



**STANDARD  
LIST**

# **IAPB ESSENTIAL LIST**

## **for Trachomatous Trichiasis Screening and Surgery**

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## INTRODUCTION

IAPB considers appropriate information as a vital resource in improving eye health in developing countries. In resource-constrained settings especially, procurement decisions can play an important role in ensuring that a maximum number of people have equitable access to quality services, the investment makes a satisfactory social return and significantly enhances the quality of life of the beneficiaries.

The IAPB consults a panel of experts with considerable experience in resource-constrained settings, to identify good practice and assist with the compilation of **Essential Equipment Lists**. Armed with IAPB's essential lists, NGOs, Ministries of Health, District health services, eye clinics and hospitals in developing countries can plan and purchase inventory which will support the delivery of high-quality care and enhance health outcomes.

Trachoma is the world's leading infectious cause of blindness, and is particularly common in the most vulnerable populations. Surgery for trachomatous trichiasis (TT) is one of the components of the WHO SAFE (Surgery, Antibiotics, Face Washing, and Environment) strategy to address trachoma. This list offers suggestions for the minimum essential and desirable items required to screen for trachoma and perform high quality Trabectome or Bilamellar Tarsal Rotation (BLTR) surgery under conditions prevalent in most endemic areas. The List reflects the procedures and requirements outlined in WHO documents *Trichiasis Surgery for Trachoma (second edition, 2015)* and is aligned with the conclusions and recommendations from the International Coalition for Trachoma Control *preferred* practices and the second Global Scientific Meeting in Trachomatous Trichiasis (December 2015).

The List provides general guidelines to facilitate planning / budgeting: recommends the amount needed per patient or eye care provider and indicates the typical quantity packaged for sale. To calculate the quantities required the Morbidity Management & Disability Prevention Project (MMDP) has developed a TT management procurement calculator (current version here: <http://www.mmdpproject.org/resources/trachoma> – scroll down the list to find the management procurement calculator).



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Description	Standard List Category or Locally Purchased (L)	Essential (E) or Desirable (D)	Quantity Required
<b>SCREENING FOR TRACHOMA</b>			
Torch or Arclight or Wilson Smart Torch Magnifier with LED		E <i>A focussed light source, preferably with magnification</i>	One per screener
<b>NON-SURGICAL MANAGEMENT OF TT</b>			
Epilation forceps: reasonable cost high quality durable frames and rounded tips with non-cutting opposing edges		E <i>Provide, with proper counseling and epilation training, to people with minor TT who refuse surgery</i>	One per staff and to give to patients counseled
<b>SURGICAL EQUIPMENT</b>			
Binocular 2.5x Loupe (8 inch focal length)		E D internally illuminated device	1pc per surgeon
Kidney Dish 0.5L 250mm x 36mm		E	2pcs
Galley Pot		E	1pc
<b>STERILISING EQUIPMENT</b>			
Autoclave or Pressure Cooker		E	1pc
Autoclave drums to fit inside autoclaves		E	3 pcs at least for drapes instruments surgeon supplies (cap, mask, gown)
Kerosene stove		E <i>Rural areas where there is no electric power or there is power failure.</i>	1/TT surgery team
Stainless Steel Sterilization Case (large)		E per TT set	1pc per surgeon/set
Wash basins		E decontamination/ washing/rinsing prior to sterilization	3pcs
<b>SURGICAL INSTRUMENTS – for both Trabut and Bilamellar Tarsal Rotation (BLTR) Surgery</b>			
Toothed forceps with 0.5mm teeth, E.g. St Martins		E	1pc
Serrated forceps E.g. Castroviejo		E D: with tying platform	1pc
Small haemostat forceps ('mosquitos') Straight		E for securing drapes	1pc
Needle holder (with or without catch) e.g. Barraquer/Castroviejo/Troutman/Silcock Needleholder		E	1pc
Scalpel Handle No 3		E	1pc

<b>SURGICAL INSTRUMENTS – Additional instruments for Trabut surgery</b>			
Trabut Lid Plate		E	1pc
Scissors Straight (strabismus)		E	1pc
<b>SURGICAL INSTRUMENTS – Additional instruments for Bilamellar Tarsal Rotation (BLTR) Surgery</b>			
TT-clamp or Waddell clamp A range of clamp sizes for different eyelid sizes <i>to use the largest and have smaller clamps available until the maximum that will fit is reached</i>		E In every TT set: include the size most commonly used in the region and one larger D At least three sizes available at outreach (most common size, larger and smaller)	
Scissors (eg Westcotts curved tip spring scissors)		E	1pc
Trabut lid plate		D	1pc
<b>Consumables</b>			
Scalpel Blades no 15		E <i>One blade per eyelid</i>	1 pack: 100pcs
21G Sterile Disposable Needles		E One needle per patient, plus one per surgery day to remain in lidocaine bottle.	1 pack: 100pcs
5ml Sterile Disposable Syringe		E <i>If kept sterile, one syringe can be used for both eyes of the same patient under outreach conditions</i>	1 pack: 100pcs
4/0 Vicryl coated sutures with 3/8 circle 19mm reverse cutting needle attached		E Does not necessarily need to be double-armed. For BLTR: One double-armed suture required for one patient. For Trabut: 2 sutures required for unilateral procedures. 3 sutures required for bilateral procedures <i>everting suture typically can be reused on second eyelid.</i>	1 pack: 12pcs.

