



STANDARD
LIST

IAPB ESSENTIAL LIST for Cataract Surgery

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INTRODUCTION

Cataract remains the major cause of treatable blindness. The Essential List for Cataract Surgery contains recommendations of essential and desirable items to perform quality surgery. The use of the 'cataract surgical outcomes' monitoring tool is also recommended to ensure quality.

<http://www.cehjournal.org/resources/monitoring-cataract-surgical-outcomes/>

This list offers suggestions for surgical equipment and instruments required for Extracapsular Cataract Extraction (ECCE), also the additional pieces required for Manual Small Incision Cataract Surgery (MSICS) and Phacoemulsification procedures. Also included are: pharmaceuticals and consumables, and equipment for diagnosis, sterilization and refraction after surgery. These have been calculated for 1,000 cataract cases per annum at a base hospital. Quantities can be easily adjusted for different caseloads. This list provides additional general guidelines to facilitate planning/budgeting. Please note, however, all responsibilities for decisions remain entirely with ophthalmologist, programmes and partners.

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- Dr Vivek Ramakrishnan, Medical Officer Cataract Clinic, Aravind Eye Care System
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- Dr R  n  e du Toit, Independent Eye Health Consultant
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- Dr Robert Lindfield – Clinical Lecturer in Public Health Ophthalmology, ICEH UK
- Yuddha Dhoj Sapkota – Regional Coordinator, IAPB South East Asia

Note: Some items are not currently included on the new Standard List, but will be added in due course.



Description	Standard List Category or Locally Purchased (L)	Essential (E) or Desirable (D)	Quantity Required
DIAGNOSTIC EQUIPMENT			
Slit Lamp	Diagnostic/ Slit Lamps/Static	E LED if possible	1
Stand and table top for Slit Lamp		E	
60D, 78D or 90D lens for slitlamp	Diagnostic/ Diagnostic Ophthalmic Lenses/Fundus Lenses	E	2
Observer tube for Slit Lamp		D	1
Binocular Indirect Ophthalmoscope with Case	Diagnostic/ Ophthalmoscopes/Indirect	E LED if possible	2
20D or 28D lens for Indirect Ophthalmoscope	Diagnostic/Diagnostic Ophthalmic Lenses/ Fundus Lenses	E	2
Observer mirror/wireless capability for digital imaging for Indirect Ophthalmoscope		D	1
Direct Ophthalmoscope		E LED if possible	2
Spare Bulbs for non LED equipment		Not required if LED	4 pcs for one year
Ultrasonography (A or A/B scan)	Diagnostic/Biometry	E all in one or separate	1
Keratometer	Diagnostic/Biometry/ Keratometers	E	1
Autorefractor/keratometer	Diagnostic/Biometry/ Autorefractometers/ Keratometers	D	1
Applanation Tonometer	Diagnostic/Tonometers/ Intraocular Pressure Measurement/Applanation	E e.g. Goldmann	1
Gonio lens (single, three or four mirror)	Diagnostic/Diagnostic Ophthalmic Lenses/ Goniocopy lenses	E lenses with only 1 mirror, the lens must be rotated to view the entire angle	2
Examination Loupe x 2.5 Magnification		E	2
Surge Protector		E	For all electrical equipment
Voltage Stabiliser.		E	For all electrical equipment
SURGICAL EQUIPMENT			
Portable Operating Microscope (OM)	Surgical/Treatment/ Operating Microscopes/ Portable	E LED if possible	2
Floor Stand for microscope		E	2
Observers Tube for OM		D	1

