

# International mission work with Ophthalmology

OAS 2024, Houston

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# Financial Disclosures

**No financial disclosures**



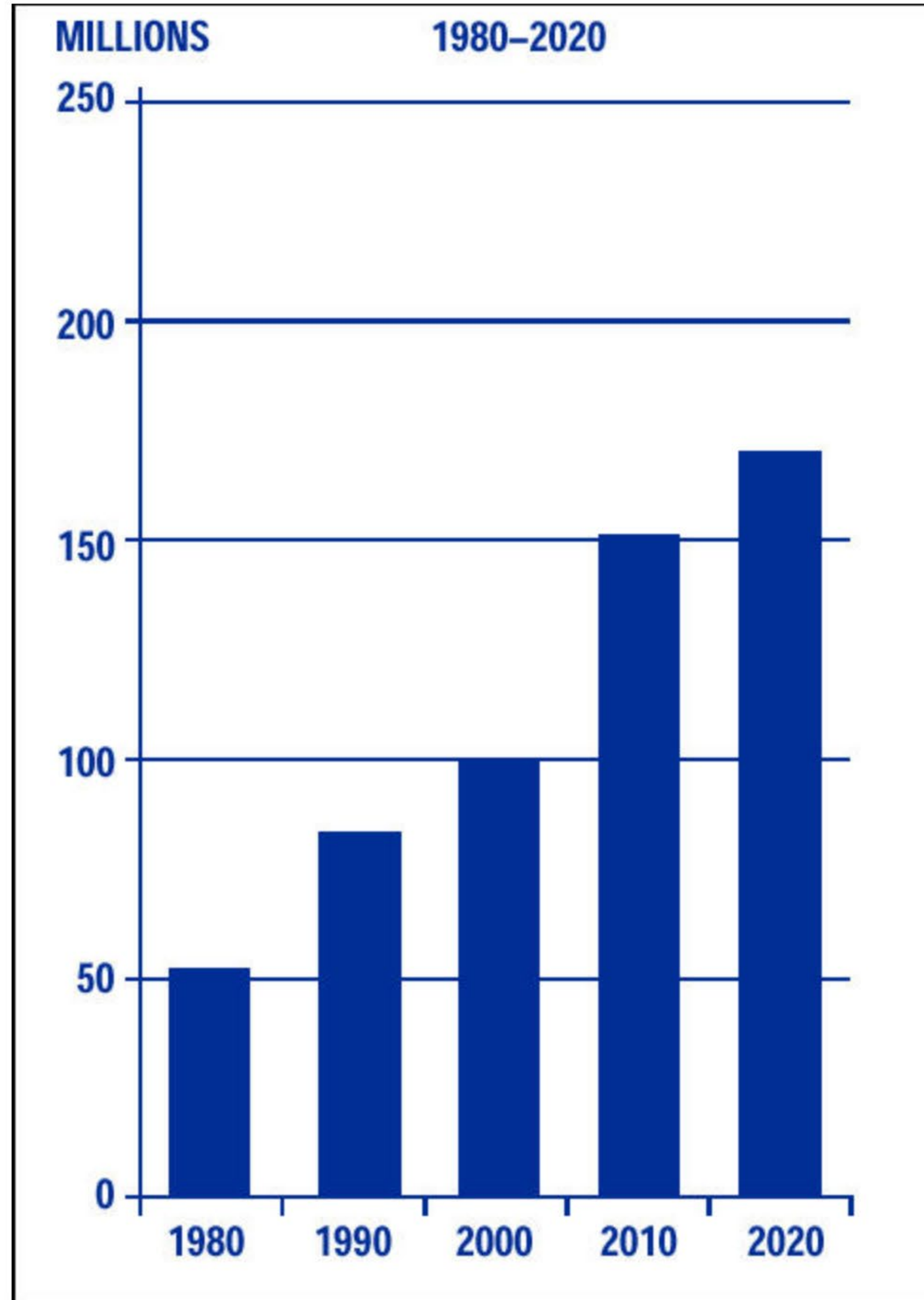
# Need for cataract surgery world-wide

## You can help!

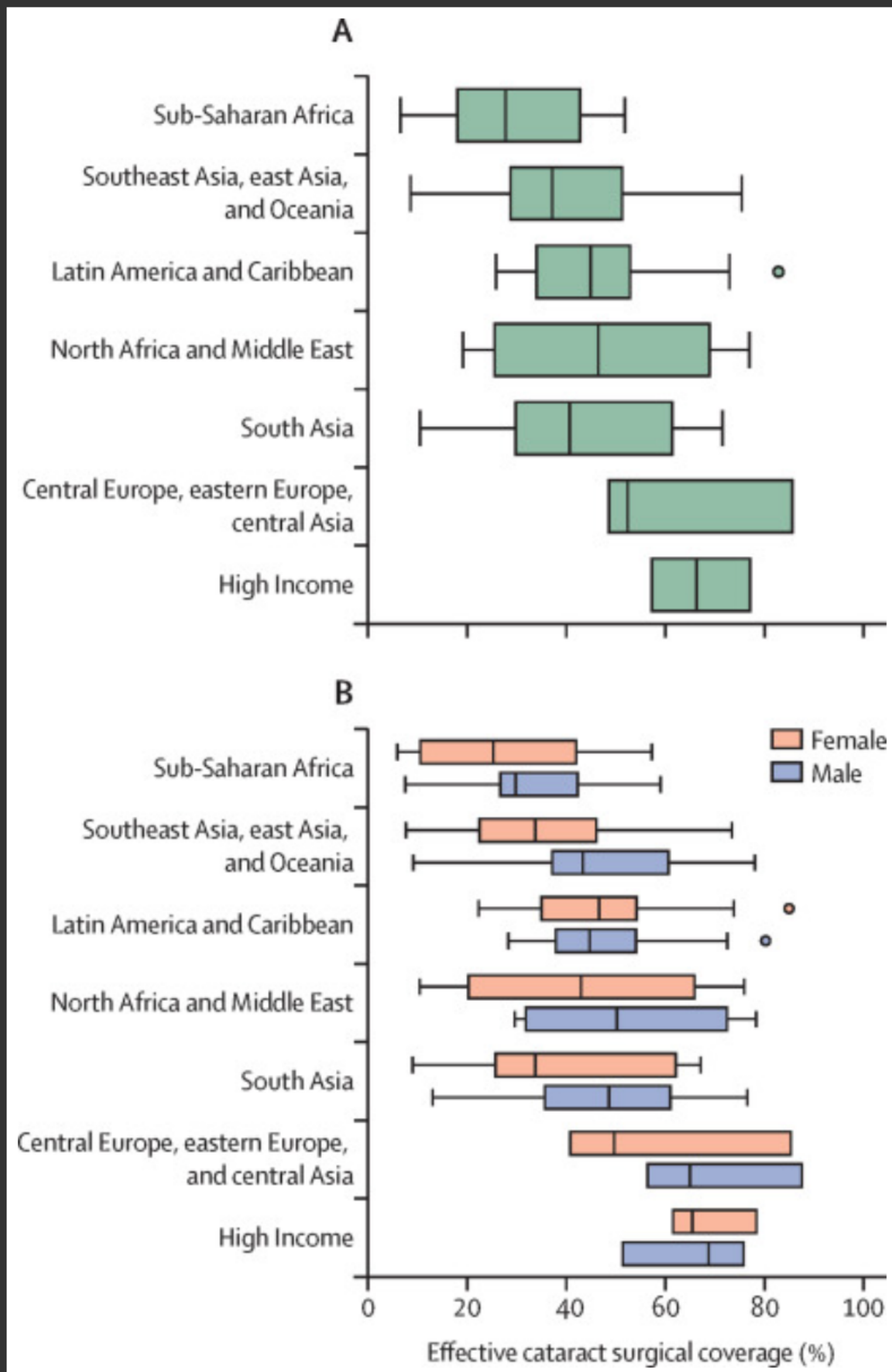
- Still large backlog of preventable blindness
- Cataract surgery biggest "bang for the buck"
- Many settings MSICS better suited to cataract type, and much less resource intensive
- Regional eye blocks very helpful for MSICS, especially for beginning surgeons

