatous optic nerve diseases, e.g. optic atrophy, AION etc
31.	Retinal detachment	Presence of existing retinal detachment

32.	Cannot access	Presence of media opacity including cataract which preclude the view of the fundus
	Miscellaneous	
33.	Amblyopia	Defective visual acuity which persists after correction of any refractive error and removal of any pathological obstacle to vision.
34.	Significant previous eye trauma	Ocular trauma which leads to visible damage to the cornea, iris , lens and retina
35.	Preexisting non glaucoma field defect (e.g CVA)	Visual field defect resulting from neurological disorders such as cerebrovascular accisents
36.	Other ocular comorbidity	
	Others, specify	
	Prior ocular surgery	
37.	Vitreoretinal surgery	Any posterior segment surgery
38.	Penetrating keratoplasty	Corneal graft
39.	Filtering surgery	Any surgery performed to promote the aqueous outflow in glaucoma
40.	Pterygium excision	
	Others	
41.	Others, specify	
	Systemic comorbidity	Any systemic disease, which have been diagnosed by medical doctors.
42.	Hypertension	
43.	Diabetes mellitus	
44.	Ischaemic Heart Disease	
45.	Renal failure	
46.	Cerebro Vascular Accident	
47.	COAD/asthma	
48.	Hansen's disease	
49.	Allergies	
50.	Others, specify	
	Section 3:Visual acuity Measurement	
51.	Right Presenting Visual Acuity (with/without glasses) at pre-op	
52.	Left Presenting Visual Acuity (with/without glasses) at pre-op	
53.	Right Pin-hole Visual Acuity (with/without glasses)	
54.	Left pin hole Visual Acuity (with/without glasses)	
55.	Right refracted Visual Acuity (with/without glasses) at pre-op	

56.	Left refracted Visual Acuity (with/without glasses) at pre-op	
	CRF 2: Operative Record	**(Red Form)**
	Operative data	
57.	Name of surgeon	
58.	Surgeon status	
59.	Name of assistant	
60.	Name of Scrub nurse	
61.	Date of operation	
62.	Time started	
63.	Time ended	
64.	Pre-op diagnosis	
65.	Type of admission	
	SURGERY	
66.	**Urgency Of Operation** :	Emergency operation - The eye operation needs to be done as soon as possible because of unwanted complications and in order to reduce ocular co-morbidity Elective operation-- A planned operation that have been discussed with the patient days or weeks before the operation.
67.	Eye for operation	
68.	Type	Type of cataract surgery
	Combined surgery	
69.	Filtering surgery	
70.	Penetrating keratoplasty	
71.	Pterygium surgery	
72.	Vitreo-retinal surgery	
73.	Other,specify	
74.	Type of anaesthesia	Local anaesthesia • Retrobulbar Injection of local anaesthesia into the intraconal space posterior to the globe. • Subconjunctival Injection of local anaesthesia in the subconjuctival space. • Peribulbar Injection of local anaesthesia in the peribulbar space. • Facial block Injection of local anaesthesia to paralyze the zygomaticofacial branches of seven cranial nerve either by O'Brien or Van Lints method.

		• Subtenon Injection of local anaesthesia into the subtenon space • Topical Local anaesthesia is given in a form of eye drop.
75.	Type of sedation	
76.	Intraocular lens (IOL)	
77.	IOL if yes	Posterior chamber, anterior chamber sclera fixated unplanned suturing of PCIOL
78.	IOL if no	IOL planned, but not implanted, no IOL planed or implanted
79.	material	PMMA Silicone Acrylic Others, specify
80.	type	foldable non-foldable
81.	Brand of IOL	Allergen Pharmacia Corneal Storz Others, specify
82.	Viscoelastic Material	Healon plain Healon GV Healon 5 Viscoat Provisc Duovisc Other, specify
	Section 2: Findings **Intra-operative Complications**	
83.	None	No complication
84.	Posterior capsule rupture without vitreous loss	Tear in the posterior capsule with intact anterior vitreous space.
85.	Zonular dialysis with vitreous loss	Disinsertion of the zonule from the capsular bag with vitreous loss
86.	Zonular dialysis without vitreous loss	Disinsertion of the zonule from the capsular bag without vitreous loss
87.	Loss of nucleus material into vitreous	Drop of part or whole nucleus into the vitreous cavity during cataract surgery
88.	Choroidal / suprachoroidal haemorrhage	Presence of blood in suprachoroidal space, which can result in the extrusion of intraocular contents from the eye or the apposition of the retinal surfaces
89.	Significant trauma to cornea or	