Description	Standard List Category or Locally Purchased (L)	Essential (E) or Desirable (D)	Quantity Required
Portable Operating Lamp with stand	Surgical/Treatment/Operating Lights	E LED if possible	2
OM Spare Bulb and Fuse Pack		Not required if LED	5
Spare Bulbs for lamp		Not required if LED	4
Electric Cautery (with cautery leads, forceps)		E	2
Vitrectomy Machine (with Infusion, Vitrectors, Case)	Surgical/Treatment/Anterior Vitrectomy Equipment	E	1
Spare Disposable Vitrectors		E	10
Operating Pillow		E	2
Eye Pressure Reducer		E	2
Instrument trolley		E	5
Kidney Bowl 0.5L		E	5
Gallipots		E	5
Operating Table		E	2
Operating Chair		D	2
OT Linen (Gown, Table Cloth, Eye Towel, Cap, Mask, Patient Gown, Hand towels etc)		E	
STERILISATION EQUIPMENT			
Autoclave - Horizontal or vertical	Surgical/Treatment/Autoclaves	E	1
Bench top sterilizer/autoclave	Surgical/Treatment/Autoclaves/Static	E	2
Timer (if not built in to autoclave)			1
Portable autoclave	Surgical/Treatment/Autoclaves/Portable	E For outreach	1
Cheatle Forceps		D large forceps to handle sterilized materials	2
Sterilizing Drums		E	4-8
Instrument Soaking Tray 210 x 130mm		E	5
Instrument Sterilizing Boxes, Lid and Silicone Mat		E	10
Distilled water unit for sterilizers		E	1
Spirit Lamp with Wick		E to sterilize glass rods for cautery may not be required if electric cautery system is used	2
SURGICAL INSTRUMENTS			
<i>ECCE SURGICAL SET IN METAL STERILISING BOX (10 SETS)</i>			
Forceps			
Forceps, for wet field electric cautery (Unipolar and Bipolar)		E	10
Forceps, Superior rectus, <i>Landolts</i>		E	10

Description	Standard List Category or Locally Purchased (L)	Essential (E) or Desirable (D)	Quantity Required
Forceps, Fixation		E	10
Forceps, Toothed <i>Moorfields</i>		E	10
Forceps, Non-Toothed <i>Moorfields</i>		E	10
Forceps, Mosquito, curved		E	10
Forceps, Mosquito, straight		E	10
Forceps, Corneal, 0.12mm Atraumatic Tips, Angled with Tying Platform		E	10
Forceps, Corneal, 1x2 Teeth, 0.12mm, with 6mm Tying Platform		E	10
Forceps, suture tying, cilia or Birks		E	10
Forceps, Lens Introducing, Angle to Tip 8-12mm, Smooth Jaw <i>Kellman McPherson</i>		E	10
Forceps, Capsulorhexis, Angle to Tip 11mm, Sharp Tip to use as a Cystotome, <i>Utrata</i>		E	10
Needle holders			
Needleholder, Straight for 4/0, 5/0, 6/0 or 7/0 Suture		E for larger sutures	10
Needleholder, Curved or Straight, overall length 10-11mm, Jaws 8mm, for 8/0 to 10/0 Suture		E for fine sutures	10
Blades and handles			
Troutman blade handle		E	10
Razor Fragments OR blade slit knife (disposable)		E	100
Blade, disposable keratomes		E	100
Blade, disposable Crescent (bevel up)		E	100
Super blade 15 Degree		E	100
Scissors			
Scissors, Conjunctival, <i>Westcotts</i>		E	10
Scissors, Corneal Section (Corneoscleral), 10mm blades		E	10
Scissors, Angled, 10mm, Extra thin Blades, Barraquers		E	10
Scissors, iridectomy, <i>De-Wecker's</i> OR <i>Vannas</i>		E	10
Scissors, Capsulotomy, fine		E	10
Scissors, iris, sharp pointed		E	10
Ordinary Scissors		E (for cutting big sutures and threads)	10
Cannulae			
Cannula, Rycroft 30 gauge		E	10
Cannula, Air Injection, 27G Angle to Tip 5mm		E	10
Cannula Visco-Elastic, 22G, Angle to Tip 10mm		E	10
Cannula, Simcoe, Irrigating/Aspirating, 23G, Angled, aspiration through top opening, 15mm		E	10