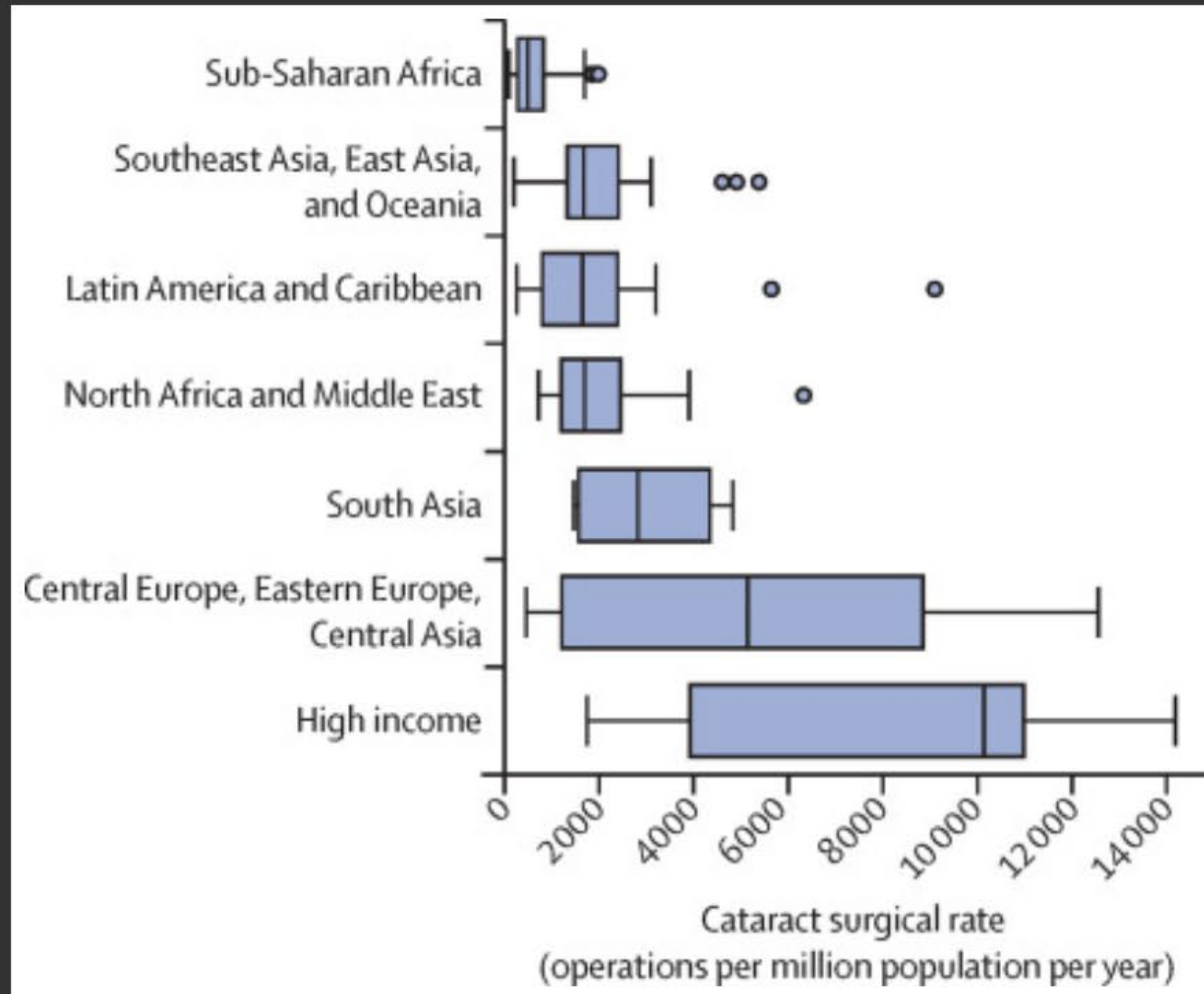
Fig. 1

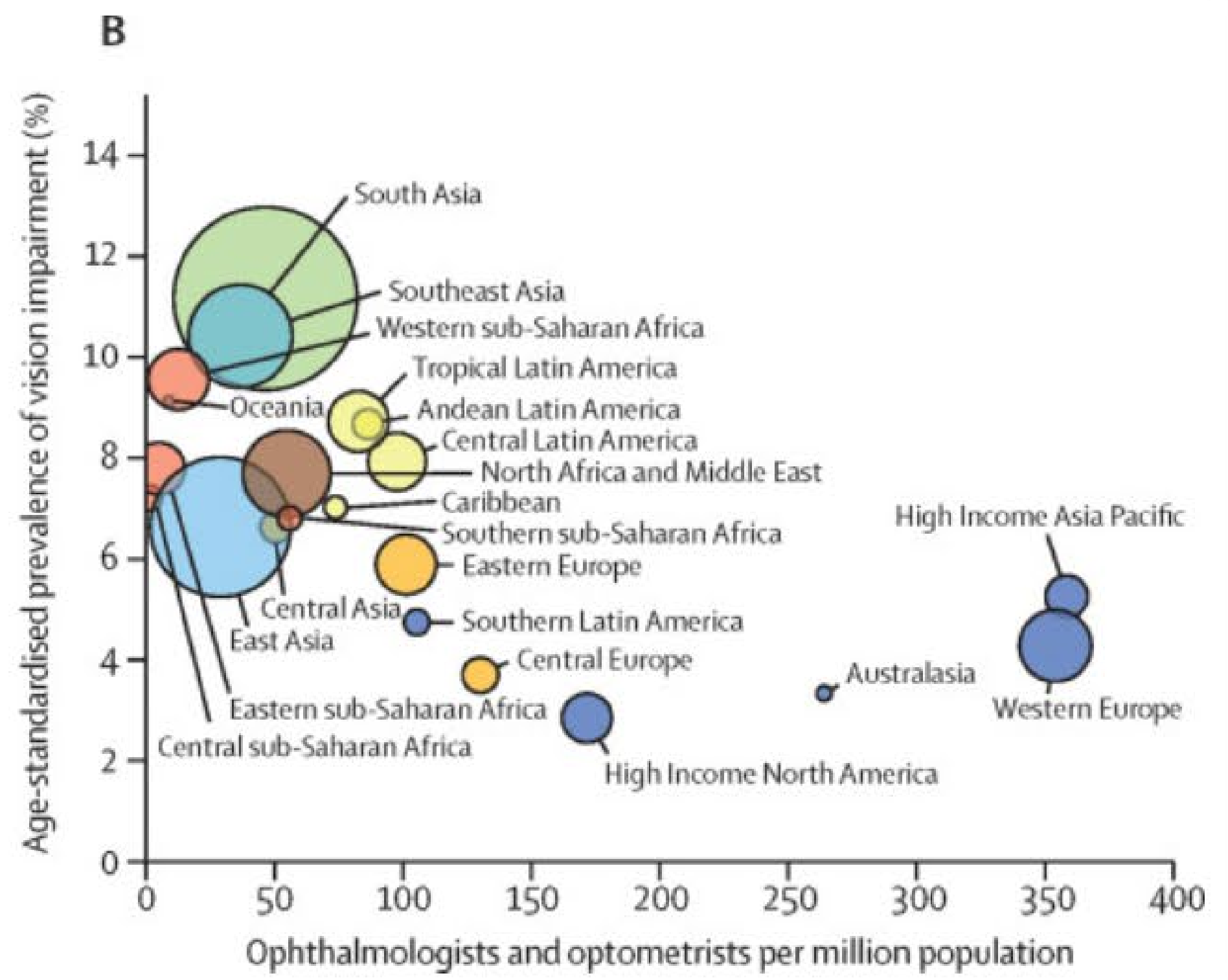
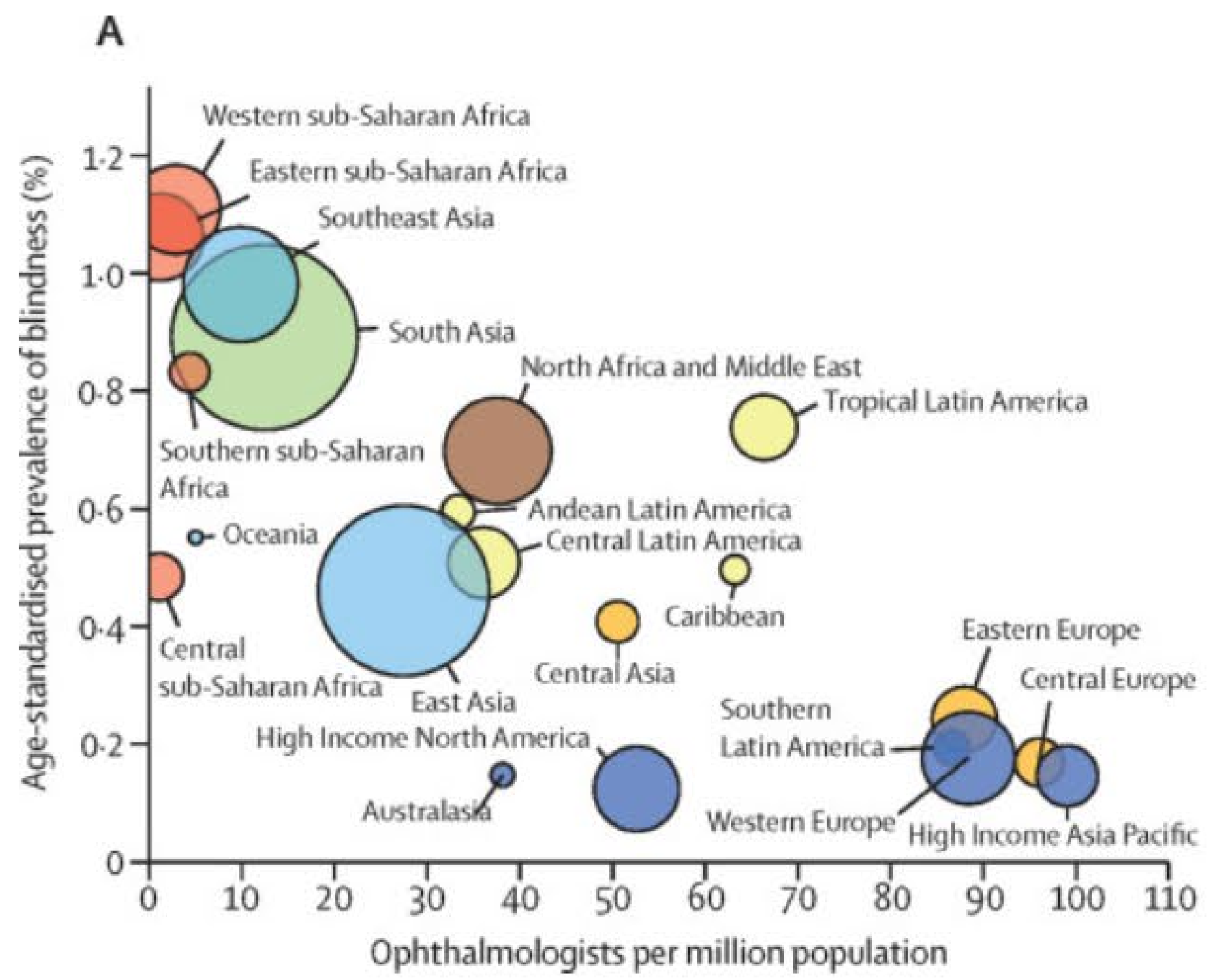
Eye Health  
Community Eye Health  
Community Eye Health



Global Estimates of the Number of Eyes with < 6/60 due to Cataract





















# Organizations

## Ways to make your work easier

- Surgical Eye Expeditions (SEE) International, founded 1974. Provides supplies and equipment for traveling surgeons, has relationships with many clinics around the world.
- World Medical Mission (Samaritan's Purse)- multiple clinics around the world
- Unite for Sight-clinics in Ghana, Honduras, India
- ORBIS- focused on education with flying eye hospital (MD-10 donated by FedEx)
- Mercy Ships- usually off west coast of Africa, onboard OR, screening in villages, longer commitment needed

