The National Cataract Surgery Registry

Ministry of Health Malaysia

NCSR INSTRUCTION MANUAL

(Edition 3, 2004)

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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 and job description:

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. Review all CRFs to ensure completeness before sending to Cataract Surgery Registry Unit at CRC.
iv. Ensure all patients who had cataract surgery had their data entered to the CRFs by counter checking the operation list or operation record book before sending them to CSRU.
v. Submit all Pre Clerking (CRF1) and Operative Records(CRF2) at the early of the month following cataract surgery (i.e. CRFs for patients who had cataract operations performed in January to be submitted by 2nd week of the following month, February).
vi. Submit Cataract Surgery Outcomes Through 12 Weeks Post –Op (CRF3) by 3 months post operatively.
vii. Send completed CRF to CSRU:
    - Double wrap the CRFs before sending for security and safe delivery
    - Send CRFs by registered mail, courier or via sales representative.
    - Tie CRFs parcel with a string if it si bulky
viii. In order to ensure complete ascertainment for the submission of the CRF (Pre-clerking, Operative and Outcomes through 12 weeks post op record), the site coordinator should :
    - Get a final OT list from OT Staff (that is the edited OT list where cancellation and addition have been updated) .
    - Add 3 column on the right hand side of the OT list (AppendixA).
    - Tick on the respective column when CRF 1 and 2 have been submitted
    - Send CRF 1+2 and a copy of the edited OT list to CSRU
    - Keep a copy of the edited OT list and tick on the column when CRF 3 are up and to be sent to CSRU.

Record of CRF submission

Modified from OT list

Date of Op 04/01/02 **Date When CRF 1& 2 sent :**
Date When CRF 3 sent :

OT List

No.	Name	A / S / R	I/C	Diagnosis	Procedure	Surgeon	Remarks / IOL	CRF1	CRF2	CRF3

Note : Tick (✓) in the appropriate column when the appropriate forms are sent.
Keep a copy before sending to CSRU.

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 2002.
3. Exchanged of IOL to improve vision.

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
        - Date 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 –presenting visual acuity (with glasses if patient has glasses) , pin hole visual acuity (with glasses if patient has glasses) and refracted vision

    1.2. Send the first page to the CSRU at CRC and retain the carbon copy as part of patient medical record.

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
            - Name of surgeon and surgeon status
            - Operative date
            - Duration of operation
            - Type of admission
            - Type of surgery
            - Type of anaesthesia
            - Types of IOL
            - Type of viscoelastic material
        - Findings- Intra - Operative Complications

    2.2. Put the IOL sticker on the first page of Operative record
    2.3. Send the first page to CSRU and retain the carbon copy as part of patient medical record.

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

   i. The outcome form is filled by optometrists or doctors, where post op week, date of last refraction or recorded visual acuity is taken, last recorded refracted visual acuity and refractive power , in diopter power are recorded in section 2.

   ii. If the best recorded visual acuity is worse than 6/12, the possible factor for poor vision is recorded in section 3.

   iii. When post-op complication like infective endophthalmitis and unplanned return to OT within 1 week occurs, to record in section 1 of outcome form

   iv. If the patient is referred to another hospital for further management of complications following cataract surgery, then the referred hospital will fill the preclerking and the operative record. Whichever hospital performs refraction for this patient will fill the outcome form, write a note on the outcome form the date and Hospital where the cataract surgery was performed and send the outcome form to CSRU

   v. For patients who do not have refraction done within the postoperative period (12 weeks $\pm$ 2 weeks), the last unaided visual acuity / refracted vision should be recorded in the outcome form, even if it is post- operative day one.

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

   vii. The endpoint of follow-up is 12 weeks after surgery. This means that forms should be completed at the latest 12 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 12 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

CRF to be filled 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.

Contact Address

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

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

CASE REPORT FORM (CRF)

1. Per-Clerking Record Form
2. Operative Record Form
3. Cataract Surgery Outcomes Through 12 Weeks

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: _____

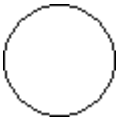
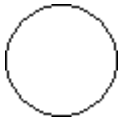
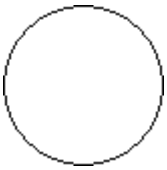
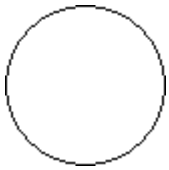
Systemic Comorbidity
(check ☑ one or more boxes below if present)
- ☐ None
- ☐ Hypertension
- ☐ Diabetes Mellitus
- ☐ Ischaemic Heart Disease
- ☐ Renal Failure
- ☐ Cerebrovascular accident
- ☐ COAD / Asthma
- ☐ Hansen's Disease
- ☐ Allergies
- ☐ Other, specify: _____