<b>Consumables – Continued</b>			
4-0 Black Braided Silk Suture with mounted single armed 3/8 circle 19mm reverse cutting needle. <i>Reverse cutting needle may decrease the likelihood of sutures pulling through tissue margin that may occur if cutting needles are incorrectly used or with a lot of force</i>		E <i>Less expensive alternative to Vicryl</i>	1pack: 12pcs
Gauze Roll 90cm x 91m		E <i>Gauze roll to be folded into gauze pads by staff. Approximately 6-8 pads used per eyelid.</i>	1 roll
Zinc Strapping 1.25cm or 2.5cm x 5m		E <i>Approximately 3 10cm pieces are used per eyelid.</i>	5m 10 rolls: pack
<b>CONSUMABLES – Surgeon/operating field asepsis</b>			
Trolley towel		E	
Soap/ hand sanitizer <i>Surgeons scrub using soap and running water only is currently recommended because brushes may cause micro abrasions</i>	L	E	
Non sterile gloves (Examination)		E	
Sterile surgical gloves Most common sizes are 7 and 7.5 keep a mix of sizes when multiple surgeons are involved to ensure use of appropriate glove size that fits the individual surgeon		E <i>If kept sterile, one pair of gloves can be used for both eyes of bilateral patients. Gloves to be changed between patients.</i>	1 pack: 50prs
Mask and cap for surgeons	L	E <i>Same cap and mask can be used throughout one day of surgery</i>	1 pack
Sterile – reuseable or disposable – gown for surgeons to ensure that sterile suture does not come accidentally in contact with the shirt of the surgeon		E	1 drape <i>Depending on the number of patients per day: two in the morning and one in the afternoon</i>
Sterile Drape –disposable, made of sterilized paper		Alternative to the sterile cotton drape	
Sterile Drape – made of cotton approx. 1x1 metre, with a central hole approx 6cm diameter. <i>This size hole gives enough exposure of the surgical site without unnecessarily exposing for e.g. the nose</i>	L	E 1 per patient	1 drape.

<b>CONSUMABLES – Health and safety</b>			
Chlorine solution Strong disinfectant	L	E	
Detergent powder and brush	L	E <i>for cleaning the surgical area and instruments prior to sterilization</i>	
Sharps box Containers/plastic bags to separate the other waste can be useful	L	E <i>1 per surgeon at each surgery location. The total number depends on – surgeon productivity – the number of services planned during the period the procure</i>	
<b>PHARMACEUTICALS – for use during surgery</b>			
Amethocaine hcl 0.5% or Tetracaine 0.5% Eye Drops (or similar)		E One 10 ml bottle for about 100 eyes (2 drops per eye)	1 bottle: 10ml
Lidocaine 2% hcl + adrenaline (1:100000 epiniphrine)		E One 50 ml bottle for about 20 eyes	1 bottle: 50ml
Lidocaine		E for patients with high blood pressure	
Povidone Iodine 10% Solution		E Approximately 30-60 ml per eye for Skin Preparation	1 bottle: 200ml
70% Alcohol mainly used for disinfection of the surgeon's hands after the surgical scrubbing.	L	E	1 bottle: 1000ml
Sterile Distilled Water or normal Saline	L	D	1 bottle: 1000ml 1ltr/30lids

<b>PHARMACEUTICALS – Post-operative</b>			
Azithromycin Tabs 250mg for the reduction of infection and risk of post-op TT recurrence		E Around TT surgery give one dose of Azithromycin tablets (4 tabs per adult)	Unit: 1 Bottle of 500 tabs Blister packs of 4tabs are available to purchase outside of the donation programme. <i>National programs can apply to the International Trachoma Initiative (ITI) and include it into their annual drug donation programme requests</i>
Tetracycline 1% Eye Ointment or Chloramphenicol 1% Eye Ointment for the general prevention of postoperative infection		D Antibiotic ointment is applied once at the end of the operation before the operated eye is patched.	1 pack: 25 x 5g tubes 1 tube of per patient. Only give tube to patient if azithromycin is not being used.
Paracetamol		E pain relief for patients post-surgery. Recommend 2 doses per patient.	