# Planning a Trip

- Settings range from well equipped clinics with trained staff and luxury hotel to remote rural locations where you need to bring in everyone and everything including electrical power.
- Make sure you understand visa, passport, licensing, vaccination, and health requirements. State Department travel site and the countries US embassy site are good places to start. Don't underestimate the time it may take to get visa etc.
- Watch airfare prices (Hopper, Google flights, Kayak) and favor well known reliable carriers. Check baggage allowance on chosen fare, usually need at least 2 bags per person
- Usually need all of luggage allowance for equipment and supplies, personal items in carry on.

# Planning a trip

## Larger groups

- [www.keytravel.com](http://www.keytravel.com). Specializes in humanitarian and academic trips. Sometimes better fares
- Major airlines Group planners- Delta Groups, etc. Can lock in great fares with a lot of flexibility but can be very time consuming, tough to make advertised changes, etc
- Must have strict payment deadlines and cancellation penalties or you will be out your own money









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CONTROL DE PESO,  
TALLA Y VACUNAS  
DE NIÑOS





# How to Plan a Trip

## Next steps

- For surgeons, take a MSICS course. Aravind has a good online course on YouTube, SEE has links to this and others on their website. SEE sponsors one day courses in the US, also ASCRS and AAO have MSICS skill transfer courses at the meeting
- For your first trip consider traveling with an experienced surgeon to a known location
- Build your team carefully. Must be very flexible, willing to work extremely hard, inventive, non-complaining etc. And they will most likely be funding their own way. And if you choose wisely they will want to go on every future trip you do.

# Practicing medicine/surgery abroad

## **You will probably need some type of government clearance**

- Most countries require some type of provisional license. Invitation from local ministry of health needed (and is required by SEE). Most require copies of diplomas/residency certificates/state medical licenses etc. Can be as easy as electronically sending copies or as involved as sending paper notarized/apostilled copies to the country. Once issued can be good for a few months to a few years. Host clinic should be actively involved in this.



**KENYA MEDICAL PRACTITIONERS AND DENTISTS COUNCIL**

*(The Medical Practitioners and Dentists Act, Cap. 253)*

**TEMPORARY LICENCE FOR FOREIGN DOCTORS**

**DAVID DWIGHT MARKOFF**

(full name)

**P.O.BOX 15514 00503 KAREN**

(address)

Qualifications

**MD (LOMA LINDA) 1986**

Temporarily licenced by the Kenya Medical Practitioners and Dentists Council to render Medical Services at **AFRICA MISSION**

(name of approved institution)

In accordance with the provisions of section 13 of the Act.

Dated this 5th day of January 2024.

**Dr. David G. Kariuki**

**Chief Executive Officer/ Registrar**

**Kenya Medical Practitioners and Dentists Council**



**CONDITIONS OF LICENCE:**

This licence is valid for a period of 1 MONTH(S) from the date hereof ( 10-03-2024 to 15-03-2024 ).

The licence is authorised to render medical or dental services, as the case may be only at the institution mentioned in this licence.

The licensee is entitled to engage in training employment.

This licence does not entitle you to engage in private practice.

Signature of the Holder .....

# Health

## Keep yourself functioning

- Check CDC website for country and area you are visiting. British health service also has a nice site.
- Get at least minimum required vaccinations. Want Hep A, Hep B, probably yellow fever, others based on destination. Check country you are visiting for entry requirements.
- Eat carefully. Pepto Bismol. Have some antibiotics (Cipro etc) available.
- Buy travel insurance that includes emergency evacuation coverage (usually will cover up to \$250,000) and medical coverage (often up to \$75,000). Included with good trip insurance is often about 5% of trip price.
- [insuremytrip.com](http://insuremytrip.com) one place to check. Filter by price.

# Personnel

## Right people in the right seat

- Scrub tech who knows equipment well and is adaptable
- Circulator familiar with all supplies
- Instrument processing, cleaning, sterilizing
- A-scan and B-scan and IOL calculations
- Pre-op drops/prep for surgery
- Post-op instructions in local language



# Personnel

## Host country/clinic

- Very important to have integrity and consistency of the people you are working with in country.
- Need to watch for safeguarding of donated materials and supplies, make sure are not sold in country, used in desired manner, kept in good shape for next visit etc.
- They need to be willing to help with customs, housing, travel in country, food for team, etc.
- Some institutions tend to have frequent turn-over, others have very stable leadership for decades