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:** _____	
CVS: _____	**Renal Profile:** _____	**Systemic:**
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
☐ Silicone
☐ Acrylic
☐ Other, specify: _____

17.Type:

☐ Foldable
☐ Non-Foldable

VISCOELASTIC MATERIAL

18. 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:

Compulsory to stick on the form for NCSR

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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 (dd/mm/yy) : ☐☐ ☐☐ ☐☐

Office use: ☐☐ / ☐☐☐

Centre: ☐☐☐

SECTION 1 : POST-OP COMPLICATIONS (Quality Assurance Indicators)

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

☐ **Infective endophthalmitis** — *(If Yes)* → **Date of Onset (dd/mm/yy):** ☐☐ ☐☐ ☐☐

☐ **Unplanned Return To OT**

(If Yes) →

Reasons	Check ☑ one or more boxes below	Date (dd/mm/yy)
a) Iris prolapse	☐	☐☐ ☐☐ ☐☐
b) Wound dehiscence	☐	☐☐ ☐☐ ☐☐
c) High IOP	☐	☐☐ ☐☐ ☐☐
d) IOL related	☐	☐☐ ☐☐ ☐☐
e) Infective endophthalmitis	☐	☐☐ ☐☐ ☐☐
f) Other, specify:	☐	☐☐ ☐☐ ☐☐

SECTION 2 : POST-OP VISUAL ACUITY MEASUREMENT

(Last recorded visual acuity within 12 weeks post-op period)

Post Operative Period	UNAIDED		REFRACTED (Record of refractive power in diopter is mandatory if refraction is performed)	
	Right	Left	Right	Left
Post-op ☐☐ **weeks** **Date:** ☐☐ ☐☐ ☐☐ dd mm yy				
Reason for no post-op visual acuity record (e.g. lost to follow-up, discharged by doctor, unable to take vision, etc)				

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

(check ☑ one or more boxes below if present)

☐ **High astigmatism**
☐ **Posterior capsular opacity**
☐ **Cystoid macular edema**
☐ **Infective endophthalmitis**
☐ **Preexisting ocular comorbidity, state what:** _____
☐ **Other, specify:** _____
☐ **Cornea decompensation**
☐ **IOL decentration / dislocation**
☐ **Retinal detachment**

Name: _____

Signature: _____ **Date(dd/mm/yy):** ☐☐ ☐☐ ☐☐ (Date when form is completed)

Note: Data definition is at overleaf of this form

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Data Definition

Data items	Definition
Iris prolapse	Protrusion of iris tissue at the surgical wound with or without iris incarceration
Wound dehiscence	Separation of surgical wound
IOL decentration / dislocation	Decentration – malposition of the IOL which may be associated with optical or structural complications Dislocation – dislocation of the IOL into the anterior chamber or into the vitreous cavity
Corneal Decompensation	Persistent corneal edema
High astigmatism	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
Retinal detachment	Presence of retinal detachment which was not seen preoperatively
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
Infective endophthalmitis	Post operative severe intra-ocular inflammation, due to infection, involving the ocular cavities and the adjacent structures without extension of the inflammatory process beyond the sclera .

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 accidents**
36.	Other ocular co-morbidity	
	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 co-morbidit	Any systemic disease, which have been diagnosed by medical doctors.
42.	Hypertension	
43.	Diabetes mellitus	
44.	Ischaemic Heart Disease	
45.	Renal failure	
46.	Cerebrovascular Accident	
47.	COAD/asthma	
48.	Hansen's disease	
49.	Allergies	

50.	Others, specify	
	Section 3:Visual acuity Measurement	at pre-op assessment
51.	**Right Presenting Visual Acuity (with/without glasses)**	
52.	**Left Presenting Visual Acuity (with/without glasses)**	
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)**	
56.	**Left refracted Visual Acuity (with/without glasses)**	
57.	**Planned refractive power (in Diopter, with + or – sign) (based on Ascan calculation)**	To be added in future . for CUSUM purpose) D
	CRF 2: Operative Record	**(RED FORM)**
	Operative data	
58.	Name of surgeon	
59.	Surgeon status	
60.	Name of assistant	
61.	Name of Scrub nurse	
62.	Date of operation	
63.	Time started	
64.	Time ended	
65.	Pre-op diagnosis	
66.	Type of admission	
	SURGERY	
67.	**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.
68.	Eye for operation	
69.	Type	Type of cataract surgery
	Combined surgery	
70.	Filtering surgery	
71.	Penetrating keratoplasty	
72.	Pterygium surgery	
73.	Vitreo-retinal surgery	

