

**Cataract Surgery Registry**  
 Data Definition and Data Query  
 Version Feb 11 2009

Section	Domain	No	Data elements or variables	Data Definition	Core data?
				<b>CRF 1: Pre-Clerking Record</b>	
	Hospital/ clinic		Name of hospital	Name of hospital	Yes
	Date		Date	Date when the data are entered to web application	No
1	Patient particulars	1	Name	Full name of patient .System will make it capital letter	Yes
		2	Identification Card Number	Fill in MyKad/MyKid . If MyKad/ MyKid not available, please complete the Old IC or Other ID document No, such as Arm forces ID,Hospital MRN, Passport number.Do nto type in 'NA or not available.	Yes
		3	Address	Only postcode, town/city and state are required	No
		4a	Date of birth	Date of birth, auto-generate from MyKad/MyKid. If there is no MyKad/MyKid., to enter manually	Yes
		4b	Age at notification (in years) or (in months if <1 yr old)	Age by ___ year and ___ month Auto- calculated from the date of birth to the day of data entry If no MyKad orMyKid, to enter manually	Yes
		5	Gender	Male or female Counter check with MyKad	Yes
		6	Ethnic Group	Ethnic group of patient. Others include Punjabi ,Indonesian etc	Yes
2	Medical history	1.	Surgery on first eye or second eye	First eye. No cataract operation has been done to the fellow eye.  Second eye The fellow eye has had cataract operation done before	Yes
			If second eye , - Date of first eye surgery  -Intra-op complications (Yes or No)	If the cataract operation is for the second eye, give the date of operation for the first eye. If could not remember exact date, put as 1 <sup>st</sup> of June of that year.  Record if any complication during the first eye cataract surgery which might lead to ocular co-morbidity	No

		2.	Past ocular surgery of the eye to be operated		No
			None		
			Vitreoretinal surgery	Any posterior segment surgery	
			Penetrating keratoplasty	Corneal graft	
			Filtering surgery	Any surgery performed to promote the aqueous outflow in glaucoma	
			Pterygium excision		
			Others, specify		
		3	Cause of cataract	Cataract: Presence of opacity or clouding in any part of the lens (cortex, nuclear, capsule)	Yes
			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	Yes
			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	Yes
	Ocular co-morbidity	4.	Ocular co-morbidity in the eye to be operated	Any ocular diseases in the eye to be operated, which can lead to reduction in vision and visual function.	Yes
			None	No apparent ocular co-morbidity of the eye to be operated	
			a. Anterior segment		

		Pterygium involving the cornea	Presence of Pterygium involving the cornea	
		Corneal opacity	Presence of central corneal opacity within 4 mm diameter area of visual axis.	
		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	
		Chronic uveitis	Evidence of uveitis in anterior or posterior segment, with the following signs of inflammation: cell, flare, keratic precipitate, pigment on lens etc	
		Pseudoexfoliation	Obvious presence of pseudoexfoliation material in the anterior segment of the eye	
		Lens related complication		
		Phacomorphic	Phacomorphic glaucoma-Secondary angle closure glaucoma that occurs when a swollen intumescent cataract blocks the pupil	
		Phacolytic	Phacolytic glaucoma -Leakage of denatured lens proteins through an intact capsule and stimulates inflammatory reaction which can leads to secondary open angle glaucoma	
		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.	
		b. Miscellaneous		
		Amblyopia	Defective visual acuity which persists after correction of any refractive error and removal of any pathological obstacle to vision.	
		Significant previous eye trauma	Ocular trauma which leads to visible damage to the cornea, iris , lens and retina	
		Preexisting non glaucoma field defect ( e.g. CVA)	Visual field defect resulting from neurological disorders such as cerebrovascular accidents	
		C. Posterior Segment		
		Diabetic retinopathy		
		Non-Proliferative Diabetic	Non-proliferative diabetic retinopathy – Background DR	