- 5. ~~Abraham Loewen Montano = CAT-OD~~ <sup>MSIS</sup>
- 6. ~~Hilda Pizarro Aguilar = CAT-OI~~ <sup>MSIS</sup>
- 7. ~~Ana Martinez Fernandez = CAT-OI~~ <sup>MSIS</sup>
- 8. ~~Bertha Alvarado Zelada = CAT-OI~~ <sup>MSIS</sup>
- 9. ~~Dionisio Subicana Soletto = CAT-OD~~ <sup>MSIS</sup>
- 10. ~~Evelio Nuñez Cortizo = CAT-OI~~ <sup>MSIS</sup>
- 11. ~~Eliana Parada de Paz = CAT-OI~~ <sup>PH</sup>
- 12. ~~Delfina Vasquez Mamani = CAT-OI~~ <sup>MSIS</sup>
- 13. ~~Jose Martinez Aguilar = CAT-OI~~ <sup>PH</sup>
- 14. ~~Simón Tala Choque = CAT-OI~~
- 15. ERIBERTO ULLA NUÑEZ CAT-OI













# Clinic settings

## One-off vs sustainable

- You can travel the world going to a different clinic every trip- exciting, adventurous
- Or you can choose one or a few clinics to develop a long-term sustainable relationship with (SEE feels this is the better way forward)
- For first trip better in well established, well staffed clinic
- Then can decide to try and start or build up a clinic elsewhere in an underserved region

# Materiel

## The stuff you need to wage war on cataracts

- Fortunately portable versions of equipment available
- Microscopes- portable versions can vary widely in quality and optics
- Need A-scan and keratometer
- Autoclave capacity can be an issue- inexpensive dental units available
- Slit lamp a plus but not always available
- B-scan very helpful as most cataracts preclude view of the fundus
- Tonopen or iCare tonometer useful



ENGOS, KENYA 2024

AR CODE:

**Equipment Details**

MARKOFF

Please indicate which pieces of equipment you will need to borrow in the "Quantity" column.

**\*\*Availability of equipment should first be confirmed with a SEE coordinator\*\***

Equipment	Cost of Equipment	Collateral Amount	Quantity	Total
Keeler A-Scan Connect (Laptop driven)	\$4,800	\$500	1	5300-
Pelton Crane autoclave	\$1,000	\$100		
Ellex, Indirect Ophthalmoscope	\$1,800	\$300		
Ellex Solitaire Diode Laser	\$28,000	\$1,000		
Iridex, Oculight GLX, "Green" Ophthalmic Laser	\$26,000	\$2,000		
Iridex, Oculight SL_LX, Ophthalmic Laser	\$26,000	\$2,000		
Nidek Auto Refractor/Keratometer	\$12,500	\$1,000		
Micro Medical (tablet based) Keratometer	\$3,800	\$380	1	380-
Prescott Portable field microscope	\$9,000	\$900		
Nidek Fundus VersaCam DS-10	\$11,500	\$1,000		
Alcon Laureate Phaco Emulsification Unit	\$35,000	\$2,500		
AMO Sovereign Phaco Emulsification Unit	\$35,000	\$2,500		
Oertli CataractRhex3 Phaco Emulsification Unit	\$37,000	\$2,500		
Laserex LQP 3106, Yag Laser	\$24,000	\$2,000		
Wetfield Cautery	\$6,000	\$75	1	75-
Cataract Instrument Set	\$850	\$85	4	340-
Corneal instrument Set	\$500	\$50		
Oculoplastic Instrument Set	\$2,800	\$300		
LTD Oculoplastic Instrument Set	\$1,800	\$180		
Miscellaneous (Inquire as to availability.)				
TO OPEN		? 200-	1	200

Total: ~~14950~~

**Signature and Credit Card Information**

Please complete this form and return to SEE along with a check or credit card information.

SEE requests this as collateral in the event that equipment is lost or damaged; nothing will be charged prior to or during the program and the borrower will be notified if payment is necessary.

Upon the return of intact equipment to SEE, checks and credit card information will be disposed of securely.

**Method of Payment** \* Please make checks payable to SEE International

- CHECK \*
- MASTERCARD
- VISA
- AMERICAN EXPRESS



# Equipment

## How to get large items around the globe

- While there are portable versions of the equipment we need, the larger versions are preferable to operate with and are very helpful in building a sustainable program (microscopes, eye stretchers, slit lamps, auto refractors etc)
- Denton program run by US DOD will airlift donated large items (2000 lbs is MINIMUM) to many places around the globe. Not a rapid process but the price is right.
- Usaid.gov. <https://hatransportation.ohasis.org/account/login>





