HIFA Cataract Surgery & Eye-Care Workforce

Questions for discussion

1. What is the global epidemiology of blindness and visual impairment?

Describe the ground reality in your country/region.

- What is the estimated prevalence of blindness and visual impairment in your country/region, and what are the leading causes?
- What are the major barriers preventing patients from getting cataract surgery?
- Are there disparities in access due to gender, socio-economic status, or a rural/urban divide? Please elaborate on each.
- What data sources exist (e.g., RAAB surveys, census, hospital records) to support these estimates, and how recent and reliable are they?
- What is the burden from causes other than cataract (e.g., refractive error, diabetic retinopathy, glaucoma) that may compete for the same eye-care workforce and resources?
- What is the burden and unmet need specifically for pediatric cataract, which often requires different infrastructure and skills than adult cataract?

2. What is the human, household, and economic impact of blindness and visual impairment in your region?

Have any studies been conducted in your region that assess this impact? Consider both the household level and the broader economic/system level.

Individual and household impact

- How does blindness affect a person's ability to work or earn an income, and what proportion of affected patients are unable to work or have reduced working hours?
- How does blindness affect household income, and do family members stop working or reduce their work to provide care?
- What additional costs do families incur because of blindness (e.g., transportation, caregiving, assistive devices, medical care), and do they borrow money, sell assets, or incur debt to pay for eye care?
- How does blindness affect children's education or school attendance within affected households, and does it increase dependence on family members for daily activities?
- Are the financial and social consequences different for women and men, and are poorer households disproportionately affected?

Economic and health-system impact

- What is the estimated economic burden of blindness and visual impairment, including productivity losses, reduced workforce participation, household income losses, and impacts on GDP? Which populations, age groups, occupations, or economic sectors are most affected?
- What are the direct and indirect costs of blindness and visual impairment to patients, households, the health system, and government, including out-of-pocket expenses, transportation, lost income, and social or disability-support costs?
- What does cataract surgery cost the patient and the health system? Please include average out-of-pocket costs after insurance/subsidies, total facility/surgeon costs, and, where available, differences between MSICS and phacoemulsification.

- What is the economic cost of delayed or untreated cataract, and is there evidence that cataract surgery enables people to return to work, increase household income, reduce caregiver dependence, or improve economic productivity?
- What evidence exists on the economic value of cataract surgery, including cost-effectiveness, cost-benefit, return on investment (ROI), or economic benefits per surgery or at the national/regional level?
- What would be the potential economic impact of expanding cataract surgical capacity in the country or region?
- What government financing or compensation mechanisms exist for blindness and visual impairment, including government spending on eye care, disability benefits, or other support schemes?

3. Health Insurance and Government-Covered Healthcare

- What health insurance options are available in the region (public, private, community-based/micro-insurance)? What proportion of the population is covered by any form of health insurance?
- Is there a government-funded or government-covered healthcare scheme that includes cataract surgery?
- How functional is this government coverage in practice in the area. e.g., reimbursement timeliness, coverage gaps, and any out-of-pocket top-up costs patients still incur despite having insurance or coverage?

4. Eye-Care Workforce: Current Status, Gaps, and Development Strategy

4.1 Workforce Gaps and Strategic Design

- What are the major gaps in the eye-care workforce needed to address the burden of blindness and visual impairment in your country/region, and which cadres are most urgently needed (e.g., ophthalmologists/cataract surgeons, optometrists, refractionists, ophthalmic nurses, operating-room technicians, community health workers, other cadres)?
- What roles should different cadres play within an integrated eye-care team, and which tasks could appropriately be shared or delegated? If the workforce were redesigned around task sharing, what combination of these cadres would be required to meet the population's eye-care needs?
- What are the current training gaps for each cadre, and what additional competencies are needed? Are there sufficient training programs and training capacity to produce the required number of eye-care professionals in each cadre?
- How could task sharing and multidisciplinary team-based care help expand access to eye-care services, particularly in underserved areas?
- What proportion of cataract surgeries are performed in the public versus private sector, and how does cost, quality, and access differ between them?

- What retention strategies exist (e.g., rural postings, incentives, career pathways) to keep trained surgeons and allied staff in underserved areas, since training more personnel does not help if they subsequently leave?
- Is there a national eye-health workforce information system that tracks these cadres over time, and how up to date is it?