Description	Standard List Category or Locally Purchased (L)	Essential (E) or Desirable (D)	Quantity Required
Cannula, Irrigating Vectis, Three Ports 23G		E	10
Other			
Kuglen Iris Hook and Lens Manipulator		E	10
Sinsky hook straight or angled		E	10
Lens expressor		E	10
Iris Spatula or repositor <i>Nettleship</i>		E	10
Vectis, Lens Loop or wire, <i>Snellen</i>		E	10
Muscle Hook or squint hook <i>Graefe</i>		E	10
Cautery Ball or electric cautery		E	10
Calipers 1-20mm in 1mm Increments		E	10
Speculum, 12mm Blade (Adult and child)		E	10
Speculum, Barraquer's, Weiss or wire speculum, adjustable		E	10
Towel clip, cross action		E	10
SICS – ADDITIONAL INSTRUMENTS (5 SETS)			
Keratome (bevel up) 2.7-3.5mm	Surgical/Treatment/Surgical Eye Instruments/Knives	E	5
Knife: Slit/Keratome, Angled 3.2mm (bevel up)	Surgical/Treatment/Surgical Eye Instruments/Knives	E	5
Knife: Crescent, Angled, 2.5mm (bevel up)	Surgical/Treatment/Surgical Eye Instruments/Knives	E	5
Knife: MVR 19G	Surgical/Treatment/Surgical Eye Instruments/Knives	E	5
Knife: 15 Degree Stab	Surgical/Treatment/Surgical Eye Instruments/Knives	E	5
Metal Handle for the above Single Use Knives or Purchase Knives and Handle Combined	Surgical/Treatment/Surgical Eye Instruments/Knives	E	5
PHACO – ADDITIONAL EQUIPMENT AND INSTRUMENTS			
Phacoemulsification Machine	Surgical/Treatment/Phacoemulsification Equipment	E	1
Phaco Hand Piece, tip and accessory pack with silicone sleeve		E	1
Irrigation- Aspiration tip (co-axial)		E	2
Bimanual irrigation hand pieces		E	2 sets
Keratome (bevel up) 2.7-3.5mm	Surgical/Treatment/Surgical Eye Instruments/Knives	E	1
Knife, MVR 19G	Surgical/Treatment/Surgical Eye Instruments/Knives	E	10
Phaco chopper		E	10
Spatula, fine iris		E	10
Forceps, IOL folding and inserting		E	10
Blades (included in sets)			

Description	Standard List Category or Locally Purchased (L)	Essential (E) or Desirable (D)	Quantity Required
CONSUMABLES			
Needles			
Needle, 23g, 30-35mm long	Consumables/Syringes/Needles	E retrobulbar block	1000
Needle, 26g	Consumables/Syringes/Needles	E peribulbar block	1000
Needle, 27g	Consumables/Syringes/Needles	E for cystitome – bend manually	1000
Needles, superior rectus, for 5/0 cutting silk		E	20 pkts (12 pcs)
Cutting Eye Needles for Lid Surgery		E	10 pkts (12 pcs)
6/0 Vicryl spatulated Cutting Needle 20mm		E	10 pkts (12 pcs)
Syringes			
5ml disposable syringes leur lock	Consumables/Syringes/Needles	E BSS, simco, aspiration	500
2ml disposable syringes leur lock	Consumables/Syringes/Needles	E viscoelastics	500
1ml disposable syringes leur slip	Consumables/Syringes/Needles	E adrenaline, trypan blue and pilocarpine	500
Sutures			
9/0 Nylon double armed sutures spatulated needles	Consumables/Sutures	E	50 boxes (12 pcs)
10/0 Nylon double armed sutures spatulated needles	Consumables/Sutures	E	50 boxes (12 pcs)
4/0 Black Braided Silk on a Reel	Consumables/Sutures	E	1 reel 1000m
Prolene 5/0, double armed with spatulated needles	Consumables/Sutures	E for lid surgery	10 boxes (12 pcs)
IOLS			
IOLs 19 – 21D, Single Piece with Dialling Holes (0.50D increments)	Consumables/IOLs/PMMA Posterior Chamber	E	200
IOLs 21 – 23D, Single Piece with Dialling Holes (0.50D increments)	Consumables/IOLs/PMMA Posterior Chamber	E	800
IOLs 24 – 25D, Single Piece with Dialling Holes (0.50D increments)	Consumables/IOLs/PMMA Posterior Chamber	E	200
AC Lenses 19D Three or Four Point Fixation	Consumables/IOLs/PMMA Anterior Chamber	E	50
Capsular tension ring (11mm)	Consumables/Ancillary Supplies for IOL Surgery	E	50
Other			
1mm Silicone tube		E to connect simcoe cannula and syringe	10m

