


## Issues in eye care in India



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## Magnitude of Blindness




**Worldwide:**  
37 million are blind and 1 to 2 million is added to this every year.


**In South East Asia:**  
33% of the world's blind  
50% of the world's childhood blindness




## Magnitude of Blindness in India




Largest number of blind in India estimated at 12 million  
Expected to rise to 15 million by 2020  
An estimated 320,000 Indian children are blind  
In addition, an estimated 9.2 million children are functionally blind due to visual impairment




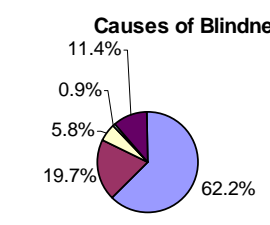
## Prevalence of Blindness in India




Category	Prevalence %	States & region
<b>Low Prevalence</b>	Less than 1	Punjab, Himachal Pradesh, Delhi, West Bengal, & N.E. States
<b>Moderate Prevalence</b>	1 to 1.49	Gujarat, Haryana, Kerala, Bihar, Karnataka, Andhra Pradesh and Assam
<b>High Prevalence</b>	1.5 to 1.99	Maharashtra, Orissa, Tamil Nadu & Uttar Pradesh
<b>Very High Prevalence</b>	2 & above	Madhya Pradesh, Rajasthan and Jammu & Kashmir




## Causes of Blindness in India

Cause	Percentage
Cataract	62.2%
Uncorrected Refractive Errors	19.7%
Glaucoma	11.4%
Diseases of Cornea	5.8%
Others including Leprosy, diabetic retinopathy etc	0.9%



## Emerging priorities and patterns of eye diseases




**Cataract** remains the leading cause of blindness despite impressive advancements in surgical services.

**Uncorrected Refractive Errors** is now recognised as the second leading cause, followed by **Glaucoma, cornea**.

**Childhood Blindness** is now gaining attention.

**Diabetic Retinopathy** is now becoming a major problem.

Despite an over increasing need, **low vision services** are dramatically lacking



## Some Challenges

- Changes in the pattern of eye diseases can be attributed to major progress done in the prevention and management of some causes of avoidable blindness.
- On the other hand, issues such as the following are the major challenges, in addition to others
  - poverty,
  - inequity in access to care
  - the lack of affordable quality services
  - life style and
  - Ageing due to increased life expectancy,



## Other Challenges for effective eye care

1. Human Resources
2. Eye Care Delivery System
3. Quality
4. Equity
5. Supply and Equipment
6. National and sub national structures
7. Urban rural divide



## Human Resources Status

Category/Years	Current	2010	2015	2020
Ophthalmologist	12,000	18,000	21,000	25,000
Ophthalmic Assistants	6,000	15,000	20,000	25,000
Ophthalmic Paramedic (Hospital)	18,000	36,000	42,000	48,000
Eye care managers	200	1,000	1,500	2,000
Community eye health specialist	20	100	150	200



## Human Resources Status

Sub – optimal utilization: 50% qualified surgeons are “non – operating” surgeons

The current ratio of doctor and mid – level personnel is low (desirable is 1:4)

Inadequate number of mid – level personnel forces surgeons to perform jobs like refraction, pre-operative care and routine diagnostic tests

Inadequate/non-existing trained teams on integrated eye care to provide best eye care services

Inequitable distribution of eye surgeons: 1:20,000 in urban area to 1 in 2,50,000 in rural areas



## Human Resources Status

No common curriculum for residency training of ophthalmologist

Inadequate CME for enhancing the skills of ophthalmologists

Inadequate exposure to doctors and other para medical personnel to advancements worldwide

Inadequate or lack of appropriate training programs

Insufficient teaching and education material available

No common guidelines to ensure basic infrastructure



## Strengthening Human Resources

A larger number of training programs to enhance the skills of already qualified professionals

Design of an appropriate matrix of human resource requirements

Pilot projects should be carried out to find a solution to the complicated issue of under-utilization and unequal distribution of ophthalmologists

Development of a global network of training centers

Career advancement mechanisms should be explored for all eye care personnel



Source: Dr. G.N. Rao; Human resource and development



### Eye Care Service Delivery

About 65% of surgical performance in the country is performed in the private and voluntary sector and only 35% is within the government sector