			retinopathy		
			Proliferative Diabetic retinopathy	Proliferative diabetic retinopathy- presence of neovascularization at the disc or elsewhere, or presence of vitreous haemorrhage.	
			Maculopathy	Maculopathy means 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.	
			Vitreous haemorrhage	Presence of any bleeding in the vitreous cavity	
			ARMD	Age related macular degeneration- Presence of drusen and /or choroidal neovascularisation within one disc diameter from the center of fovea.	
			Other macular disease( includes hole or scar)		
			Optic nerve disease, any type	Presence of non-glaucomatous optic nerve diseases, e.g. optic atrophy, AION etc	
			Retinal detachment	Presence of existing retinal detachment	
			Cannot access	No view of fundus due to presence of media opacity including dense cataract	
			Other ocular co-morbidity , specify		
	Systemic co-morbidity	5.	Systemic co-morbidity	Any systemic disease, which have been diagnosed by medical doctors.	Yes
			None		
			Hypertension, Diabetes mellitus, Ischaemic Heart Disease, Renal failure, Cerebrovascular Accident COAD/asthma		
			Others, specify		

3	Visual acuity Measurement		Pre-operative vision ( for operated eye only)	Visual acuity measured with Snellen Chart at pre-op assessment	Yes
			Unaided vision	Vision is recorded as: : 6/6, 6/12, 6/18, 6/24., 6/36, 6/60, 1/60, 2/60, 3/60, 4/60,5/60, 6/60, CF, HM, PL, NPL Patients who wear glasses may not have unaided vision , enter vision with glasses.	
			With glasses/ pin hole	For patients who wear glasses or patients with unaided and pin hole vision	
			Refracted	Refracted vision	
			Refraction	Sp= spherical, SP has either +/- sign Cy= cylinder, CY is recorded with minus sign	
4	Surgical plan (Do not need to enter into NED)		Date of admission Date of operation Operation IOL detail Pre-op instructions	This information is to be filled on hard copy CRF for hospital that uses preclerking form as medical record. Do not need to enter into NED	
5	Planned refractive power		Planned refractive power (In Diopeter with + or _ sign)	Doctor will decide based on A scan print out, recorded in diopter power , with plus or minus sign ( usually minus ). The common values is between -0.0 (plano) to -0.5 D	
				<b>CRF 2- OPERATIVE DATA</b>	
				<b>Suggest to key in to web application Preclerking and operative record at the same time. If not, search patients by IC</b>	
	Hospital/ clinic		Name of hospital	Name of hospital	Yes
	Patient name				Yes
	IC Number				Yes
1	Operative data	1	1a. Surgeon status	Code 1= Specialist, 2= Gazetting Specialist, 3= Medical officer	Yes
			1b. Name of surgeon	Surgeons' names are in pull down list, cannot enter by free text. If new doctor join the department, site coordinator must inform NED secretariat to add in his full name, based on what appear on MyKad.	Yes
		2	Type of admission	day care in-patient	Yes
		3	Date of cataract operation	Date the operation is done.	Yes
		4	4a Time	Time started and Time ended of surgery	Yes
			4b. Duration of	Auto- calculated if time start and time end is entered	Yes

			cataract surgery		
		5	Surgery		Yes
			5a. Operative Eye	Pull down R= right eye , L= left eye	Yes
			5b. Type of surgery	Choose only one : Phacoemulsification. ECCE, Phaco converted to ECCE, ICCE , lens aspiration Others, specify	Yes
			5c. Combined surgery	When the cataract surgery is performed together with another type of ocular surgery such as Pterygium surgery, filtering surgery, , Vitreo-retinal surgery, Penetrating keratoplasty and other, specify	No
		6	Anaesthesia		Yes
			6a. Type of anaesthesia	Choose either GA or Local	Yes
			Local Anaesthesia	If Local , check type of local .  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. Subtenon - Injection of local anaesthesia into the subtenon space Facial block - Injection of local anaesthesia to paralyze the zygomaticofacial branches of seven cranial nerve either by O'Brien or Van Lints method  Topical –instilling topical anaesthetic eye drop into patients conjunctival sac	Yes
			Sedation	Type of sedation – Choose either: none, oral, intravenous, intramuscular	Yes
			7. Intra-ocular lens (IOL)		Yes
			a. IOL If IOL yes	IOL placement ,either : posterior chamber IOL anterior chamber IOL sclera fixated PCIOL	Yes
			If IOL no	If no IOL is implanted, choose  IOL planned but not implanted No IOL planed or implanted Other, specify	
			b. IOL Material	If IOL yes, check type of IOL material :	Yes