MOUNTAIN EYE  
ASSOCIATION



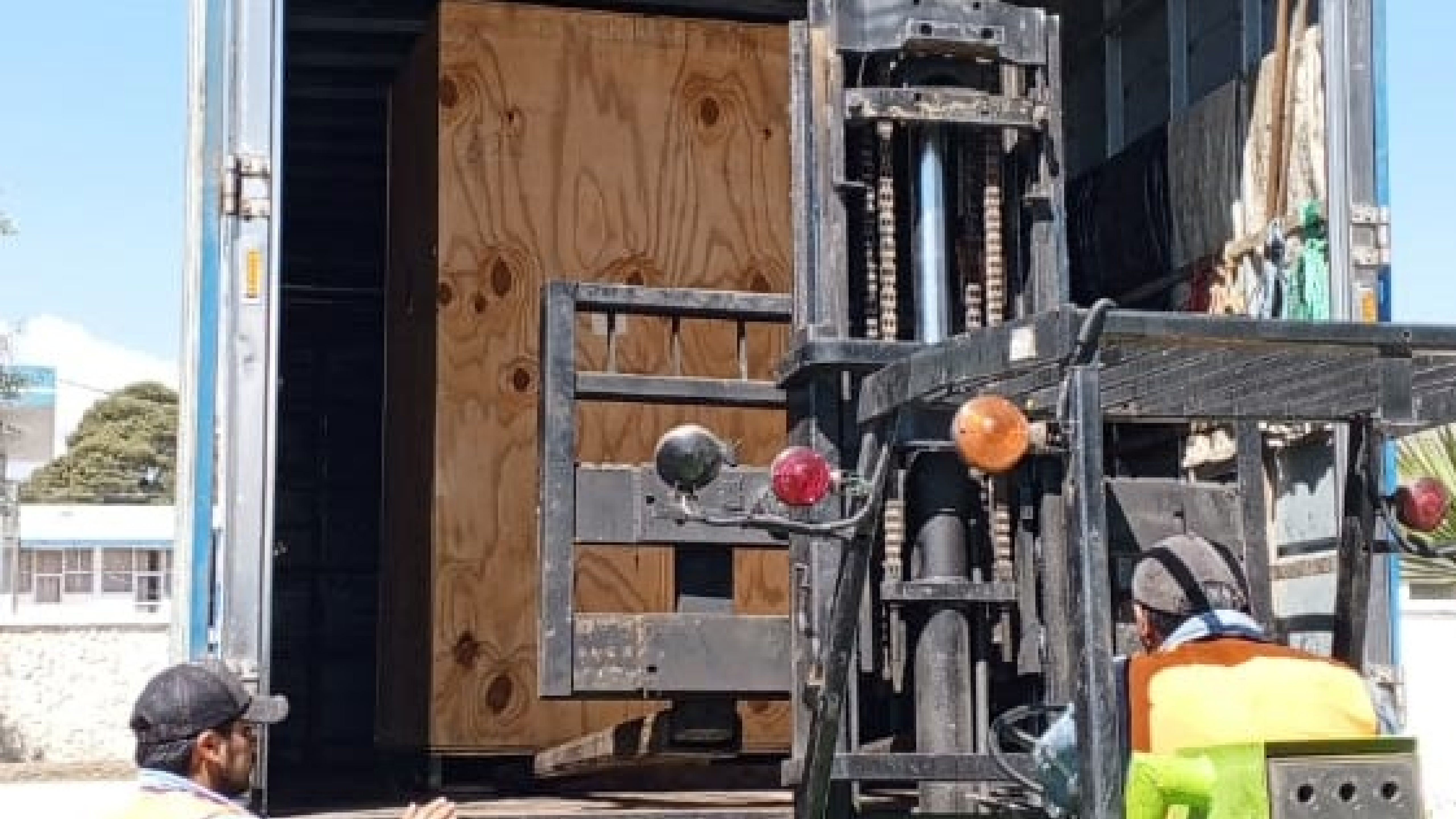














# Customs

## Often most stressful part of the trip

- So, now you have all of your equipment and supplies and you need to get them into the country
- Can be as easy as getting a "green light" or loading up a luggage cart and being waved through to difficulties of large amounts of money demanded, confiscation of equipment, etc.
- Host should be very involved and pave the way for this. At times significant paperwork needs to be done ahead of time. Research local requirements. Stay calm (but stubborn) and negotiate. Cooperate with the customs officials.
- Some countries require "check out" by customs also on departure



# Customs

- If good supplies available locally and inexpensively can source many items in country. Aravind and aurolab from India make high quality products available many places in the developing world.



# Clinic logistics

## Avoid being overwhelmed

- Organization of clinic and OR flow very important for efficient use of time
- Will patients be pre-screened (and do you trust the pre-screeners)?
- Need for IOL calculations (I feel very important- if you put in IOL of incorrect power you may leave vision and blurry as it was, and few of these pts can afford prescription glasses)
- Numbering system very helpful. Simple but accurate charting system.
- Needs to be sufficient post-op care available after you leave. Do not "cut and run"- creates ill will with local providers and potentially poor results for patients



	*ICD Code	Eye OD/R OS/L OU/Both	Pre-Op Visual Acuity	Surgeon	Comments: Include all complications, follow up, i.e. Vitreous loss/Vitrectomy/AC IOL, need for further surgery or type of surgery other than cataract.
3	366.1 ECCP	R+	SOMBRA R LT L	MARKOFF	MSICS @ Cantarella @SOMRA
0	366.1	LT	R 20/50 L 20/70	MARKOFF	MSICS @Cantarella @SOMRA
	366.1	LT	R 20/40	WIA	

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HORARIOS DE ATENCIÓN:  
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12:00 PM SÁBADO

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# Anesthesia

## How can OAS help

- MSICS longer and more involved surgery than standard US phaco.
- Sub-tenon's can work well but full block often better in these settings
- Most US surgeons (especially more recent trainees) no longer proficient in blocks
- Having dedicated personnel to administer blocks very helpful for OR flow
- IV access/drugs usually not an option. Intra-op monitoring usually not done, but pulse oximeter could be useful, some clinics have oxygen available to administer under drape
- Patients tend to be more elderly with medical issues just like at home



# How can OAS help

## Opportunities to contribute your skills

- Would you be interested in International Humanitarian work related to Ophthalmology?
- Which continent interests you?
- Do you speak any additional language?
- Do you have any unique skill sets?
- Have you been on Humanitarian trips in the past? If so, where?