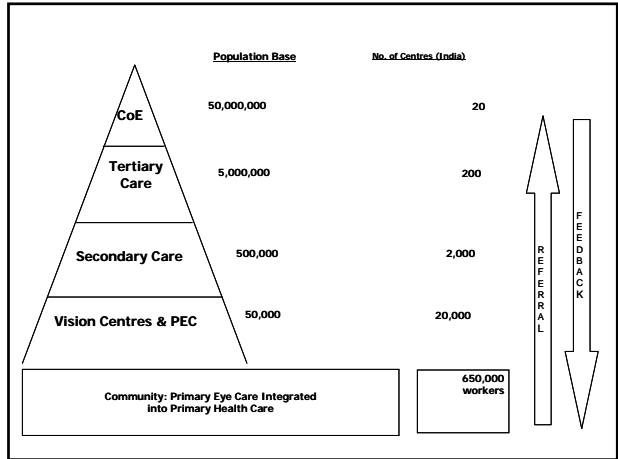
### Eye Care Delivery

- Center of Excellence: 50.0 million population
- Training Center in 5.0 million population
- Service Centers in 500,000 population
- Vision Centers in 50,000 population



### Eye Care Delivery

- Service Centers 2,000 to be developed
- A mismatch of equipments and trained human resources
- Vision Centers to be developed 20,000
- Vision Centers crucial to primary eye care are in the nascent stage



### Quality

- Absence of mandatory protocols and mechanism result in variation in quality of services and outcome leading to infections
- Poor surgical outcomes, as high as 40% post-operatively blind following conventional ICCE & 10% following IOL surgery – population based outcomes.
- Follow-up mechanism is poor
- Eye Care Institutions in India have few guidelines & standards for basic healthcare practices. The monitoring mechanisms are virtually non-existing, except for the Centers of Excellence and few other institutes



### Quality

#### Dimensions of Quality

- Technical competence
- Access to services
- Effectiveness
- Interpersonal relations
- Efficiency
- Continuity
- Safety
- Amenities

Quality Assurance Project: <http://www.qaproject.org/>





## Equity

**Gender bias:** Prevalence of blindness was found to be 1.6% among females as against 1.42% in males *(In Assam Uttar Pradesh, Andaman and Nicobar Islands and West Bengal, males were observed to be suffering from higher blindness rates)*

**Underserved areas:** Inequitable distribution of eye care services across the country. North eastern states are underserved in view of the geographical location and socio – political issue.

**Barriers** to update of services



## Equipment

**Non – availability** of proper equipment hampers providing eye care

**Cases** where equipments are available, lack of maintenance results in sub – optimal use of the equipment

**Inadequate ophthalmologic equipment management training** acts as a barrier in utilization of equipment

**High costs and remote areas – pose challenges** for maintenance of equipment



## Urban/ Rural Divide

**Rural areas** had an overall prevalence of 1.63% as against the prevalence of 1.01 % in the urban areas *(This trend is reversed in the states of Tamil Nadu, Bihar, Kerala, Tripura and West Bengal. The access to service facilities is the most important factor in determining these differences)*

**Nearly 80%** of the ophthalmologists are clustered in urban areas, where only 24% of the population reside

**Eye Surgeon-population ratio** varies from 1:20,000 in urban area to 1 in 2,50,000 in rural areas



WHO-NPCB survey



## VISION 2020 the Right to Sight India

**To coordinate and advocate** for improved eye care programs in India, started in 2004

**Collaborative efforts** of Govt, INGOs, NGOs,

**Gain more knowledge, understand problems better, and think solutions together.**

**Encourage to include comprehensive eye care, thinking not only cataract but all eye care problems.**



## Tackling avoidable blindness

Disease prevention and control

Training of required personnel

Infrastructure Development

Strengthening Existing eye care

Development of affordable technology

Advocacy and resource mobilization



## Vision 2020 plan of action

**Strengthen advocacy** at all levels

**Reduction of disease burden**

**Strengthen physical infrastructure and human resources**

**MIS for better program management, transparency and coordination**

**Central government – Advisory role in policy, resource mobilization and program implementation – XI plan was drafted at the request of Gol and was discussed at various levels for increased allocation of resources.**





### Vision 2020 plan – lots to be done

- Revamping of medical education for improved knowledge, skills, practice
- Redeployment of human resources at all levels
- Better coordination among all stakeholders
- Better service quality – standards & protocols
- Due emphasis on preventive eye care



### Creating Awareness

- Large part of the population whom we are targeting are illiterate and under –privileged, largely in rural also in urban areas
- Lack awareness of such health issue and absence of health seeking behavior
- Adopt bottom up approach to create awareness and bring behavioral change using multiple mediums ranging from folk theatre to community radio, panchayat, peer group influence



### Eye Health Promotion

- Health Education:**
  - Eye health promoting behavior,
  - Uptake of Services, Promotion of awareness, knowledge, decision making, belief, attitudes, empowerment
- Service Improvement:**
  - Improvement in the quality and quantity of services
  - Patient education
  - Community Outreach
  - Testing/ screening provision of spectacles
  - School health services



### Eye Health Promotion

- Advocacy for policies that promote eye health
- Support for expansion of eye health services and disease prevention in the most needy areas / population
- Economic support to increase affordability of preventive actions
- Provision of improved services of water, housing, sanitation



**Thank you!**