# Training and Reference Resources

Resource/Publication/Manual	Published by	Where available
<b>Training/reference resources for screening and grading of trachoma</b>		
Overview of Trachoma	Medscape e-medicine	<a href="http://bit.ly/19wir1s">http://bit.ly/19wir1s</a>
Trachoma Toolkit – Implementing the SAFE Strategy for Trachoma Control	The Carter Center	<a href="http://bit.ly/18Pb0lr">http://bit.ly/18Pb0lr</a>
Trachoma Action Planning. A planning guide for the national elimination of blinding trachoma.	ICTC (2015)	English: <a href="http://www.trachomacoalition.org/sites/default/files/content/resources/files/ICTC%20TAP%20planning%20guide%20eng.pdf">http://www.trachomacoalition.org/sites/default/files/content/resources/files/ICTC%20TAP%20planning%20guide%20eng.pdf</a> French: <a href="http://www.trachomacoalition.org/sites/default/files/content/resources/files/ICTC_TAP15_FR%20082415%20FINALweb_0.pdf">http://www.trachomacoalition.org/sites/default/files/content/resources/files/ICTC_TAP15_FR%20082415%20FINALweb_0.pdf</a>
Training Curriculum for Trichiasis Case Finders	ICTC (2015)	English: <a href="http://www.trachomacoalition.org/sites/default/files/content/resources/files/ICTC%20TrichiasisCaseFindersTrainingCurriculum%20111915%20v6.pdf">http://www.trachomacoalition.org/sites/default/files/content/resources/files/ICTC%20TrichiasisCaseFindersTrainingCurriculum%20111915%20v6.pdf</a> French: <a href="http://www.trachomacoalition.org/sites/default/files/content/resources/files/Cursus%20de%20formation%20pour%20les%20identificateurs%20de%20patients%20atteints%20de%20trichiasis%202Mb.pdf">http://www.trachomacoalition.org/sites/default/files/content/resources/files/Cursus%20de%20formation%20pour%20les%20identificateurs%20de%20patients%20atteints%20de%20trichiasis%202Mb.pdf</a>
Trachoma Simplified Grading card	WHO	<a href="http://bit.ly/18Pb5Mg">http://bit.ly/18Pb5Mg</a>
Trachoma Grading Self Directed Learning	CERA	<a href="http://trachoma.iehu.unimelb.edu.au/">http://trachoma.iehu.unimelb.edu.au/</a>
<b>Training/ reference resources for TT management</b>		
Global Scientific Meeting on Trachomatous Trichiasis (Eng, Fre and Port)	ICTC (2012)	English: <a href="http://www.trachomacoalition.org/sites/default/files/content/resources/files/Moshi_TTSWR_English_2013.4.19.pdf">http://www.trachomacoalition.org/sites/default/files/content/resources/files/Moshi_TTSWR_English_2013.4.19.pdf</a> French: <a href="http://www.trachomacoalition.org/sites/default/files/content/resources/files/ICTC%20TT%20Surgery%20Report%20French%20FINAL%20lowres_0.pdf">http://www.trachomacoalition.org/sites/default/files/content/resources/files/ICTC%20TT%20Surgery%20Report%20French%20FINAL%20lowres_0.pdf</a> Portuguese: <a href="http://www.trachomacoalition.org/sites/default/files/content/resources/files/TT%20Surgery%20Workshop%20Report%20Portuguese.pdf">http://www.trachomacoalition.org/sites/default/files/content/resources/files/TT%20Surgery%20Workshop%20Report%20Portuguese.pdf</a>
Second Global Scientific Meeting on Trachomatous Trichiasis	(2015)	<a href="http://apps.who.int/iris/bitstream/10665/250571/1/WHO-HTM-NTD-2016.5-eng.pdf?ua=1">http://apps.who.int/iris/bitstream/10665/250571/1/WHO-HTM-NTD-2016.5-eng.pdf?ua=1</a>
Trachomatous Trichiasis and Its Management in Endemic Countries	Surv Ophthal (2012)	<a href="http://1.usa.gov/1dhFWbA">http://1.usa.gov/1dhFWbA</a> Surv Ophthalmol 2012; 57-341(2): 105–135
Tracking Geographic Coverage of TT Management Services (Eng and Fre)	HKI (2016)	<a href="http://www.mmdppproject.org/resources/trachoma">http://www.mmdppproject.org/resources/trachoma</a>