4.2 Ophthalmologists and Cataract Surgeons

- What is the current ophthalmologist density per million population, and how does it compare with WHO-recommended or national targets?
- How many ophthalmologists are currently performing cataract surgery, and what proportion of the workforce is surgically active?
- What is the current cataract surgical volume per ophthalmologist, and how does this compare with the level needed to meet regional demand?
- Is there a shortage of cataract surgeons, and which geographic areas or populations are most affected?
- What proportion of ophthalmologists' time is currently spent on tasks that could potentially be performed by other trained eye-care personnel, and which of those tasks could safely and effectively be delegated or shared with optometrists, ophthalmic nurses, or other cadres?
- What number of additional ophthalmologists/cataract surgeons would be required to meet current and projected cataract surgery needs over the next 5–10 years?
- What are the major barriers to increasing the number and productivity of cataract surgeons while maintaining quality and patient safety — training capacity, retention, infrastructure, equipment, case volume, or financing?

4.3 Non-Physician Cataract Surgeons and Task Sharing

- Does national regulation permit non-ophthalmologist personnel to independently perform cataract surgery? If yes, which cadres are authorized, what additional training/certification is required, what surgical procedures can they perform, and what proportion of national cataract surgery is performed by these cadres?
- What regulatory, professional, or policy barriers exist to expanding task sharing for cataract surgery?
- Could appropriately trained non-physician cataract surgeons be part of the workforce strategy to address the country's ophthalmologist shortage and cataract surgical backlog?

4.4 Allied Eye-Care Team: Optometrists, Ophthalmic Nurses, Refractionists, Operating-Room Technicians, and Community Health Workers

- What is the current density and distribution of optometrists, ophthalmic nurses, community health workers, and other eye-care personnel in the region, and how does this compare with WHO or national workforce targets?
- Which eye-care tasks are currently performed by optometrists, ophthalmic nurses, and community health workers, and which additional tasks could be safely delegated to these cadres to expand access and reduce the workload on ophthalmologists?
- What role could community health workers play in identifying people with cataract and other eye conditions, patient education, referral, follow-up, and postoperative support?
- What role could optometrists play in cataract assessment, preoperative evaluation, postoperative care, refraction, and referral of patients requiring surgical care?

- What role could operating room/ophthalmic nurses play in preparing patients, assisting with surgery, infection prevention, postoperative care, and other aspects of the surgical pathway?
- What role should refractionists and operating-room technicians play in supporting the cataract surgical pathway and increasing surgical capacity?
- Are there regulatory, licensing, training, or scope-of-practice barriers that currently limit task sharing among these cadres, and what training, supervision, certification, and quality-assurance systems would be required to safely expand it?

4.5 Simulation-Based Training for Workforce Development

- Can simulation-based training improve the skills, competency, and quality of care of different eye-care cadres? Which cadres would benefit most, and for which skills or procedures?
- Could simulation reduce the amount of supervised clinical training required before a provider performs procedures on patients?
- How could simulation be incorporated into national training, certification, competency assessment, and continuing professional development?

4.6 Equipment and Infrastructure

- Is there adequate access to surgical equipment, consumables, and intraocular lenses (IOLs) e.g., phacoemulsification machines, biometry devices, and sterile supply chains? Workforce capacity is often bottlenecked by equipment availability as much as by personnel.
- What is the state of infection-control and quality-assurance protocols in surgical facilities?

5. How does your country or region stand on the WHO indicators of quality of care?

- How many people are estimated to have operable cataract, and what is the estimated cataract surgical backlog?
- What is the current Cataract Surgical Rate (CSR), nationally and by region?
- What is the current Cataract Surgical Coverage (CSC) and effective Cataract Surgical Coverage (eCSC)?
- How has the burden changed over the past 5–10 years?
- What is the postoperative complication rate, and is it routinely tracked?
- What proportion of patients return for second-eye surgery, and what explains any drop-off between first- and second-eye surgery?

6. National Eye Health Policy and Implementation

- Does the country have a current national eye-health or prevention-of-blindness policy/strategy? When was it developed or last updated? What are its key priorities and targets?
- Is eye health integrated into the country's broader national health strategy and primary health-care system?

- How is the national eye-health strategy implemented at the national, regional, district, and facility levels, and which government agency, ministry, or other body is responsible for coordinating it?
- Is there a dedicated government budget or funding mechanism for implementing the strategy? Is the funding adequate to achieve the stated targets?
- What specific national targets have been established for reducing blindness and visual impairment, particularly for cataract and other avoidable causes?
- What indicators are routinely used to monitor implementation and progress (e.g., Cataract Surgical Rate, effective Cataract Surgical Coverage, cataract surgical outcomes, eye-care workforce, other national indicators), and how frequently are they collected, reviewed, and reported, and at what geographic level?
- What are the main gaps between the national eye-health policy and its implementation in practice, and what are the major barriers — financing, workforce, infrastructure, equipment, supply chains, access, governance, or other factors?
- What role do NGOs, private providers, professional associations, and other partners play in implementing the national eye-health strategy?