Description	Standard List Category or Locally Purchased (L)	Essential (E) or Desirable (D)	Quantity Required
Rolls of Protective Silicone Tubing		E for delicate instrument tips	10m
Eye Drape (125cm)		E	1000
Eye Drape small (25cm)		E	500
Gloves (different sizes 7-8.5)	Consumables/Gloves	E	2000
Leukoplast adhesive tape 10cm		E	500
Gauze Rolls		E	500m
Triangular Swabs (Microsponges)		E	5 pkts (500pcs)
Sterilization			
Autoclave Tape/Steam indicator roll		E	500m
Biological indicator		D (steam sterilization)	500
Chemical indicator		E (steam sterilization)	500
PHARMACEUTICALS			
Antiseptics			
Povidone Iodine Aqueous Solution 10% (200ml)	Pharmaceuticals/Antibiotics	E	200 bottles
Antiseptic hand scrub minimum 70% alcohol (500ml)	L	E	200 bottles
Scrubbing Brush	L	E	6pcs (one per user)
Antiseptic handwash solution (500ml)	L	E	200 bottles
Perasafe sterilizing powder 81g	L	E for outreach, not for base hospital	50 bottles
Disinfectants			
Isopropyl alcohol 70% minimum		E	20 litres
Sodium hypochlorite		E	20 litres
Chlorhexidine aqueous 0.5%		E	10 litres
Drops			
Proparacaine 0.5% 5ml	Pharmaceuticals > Local Anaesthetic Preps	E	200
Tropicamide + Phenylephrine 5mls	Pharmaceuticals > Mydriatics/Dilating Drops	E	200
Atropine 1% 5ml	Pharmaceuticals > Mydriatics/Dilating Drops	E	100
Lidocaine 2% + Adrenaline 1:100,000, 50ml		E	50 vials
Hyaluronidase 1500 IU	Pharmaceuticals/Others	E	50 amps
Gentamicin 0.3% + Dexamethasone 0.1%, 10ml	Pharmaceuticals/Antibiotics/Steroids/Anti-Inflammatory Combo Drops	E	1500
Ciprofloxacin 0.3% 5ml	Pharmaceuticals > Antibiotics	E	500

Description	Standard List Category or Locally Purchased (L)	Essential (E) or Desirable (D)	Quantity Required
Ointment			
Ciprofloxacin with Dexamethasone 10mg 5mg		E	100
Injectables			
Vancomycin 1 gm powder in bottle	Pharmaceuticals > Antibiotics	E	20 bottles
Ceftazidime 1gm powder in bottle	Pharmaceuticals > Antibiotics	E	20 bottles
Cefuroxime 750mg or 250mg powder in bottle		E (prefer 750mg)	500 bottles
Dexamethasone Sodium Phosphate 4mg/ml Injection	Pharmaceuticals > Steroids/Anti-Inflammatories	E	500 vials
Pilocarpine Nitrate Injection 0.5%, 1ml	Pharmaceuticals > Miotics/Glaucoma Preps	E	50 amps
Methycellulose HPMC in prefilled Syringes with Cannula 2ml	Consumables/Ancillary Supplies for IOL Surgery	E	1500 pcs
Trypan blue 0.06% 1ml	Consumables/Ancillary Supplies for IOL Surgery	E	100 vials
Adrenaline 1mg/1ml vial	Pharmaceuticals > Mydriatics/Dilating Drops	E	500
Ringers Lactate 500ml		E	500
REFRACTION AFTER SURGERY			
Retinoscope		E LED if possible	5
Spare Bulb for Retinoscope		Not required if LED	1 pack
Cross Cylinder 0.5		E	5
Trial Frame, Adult		E	5
Auto-refractor-keratometer	Diagnostic/Biometry/ Autorefractometers/ Keratometers	D	1
Focimeter	Refractive Services/ Lensmeters	E	1
Distance and near vision charts, E charts		E	5
Trial frame, children		E	5
Children's vision charts		E	5
Readymade spectacles for adults (custom made preferable for children)			
+2.50 +3.00DS		E If biometric measurements and IOL calculation are correct, most will only require spectacles for near	900
+1.00, +2.00DS		E	50
-1.00, -1.50, -2.00DS		E	50

Resources

Publication/Manual	Published by	Where available
Ophthalmic operating theatre practice: A manual for lower-resource settings. 2nd Ed.	Machin, Heather	Community Eye Health Journal
Monitoring Cataract surgical outcomes, 2005, Author: Limburg H	ICEH	http://www.cejjournal.org/article/monitoring-cataract-surgical-outcomes-methods-and-tools/
Aravind ECCE SICS teaching series		CBM standard list
Care of Ophthalmic Surgical Instruments (I Cox & S Stevens) Control of Infection in Ophthalmic Practice (S Stevens) Sterilization and Disinfection (I Cox & S Stevens)		JCEH

WORKING TOGETHER TO ELIMINATE AVOIDABLE BLINDNESS

IAPB's ESSENTIAL LISTS identify equipment and consumables considered essential, minimum requirements to perform high quality eye health interventions. IAPB produces these lists in collaboration with leading experts from around the world and updates them from time to time.



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London School of Hygiene and Tropical Medicine
Keppel Street, London WC1E 7HT, England, UK

Tel: +44 (0)20 7927 2973 Fax: +44 (0)20 7958 8325 Email: communications@iapb.org

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