Resource/Publication/Manual	Published by	Where available
Organizing trichiasis surgical outreach. A preferred practice for program managers (Eng and Fre)	ICTC (2015)	English: <a href="http://www.trachomacoalition.org/sites/default/files/content/resources/files/Organizing%20trichiasis%20surgical%20outreach%20-%20ICTC%20preferred%20practice_web.pdf">http://www.trachomacoalition.org/sites/default/files/content/resources/files/Organizing%20trichiasis%20surgical%20outreach%20-%20ICTC%20preferred%20practice_web.pdf</a> French: <a href="http://www.trachomacoalition.org/sites/default/files/content/resources/files/Organisation%20de%20campagnes%20de%20proximit%C3%A9%20pour%20la%20prise%20en%20charge%20chirurgicale%20du%20trichiasis.pdf">http://www.trachomacoalition.org/sites/default/files/content/resources/files/Organisation%20de%20campagnes%20de%20proximit%C3%A9%20pour%20la%20prise%20en%20charge%20chirurgicale%20du%20trichiasis.pdf</a>
TT management procurement calculator (Eng and Fre)	HKI (2016)	<a href="http://www.mmdpproject.org/resources/trachoma">http://www.mmdpproject.org/resources/trachoma</a>
Trichiasis Counselling Guide (Eng and Fre)	ICTC (2016)	English: <a href="http://www.trachomacoalition.org/sites/default/files/content/resources/files/ICTC%20TrichiasisCounsellingGuide%20022616%20FINAL.pdf">http://www.trachomacoalition.org/sites/default/files/content/resources/files/ICTC%20TrichiasisCounsellingGuide%20022616%20FINAL.pdf</a> French: <a href="http://www.trachomacoalition.org/sites/default/files/content/resources/files/Guide%20de%20soutien%20psychologique%20relativement%20au%20trichiasis.pdf">http://www.trachomacoalition.org/sites/default/files/content/resources/files/Guide%20de%20soutien%20psychologique%20relativement%20au%20trichiasis.pdf</a>
Epilation Counseling and Training Guidance (Eng and Fre)	HKI (2016)	<a href="http://www.mmdpproject.org/resources/trachoma">http://www.mmdpproject.org/resources/trachoma</a>
<b>Training/reference resources for TT surgical training</b>		
WHO Trichiasis surgery for trachoma – 2nd ed (Yellow Book) (Eng and Fre)	WHO (2015)	<a href="http://www.who.int/trachoma/resources/9789241549011/en/">http://www.who.int/trachoma/resources/9789241549011/en/</a>
Supportive Supervision for Trichomatous Trichiasis Programmes	ICTC 2017	<a href="http://www.trachomacoalition.org/sites/default/files/content/resources/files/ICTC%20Trichiasis%20Supervision%20Manual.pdf">http://www.trachomacoalition.org/sites/default/files/content/resources/files/ICTC%20Trichiasis%20Supervision%20Manual.pdf</a>
Trichomatous Trichiasis Surgery – Surgery Training DVD. A Step By Step Guide to Trachoma Surgery	ICEH	<a href="http://bit.ly/1hll6xd">http://bit.ly/1hll6xd</a>
The HEAD START training device uses a mannequin head as a base. Bases are reusable. <a href="http://www.mmdpproject.org/stories/trichiasis-surgeons-it-helps-learn-dummy">http://www.mmdpproject.org/stories/trichiasis-surgeons-it-helps-learn-dummy</a> <a href="http://www.cehjournal.org/article/training-trichiasis-surgeons-ensuring-quality/">http://www.cehjournal.org/article/training-trichiasis-surgeons-ensuring-quality/</a>	Wake Forest School of Medicine	Each trainer should have a base. It is recommended to have one trainer per 2 trainees. A minimum of one extra base is useful so that trainees can practice individually while the trainers continue to work with other trainees.
Disposable HEAD START eyelid cartridges are inserted to practice surgery	Wake Forest School of Medicine	15 cartridges each for new trainees 10 cartridges each for refresher training For each cartridge (surgery) the sutures and blades for that procedure are also required.
Monitoring of surgical quality, patient satisfaction, and data quality during the 3-6 month period following trichiasis surgery (Eng and Fre)	HKI (2016)	<a href="http://www.mmdpproject.org/resources/trachoma">http://www.mmdpproject.org/resources/trachoma</a>
The Outcome of Trichomatous Trichiasis Surgery in Ethiopia: Risk Factors for Recurrence	PLoS Negl Trop Dis. (2013)	<a href="http://1.usa.gov/1gjMktH">http://1.usa.gov/1gjMktH</a> PLoS Negl Trop Dis. 2013 August; 7(8): e2392

# 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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