	iris	
90.	Others, specify	
	CRF3 Cataract surgery outcome through 12 weeks post-op	**Green Form**
	Post-op complications	
91.	Central cornea edema within 4mm of visual axis	Presence of epithelial or stromal edema within 4 mm diameter area of the visual axis
92.	Raised IOP of more than 30 mmHg	Elevation in the intraocular pressure of more than 30 mmHg measured by applanation tonometer
93.	Suture abscess	Presence of abscess at any part of the sutures.
94.	Severe iritis with fibrin	Presence of fibrin in the anterior chamber
95.	Iris prolapse / wound dehiscence	Presence of iris at the wound
96.	Vitreous incarceration into wound	Presence of vitreous in the anterior chamber, which is being tracked to the wound site.
97.	Vitreous in AC touching cornea	Presence of vitreous in the anterior chamber which touches the cornea
98.	IOL decentration / dislocation	Mal-position of the IOL, which may be associated with optical and structural complication. Dislocation – dislocation of the IOL into the anterior chamber or into the vitreous cavity**.**
99.	Cystoid macular edema	Presence of macular edema with the sign of irregularity and blurring of the foveal reflex, thickening with or without small intraretinal cyst in the foveal region
100.	Endophthalmitis	Inflammation of one or more coats of the eye and adjacent intraocular spaces
101.	New retinal break	Presence of retinal break, which was not seen preoperatively.
102.	Retinal detachment	Presence of retinal detachment, which was not seen preoperatively.
103.	High astigmatism of >3 diopters	Presence of astigmatism of more than 3 diopters which was not noted preoperatively
104.	Posterior capsule opacification	Presence of posterior capsule opacification which lead to diminished in visual acuity and impaired visualization of the fundus

105.	Other, specify	
	Visual Acuity Measurement	
	At 12(+/-2) weeks post-op	
106.	Right unaided visual acuity	Presenting visual acuity without any correction such as spectacles or contact lens
107.	Left unaided visual acuity	Presenting visual acuity without any correction such as spectacles or contact lens
108.	Right refracted visual acuity	Visual acuity assessed with refraction, either auto or retinoscopic refraction
109.	Left refracted visual acuity	Visual acuity assessed with refraction, either auto or retinoscopic refraction
	If VA at 12(+/-2) weeks post-op is not available, please provide the final available VA measurement	
110.	Right unaided visual acuity	VA – Without pinhole
111.	Left unaided visual acuity	
112.	Right refracted visual acuity	Visual acuity assessed with refraction, either auto or retinoscopic refraction **(Ref. power is optional**)
113.	Left refracted visual acuity	Visual acuity assessed with refraction, either auto or retinoscopic refraction **(Ref. power is optional)**
114.	Reasons VA not determined at 12 weeks(+/-2) weeks (e.g. lost to follow-up, discharged by doctor, etc)	
	Post-op refracted VA worse than 6/12 , probable factors	
115.	High astigmatism	Presence of astigmatism of more than 3 diopters which was not noted preoperativ
116.	**Posterior capsular opacity**	As in above No.103
117.	Corneal Decompensation	Bullous keratopathy
118.	Decentered IOL	As in above No 97
119.	Retinal detachment	As in above No.101
120.	Cystoid macular edema	As in above No.98
121.	Endophthalmitis	As in above No.99
122.	Preexisting ocular co-morbidity, state what	Preexisting ocular comorbidity , which may or may not be noted before cataract surgery
123.	Other, specify	
124.	Name	
125.	Signature	
126.	Date(dd/mm/yy)	

Ascertainment of CRF Sent to NCSR monthly

1. To list number of Cataract Surgery performed by month. Example of the list as shown by the table attached below .

2. Please attach one copy of this ascertainment record to NCSR when sending CRF 1+2 (Pre clerking and Operative Record). Cataract operation done in the same month are to be sent together by 2 weeks of the following month. A copy of this ascertainment record is to be kept by your center to ease your working process and to keep track of CRF 3 (Outcome) which will be sent 12 weeks later.

3. O.T list is not ideal as cancellation of case is not mention and emergency cataract operation is not recorded in an elective OT lsit.

4. We suggest using the table given below as we can compare the names and I/C written on CRF, which at time is not clear and to check if there is duplicate copy of CRF.

Format Submission CRF by Month (example)

LIST OF CATARACT SURGERY
HOSPITAL _____
MONTH _____/_____YEAR

Bil	Operation Date	Identiti Card Numbers	Patients Name	Types of Operation	CRF to Fill	
					CRF 1&2	CRF 3
1	04/01/02	360521-06-5188	Siti Esah Abd Razak	R. ECCE/IOL	✓	
2	"	460605-08-5098	Lim Yok Chuan	R. Phaco/IOL	✓	
3	**09/01/02**	560105-03-9911	**Jawahi Haji Kadir**	**R. Phaco/IOL**	✓	
4	"	560105-03-9911	**Jawahi Haji Kadir**	**L. ECCE/IOL**	✓	
5	**26/01/02**	560212-03-8971	**Yip Kah Chen**	**L. Lens Aspiration**	✓	
6	**30/01/02**	560212-03-8971	**Yip Kah Chen**	**L. Secondry Impalants**	✓	
7	31/01/02	450602-03-6923	Yusof Ghazali	R. ECCE/IOL	✓	
	"	580205-03-6541	Ng Yoke Yin	L. Phaco/IOL	✓	
	"	740512-08-6045	Halim Hamzah	R. ECCE/IOL	✓	
	"	520807-07-3216	Rahmah Basri	R. ECCE/IOL	✓	
	"	160316-07-5642	Siti Rosiah	R. ECCE/IOL	✓	
	"	430206-06-4567	Abd Halim	L. ECCE/IOL	✓	

<u>Submission CRF by Month</u>

LIST OF CATARACT SURGERY
HOSPITAL ____________________________
MONTH _____________/_____________YEARS

No	Operation Date	Identiti Card Numbers	Patients Name	Types of Operation	CRF to Fill	
					CRF 1&2	CRF 3