Past Learning from Vision 2020

- Did the country develop a national plan under VISION 2020, and what were its major achievements, challenges, and lessons? Which elements have been incorporated into the country's current eye-health strategy?
- What national strategy or framework has succeeded VISION 2020, and what are its priorities through 2030?
- How are the country's current eye-health priorities aligned with WHO's global eye-health targets for 2030, particularly effective cataract surgical coverage and effective refractive error coverage?
- What are the three highest-priority actions needed to strengthen implementation of the national eye-health strategy and reduce avoidable blindness in the country?

7. Eye Health Education and Training Resources

Directed toward educators, policymakers, and training leaders. What educational and training resources are currently available to you and your institution for learning about eye health and eye-care delivery?

What types of educational resources are widely used?

- Online courses and e-learning
- Videos and recorded demonstrations
- Textbooks, guidelines, and clinical protocols
- Wet labs using artificial or animal eyes
- Simulation-based training, including high-fidelity surgical simulators
- Hands-on clinical training
- Mentorship or peer-to-peer learning

Accessibility and effectiveness of these resources

- How accessible are these resources to eye-care professionals and trainees, particularly those in rural or underserved areas? Are they affordable, or are cost and access barriers limiting their use?

- How well do current educational resources meet the needs of different cadres of the eye-care workforce, including ophthalmologists, optometrists, ophthalmic nurses, and community health workers?
- How effective are the available resources in developing practical clinical and surgical skills, rather than only theoretical knowledge, and what are the main limitations or gaps?

Cataract Surgery Training Resources

What resources are currently available for learning and practicing cataract surgery before performing surgery on patients?

- How commonly are wet labs using artificial eyes, animal eyes, or other models used for cataract-surgery training, and what are their perceived benefits and limitations?
- How commonly are surgical simulators used for cataract training in your country or institution?

What benefits do high-fidelity cataract surgical simulators provide compared with conventional training methods?

- Repeated practice
- Immediate feedback
- Ability to practice complications
- Objective assessment of skills
- Reduced risk to patients
- Standardized training

What are the limitations or barriers to using high-fidelity simulators?

- Cost
- Availability
- Maintenance
- Faculty/trainer requirements
- Access to facilities
- Lack of evidence or familiarity

Other factors

- Do you consider the available simulation technologies sufficiently realistic and representative of actual cataract surgery? Why or why not? Are there differences in quality or effectiveness among available simulators, and if so, what characteristics distinguish a high-quality simulator from a less effective one?
- How should simulation-based training complement, rather than replace, wet-lab and supervised surgical training?
- Strategic question for educators/policymakers: If you could improve or add one training resource for cataract surgery in your country, what would it be and why?

8. Patient Education, Community Awareness, and Care-Seeking

- What patient education and eye-health materials are currently available, and which organizations develop and distribute them?
- How are patients and communities educated about cataracts, visual impairment, available treatment, and the importance of seeking timely care (e.g., community outreach and mobilization, community health workers, health facilities and outreach camps, radio/television/social media/digital platforms, schools/community groups/local leaders)? How effective are these efforts in increasing awareness and uptake of eye-care services?

- What are the most common myths, misconceptions, or fears about cataract and cataract surgery in your country/region, and how are they identified and addressed? Which approaches have been most effective?
- What are the main reasons patients delay or refuse cataract surgery after being diagnosed?
- Does couching or other traditional treatment for cataract persist in the country? If yes, where is it most common, how prevalent is it, and what factors contribute to patients choosing traditional treatment over modern cataract surgery?
- Are there particular communities or populations that are difficult to reach with eye-health education and community mobilization? Why?
- What additional patient-education or community-mobilization resources are needed to increase awareness, trust, and timely uptake of cataract surgery?
- Are follow-up and adherence rates tracked after surgery, and what causes patients to skip follow-up visits?
- Are there specific barriers for women needing an escort or permission to travel for surgery? This is often a bigger gender disparity than general access-to-care barriers alone.
- Strategic question: What is the single biggest barrier to getting a person with cataract from "knowing they need surgery" to actually receiving surgery?

9. Which organizations are you currently working with?

- WHO
- International Agency for the Prevention of Blindness (IAPB)
- International Council of Ophthalmology (ICO)
- VISION 2020 LINKS Program
- Others – elaborate