74.	Other, specify	
75.	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 subconjunctival 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.
76.	Type of sedation	Either GA or Local, if Local to check type of local . Check None if no sedation is given, If given sedation, to check type of sedation
77.	Intra-ocular lens (IOL)	
78.	If IOL yes	Posterior chamber, anterior chamber sclera fixated unplanned suturing of PCIOL
79.	If IOL no	IOL planned, but not implanted, no IOL planed or implanted
80.	Material	If IOL yes, check type of IOL material : PMMA Silicone Acrylic Others, specify
81.	Type	Check type : foldable non-foldable
82.	Viscoelastic Material	Check type : Healon plain Healon GV Healon 5 Viscoat Provisc Duovisc Other, specify
	Section 2: Findings Intra-operative Complications	
83.	None	No complication occur intra-operatively
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	
91.	IOL Sticker	Please stick IOL sticker at bottom of operative record
	CRF3 Cataract surgery outcome through 12 weeks post-op	**(GREEN FORM)**
	Hospital/Clinic	
	Patient Name	
	IC_No old/ new	
	Date of cataract operation (dd/mm/yy)	
	SECTION 1 : POST-OP COMPLICATIONS (QUALITY ASSURANCE INDICATORS)	
92.	Infective endophthalmitis	Post operative severe intra-ocular inflammation, due to infection, involving the ocular cavities and the adjacent structures without extension of the inflammatory process beyond the sclera and needed conservative treatment only. If yes, pleas record the date at the time of diagnosis
93.	**Unplanned return to OT**	**If yes, please state reason for patient to return to OT and record the date when patient returns to OT**
94.	**a) Iris prolapse**	**Protrusion of iris tissue at the surgical wound with or without iris incarceration**
95.	**b) Wound dehiscence**	**Separation of surgical wound.**
96.	**c) High IOP**	**Elevation in the intraocular pressure requiring anterior chamber washout.**
97.	d) IOL related	Any complication related to IOL that need operation. For e.g. -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** - IOL capture **-Exchange of IOL due to incorrect power** -ETC

98.	e) Infective endophthalmitis	Post operative severe intra-ocular inflammation, due to infection, involving the ocular cavities and the adjacent structures without extension of the inflammatory process beyond the sclera and needed surgical intervention.
99.	f) Other, specify:	
	SECTION 2: POST-OP VISUAL ACUITY MEASUREMENT	(Last recorded visual acuity within 12 weeks post-op period)
	Post Operative Period	
	Post-op ☐ weeks	By week following cataract surgery . For example : Post-op day — Week 0-7 — 1 8-14 — 2 15-21 — 3 22-28 — 4 29-35 — 5 etc
	Date : ☐ dd yy mm **(Date when VA is taken)**	Date of last refraction or visual acuity measurement by 12 weeks post-op
100.	**Right unaided visual acuity**	**Presenting visual acuity without any correction such as spectacles or contact lens**
101.	**Left unaided visual acuity**	**Presenting visual acuity without any correction such as spectacles or contact lens**
102.	**Right refracted visual acuity**	**Visual acuity assessed with refraction, either auto or retinoscopic refraction.** (Record of refractive power in diopter is mandatory if refraction is performed, cylinder power is always with minus sign . **)** **Spherical cylinder axis** ☐ ☐ ☐
103.	**Left refracted visual acuity**	**Visual acuity assessed with refraction, either auto or retinoscopic refraction** (Record of refractive power in diopter is mandatory if refraction is performed. cylinder power is always with minus sign **)** **Spherical cylinder axis** ☐ ☐ ☐

104.	**Reasons for no post-op visual acuity record (e.g. lost to follow-up, discharged by doctor, unable to take vision, etc.)**	
105.	Section 3: POSSIBLE FACTORS IF POST-OP REFRACTED VA WORSE THAN 6/12	
106.	**High astigmatism**	Presence of astigmatism of more than 3 diopters which was not noted preoperatively.
107.	Posterior capsular opacity	Presence of posterior capsule opacification which lead to reduction in visual acuity and impaired visualization of the fundus
108.	**Corneal Decompensation**	Persistent corneal edema
109.	**Decentered IOL**	Mal-position of the IOL, which may be associated with optical and structural complication. **Dislocation – dislocation of the IOL into the anterior chamber or the vitreous cavity**.
110.	**Retinal detachment**	Presence of retinal detachment, which was not seen preoperatively
111.	**Cystoid macular edema**	Presence of macular edema with the sign of irregularity and blurring o the foveal reflex, thickening with or without small intraretinal cyst in foveal region
112.	**Infective Endophthalmitis**	Post operative severe intra-ocular inflammation, due to infection, involving the ocular cavities and the adjacent structures without extension of the inflammatory process beyond the sclera
113.	Preexisting ocular co-morbidi state what	Preexisting ocular co-morbidity , which may or may not be noted before cataract surgery
114.	**Other, specify**	
115.	**Name**	
116.	**Signature**	
117.	**Date(dd/mm/yy)** (Date when form is completed)	