				PMMA Silicone Acrylic Others, specify	
				If Acrylic, whether it is hydrophilic or hydrophobic	Yes
			c. Type of IOL	Check type : foldable non-foldable	Yes
		8	Intra-operative Complications		Yes
			None	No complication occur intra-operatively	
			Posterior capsule rupture	Tear in the posterior capsule with intact anterior vitreous space.	
			without vitreous loss	Disinsertion of the zonule from the capsular bag with vitreous loss	
			Zonular dehiscence	Disinsertion of the zonule from the capsular bag without vitreous loss	
			Drop nucleus	Drop of part or whole nucleus into the vitreous cavity during cataract surgery	
			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	
			Central corneal edema	Significant cornea edema centrally involving the visual axis	
			Other, specify		
			<b>CRF 3.</b>	<b>Cataract surgery outcome through 12 weeks post-op</b>	
				<b>Identify patient by doing patient listing for outcome form not submitted , or by search using patient's IC /MyKad</b>	
			Hospital/ clinic	Name of hospital	Yes
			Patient name		Yes
			IC Number		Yes
			Date of outcome notification	Date when patient came for last post- op visit within 12 weeks post- operation. This form can also be filled when patient has stable vision and are for discharge before 12 weeks post- operation.	
			Date of operation	Date of operation	
1	Treatment outcome	1	Post-Op Complications	Serve as Key performance indicator	
		a	None	No apparent post- operative complication of any type noted	Yes
		b	Infective endophthalmitis	Post operative severe intra-ocular inflammation, due to infection, involving the ocular cavities and the adjacent structures without extension of the inflammatory	Yes

				process beyond the sclera and needed conservative treatment only. If yes, date at the time of diagnosis	
		c	Unplanned return to OT	If yes, identify one of the reasons for patient to return to OT and record the date	Yes
			a) Iris prolapse	Protrusion of iris tissue at the surgical wound with or without iris incarceration	
			b) Wound dehiscence	Separation of surgical wound.	
			c) High IOP	Elevation in the intraocular pressure requiring anterior chamber washout.	
			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	
			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.	
			f) Other, specify:		
2	Post-op visual acuity measurement	2	Post-op visual acuity measurement	( Last recorded visual acuity within 12 weeks post-op period or BCVA recorded during last Refraction through 12 weeks)	
			a. Post Operative Period Date dd/mm/yy  Post- op weeks	Enter date of vision or refraction being done.  System will auto- calculate the weeks upon data entry to the website	Yes
			Post- op visual acuity	Last recorded vision within 12 weeks after surgery. It can be any time earlier than 12 weeks as long as vision is stable.	Yes
.			b. Unaided	Unaided visual acuity without any correction such as	Yes



		vision ( to be filled in both eyes)	spectacles or contact lens . pull down : 6/6, 6/12, 6/18, 6/24., 6/36, 6/60, 1/60, 2/60, 3/60, 4/60,5/60, 6/60, CF, HM, PL, NPL	
		b. With glasses /pin hole ( to be filled in both eyes)	Visual acuity assessed with pin hole or with glasses if patient wears them.	Yes
		c. Refracted vision ( to be filled in both eyes) d.	Refracted vision	Yes
		Refraction findings ( to be filled in both eyes)	Record of refractive power in diopter is mandatory if refraction is performed. Cylinder power is recorded with minus sign.	Yes
		e. No record of post- op vision	If yes, click reason for no post- op visual acuity recorded	Yes
		f. Reasons for no post-op visual acuity record	Options : Lost to follow-up discharged by doctor unable to take vision or specify other reason etc.	Yes
			Factors If Post-Op Refracted VA is Worse Than 6/12 (for operated eye only)	Yes
		High astigmatism	Presence of astigmatism of more than 3 diopters which was not noted preoperatively.	
		Posterior capsular opacity	Presence of posterior capsule opacification which lead to reduction in visual acuity and impaired visualization of the fundus	
		Corneal Decompensation	Persistent corneal edema	
		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 into the vitreous cavity.	
		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 intra-retinal cyst in the foveal region	
		Infective	Post operative severe intra-ocular inflammation, due to	

		Endophthalmitis is	infection, involving the ocular cavities and the adjacent structures without extension of the inflammatory process beyond the sclera	
		Preexisting ocular co-morbidity, state what	Preexisting ocular co-morbidity , which may or may not be noted before cataract surgery	
		Other, specify		