# Enjoy the country you are visiting

**Take a least a day to see some of the country you are working in**

- Easy with the need to work the entire time you are there
- Taking a day off at beginning or end of work time is good for team spirit and dynamics, and allows you to better appreciate the people and culture you are working with.



























# Why bother?

## Life is full, why should I do this?

- You will be helping to restore sight to many patients who would otherwise not receive treatment
- You will become a better surgeon and person
- You will develop new friendships around the globe with the personnel at your host clinics
- You will develop life-long friendships with your "team"
- You will get to travel and experience new countries through local eyes
- Blindness takes away a persons independence, surgery can restore that.

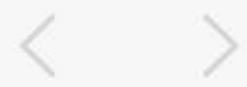












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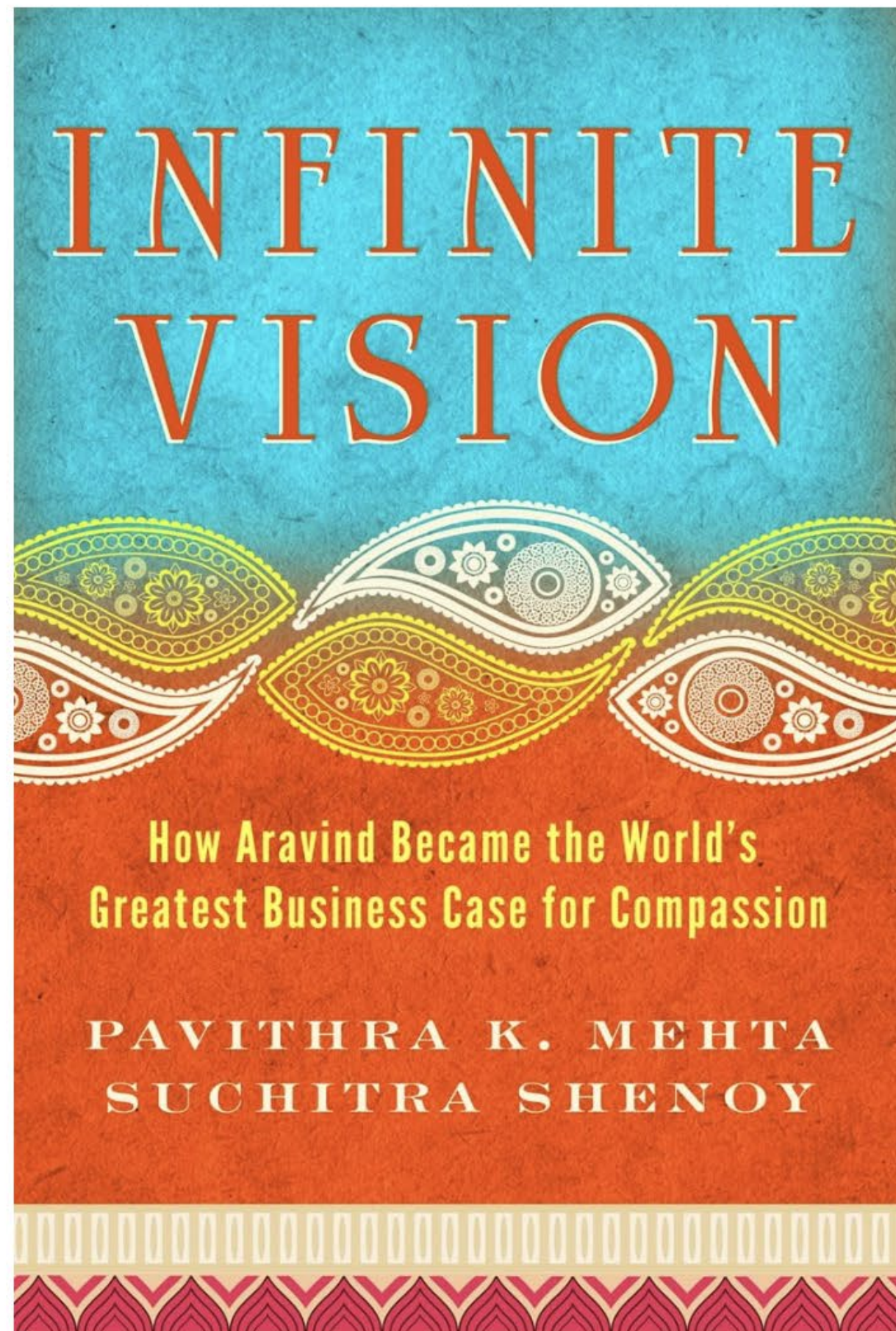
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